



## SAMPLE COURSE FILES

S.No	Description	Page No.
1.	<b>Department:</b> Computer Science and Engineering <b>Regulation:</b> R16 <b>Year/Semester:</b> IV B.Tech II Semester <b>Course:</b> Concurrent and Parallel Programming ( Theory)	2-255
2.	<b>Department:</b> Computer Science and Engineering <b>Regulation:</b> R16 <b>Year/Semester:</b> IV B.Tech I Semester <b>Course:</b> Web Technologies Lab ( Lab)	256-378



**VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN**

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Kapujaggaraju Peta, VSEZ(post), Gajuwaka, Visakhapatnam-530049,AP

## **DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

### **COURSE FILE CONTENTS**

1. Department Vision and Mission
2. Program Outcomes
3. Course Syllabus
4. CO-PO-PSO mapping
5. Course end survey questions
6. University Academic calendar
7. Department Academic calendar
8. Lecture plan
9. Class time table
10. Course time table
11. Lecture Notes (soft copy, hand written, PPTs)
12. Unit wise Important Questions
13. Multiple Choice Questions
14. Tutorial Topics/Problems
15. Topics beyond syllabus
16. List of PPTs/Videos/Other materials (CDs)
17. Mid Question papers and scheme of valuation
18. Assignment Questions Unit wise
19. University previous Question papers
20. Gap Analysis- CO-PO
21. Result analysis to identify weak students and advanced learners
22. Remedial classes schedule and attendance
23. Result analysis at the end of semester
24. Course Attainment for all assessment years

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### DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

#### **Vision-Institute**

To be a leading institution of women empowerment producing internationally accepted professionals with psychological strength, emotional balance and ethical values

#### **Mission- Institute**

- M1: To empower women engineers through innovative teaching-learning practices.
- M2: To encourage for higher education and research with well-equipped laboratories.
- M3: To promote entrepreneurship through creativity and innovation.
- M4: To promote environmental sustainability and inculcate ethical, emotional and social consciousness

#### **Vision-Computer Science and Engineering**

To evolve into a centre of excellence and to empower women in emerging areas of Computer Science and Engineering with human values

#### **Mission-Computer Science and Engineering**

- M1: To train students to analyze, design, develop and test software applications
- M2: To impart technical expertise in sustaining the needs of the IT industry
- M3: To foster research activities and entrepreneurial skills in emerging technologies
- M4: To inculcate lifelong learning skills in line with technological advancement and social consciousness

#### **Program Specific Outcomes**

PSO 1: Graduates exhibit knowledge of basic sciences, skills in engineering specialization like information security, cloud computing, networking, software engineering and data analytics.

PSO 2: Graduates can adapt to evolving technologies for the design and development of full-stack applications in diversified fields with optimal programming skills.

#### **Program Educational Objectives**

PEO1: Graduates are able to lead the diverse range of careers in IT sectors and initiate entrepreneurship in Software development.

PEO2: Graduates are able to excel in higher studies and research in emerging areas of Computer Science Engineering.

PEO3: Graduates are able to possess continuous learning by adapting to technological trends to help society with ethical values.



310  
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## **Program Outcomes**

Engineering Graduates will be able to:

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

30  
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## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### **SYLLABUS**

Course Name: <b>CONCURRENT AND PARALLEL PROGRAMMING</b>	Course Code: <b>C412</b>
Year/ Sem : <b>IV B TECH II SEM</b>	Regulation: <b>R16</b>

#### **OBJECTIVES:**

- Improvement of students comprehension of CPP, new programming concepts, paradigms and idioms
- Change of 'mood' regarding Concurrency counter-intuitiveness
- Proactive attitude: theoretical teaching shouldn't be so dull
- Multipath, individually paced, stop-and-replay, personalized learning process
- Frequent assessment of learning advances on the subject

#### **UNIT- 1**

Concurrent versus sequential programming. Concurrent programming constructs and race condition. Synchronization primitives.

#### **UNIT-II**

Processes and threads. Interposes communication. Lovelock and deadlocks, starvation, and deadlock prevention. Issues and challenges in concurrent programming paradigm and current trends.

#### **UNIT-III**

Parallel algorithms – sorting, ranking, searching, traversals, prefix sum etc.,

#### **UNIT- IV**

Parallel programming paradigms – Data parallel, Task parallel, Shared memory and message passing, Parallel Architectures, GPGPU, pthreads, STM

#### **UNIT-V**

OpenMP, OpenCL, Cilk++, Intel TBB, CUDA

#### **UNIT-VI**

Heterogeneous Computing: C++AMP, OpenCL

#### **TEXT BOOKS:**

1. Mordechai Ben-Ari. Principles of Concurrent and Distributed Programming, Prentice-Hall International.
2. Greg Andrews. Concurrent Programming: Principles and Practice, Addison Wesley.
3. Gadi Taubenfeld. Synchronization Algorithms and Concurrent Programming, Pearson.
4. M. Ben-Ari. Principles of Concurrent Programming, Prentice Hall.
5. Fred B. Schneider. On Concurrent Programming, Springer.
6. Brinch Hansen. The Origins of Concurrent Programming: From Semaphores to RPCs

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## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### CO-PO-PSO MAPPING

Course Name: <b>Concurrent and Parallel Programming</b>	Course Code: <b>C412</b>
Year/ Sem : <b>IV B TECH II SEM</b>	Regulation: <b>R16</b>
Admitted Batch: <b>2018-22</b>	Academic Year: <b>2021-22</b>
Course Coordinator: <b>Mrs.SK.Rahimunnisa</b>	

### COURSE OUTCOMES

CO	DESCRIPTION (Knowledge level) Action verb+ Context+ Condition
C412.1	Illustrate the difference between sequential systems and concurrent systems (K3).
C412.2	Solve problems requiring both semaphores and inter process communication as part of the solution (K3).
C412.3	Apply concurrent and parallel algorithms on different data structures (K3).
C412.4	Demonstrate a critical understanding of multi processor and multi core architectures for parallel programming (K3).
C412.5	Distinguish the difference between various parallel programming languages (K3).
C412.6	Use parallelization mechanisms C++ AMP and OpenCL in heterogeneous computing (K3).

### PROGRAM SPECIFIC OUTCOMES

PSO1	Graduates exhibit knowledge and skills in information security, cloud computing, networking, software engineering and data analytics.
PSO 2	Graduates can adapt to evolving technologies for design and development of full stack applications, exploring with optimal programming skills

CO	PO												PSO	
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
COs														
C412.1	3	2	2	3	2								3	2
C412.2	3	2	2	3	2								3	2
C412.3	3	3	3	3	2								3	2
C412.4	3	3	3	3	3								3	2
C412.5	3	3	3	3	3								3	2
C412.6	3	3	3	3	3								3	2
AVG	3.0	2.67	2.67	3.0	2.5								3.0	2.0

COURSE COORDINATOR

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## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### CO-PO-PSO MAPPING

Course Name: <b>Concurrent and Parallel Programming</b>	Course Code: <b>C412</b>
Year/ Sem : <b>IV B TECH II SEM</b>	Regulation: <b>R16</b>
Admitted Batch: <b>2017</b>	Academic Year: <b>2020-21</b>
Course Coordinator : <b>Dr. P. Vijaya Bharati</b>	

### COURSE OUTCOMES

CO	DESCRIPTION (Knowledge level)
C412.1	Analyze and document the difference between sequential systems and concurrent systems (K4).
C412.2	Solve problems requiring both semaphores and inter process communication as part of the solution (K3).
C412.3	Design and implement concurrent and parallel algorithms (K3).
C412.4	Demonstrate a critical understanding of multi processor and multi core architectures for parallel programming (K3).
C412.5	Analyze the difference between various parallel programming languages (K4).
C412.6	Use parallelization mechanisms C++ AMP and OpenCL in heterogeneous computing (K3).

### PROGRAM SPECIFIC OUTCOMES

PSO1	Graduates exhibit knowledge and skills in information security, cloud computing, networking, software engineering and data analytics.
PSO2	Graduates can adapt to evolving technologies for design and development of full stack applications, exploring with optimal programming skills

CO	PO												PSO	
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSC
C412.1	3	3	-	-	-	-	-	-	-	-	-	2	3	2
C412.2	3	3	-	3	-	-	-	-	-	-	-	2	3	2
C412.3	3	3	3	3	-	-	-	-	-	-	-	-	3	2
C412.4	3	2	-	-	-	-	-	-	-	-	-	-	3	2
C412.5	3	3	3	3	3	-	-	-	-	-	-	3	3	2
C412.6	3	2	2	-	2	-	-	-	-	-	-	-	3	2
Avg	3.00	2.67	2.67	3.00	2.50	-	-	-	-	-	-	2.33	3.00	2.0

Course Coordinator

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## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### CO-PO-PSO MAPPING

Course Name: <b>Concurrent and Parallel Programming</b>	Course Code: <b>C412</b>
Year/ Sem : <b>IV B TECH II SEM</b>	Regulation: <b>R16</b>
Admitted Batch: <b>2016</b>	Academic Year: <b>2019-20</b>
Course Coordinator : <b>Mrs.B.Madhavi</b>	

### COURSE OUTCOMES

CO	DESCRIPTION (Knowledge level)
C412.1	Analyze and document the difference between sequential systems and concurrent systems (K4).
C412.2	Solve problems requiring both semaphores and inter process communication as part of the solution (K3).
C412.3	Design and implement concurrent and parallel algorithms (K3).
C412.4	Demonstrate a critical understanding of multi processor and multi core architectures for parallel programming (K3).
C412.5	Analyze the difference between various parallel programming languages (K4).
C412.6	Use parallelization mechanisms C++ AMP and OpenCL in heterogeneous computing (K3).

### PROGRAM SPECIFIC OUTCOMES


PSO1	Graduates exhibit knowledge and skills in information security, cloud computing, networking, software engineering and data analytics.
PSO 2	Graduates can adapt to evolving technologies for design and development of full stack applications, exploring with optimal programming skills

CO	PO												PSO	
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSC
C412.1	3	3	-	-	-	-	-	-	-	-	-	-	3	2
C412.2	3	3	-	3	-	-	-	-	-	-	-	-	3	2
C412.3	3	3	3	3	-	-	-	-	-	-	-	-	3	2
C412.4	3	2	-	-	-	-	-	-	-	-	-	-	3	2
C412.5	3	3	3	3	3	-	-	-	-	-	-	-	3	2
C412.6	3	2	2	-	2	-	-	-	-	-	-	-	3	2
<b>Avg</b>	<b>3.00</b>	<b>2.67</b>	<b>2.67</b>	<b>3.00</b>	<b>2.50</b>	-	-	-	-	-	-	-	<b>3.00</b>	<b>2.0</b>

  
Course Coordinator

  
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### DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### **COURSE END SURVEY QUESTIONS**

Course Name: <b>CONCURRENT AND PARALLEL PROGRAMMING</b>	Course Code: <b>C412</b>
Year/ Sem : <b>IV B TECH II SEM</b>	Regulation: <b>R16</b>

CO No.	CO based question
C412.1	Are you able to analyze the difference between sequential and concurrent programming?
C412.2	Are you able to solve critical problems using semaphores?
C412.3	Are you able to implement different parallel algorithms?
C412.4	Are you able to demonstrate various multi core and multi processor architectures?
C412.5	Are you able to analyze the difference between various parallel programming languages?
C412.6	Are you able to use OpenCL and C++ AMP in heterogeneous computing?

  
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## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### LECTURE PLAN

Course Name: <b>Concurrent and Parallel Programming</b>	Course Code: <b>C412</b>
Year/ Sem : <b>IV B TECH II SEM</b>	Regulation: <b>R16</b>
Admitted Batch: <b>2018-22</b>	Academic Year: <b>2021-22</b>
Number of Lectures per week: <b>06</b>	
Course Coordinator : <b>Mrs.Sk.Rahimunnisa</b>	
Course handled: Section A- <b>Mrs.Sk.Rahimunnisa</b>	
Course handled: Section B – <b>Mrs. N.Sowjanya Kumari</b>	
Course handled: Section C – <b>Mrs.M.Mamatha Laxmi</b>	

Lecture No.	Topic name	Source	Teaching Methodology
Lecture 1	<b>UNIT I: Introduction to concurrent and parallel programming</b>	TB1- P: 11 – 15/ Vlink1	Lecture/ Video Lecture
Lecture 2	Concurrent versus sequential programming differences	TB1- P: 15 - 17	Lecture
Lecture 3	Need of Concurrent Programming*	TB1- P: 17 - 20	Lecture
Lecture 4	Concurrent programming constructs: Interleaving , Mutual Exclusion, safety	TB1- P: 28 - 37	Lecture
Lecture 5	Concurrent programming constructs: Liveness , semaphore, monitor	TB1- P: 37 - 44	Lecture
Lecture 6	Concurrent programming constructs: Channels, Message Passing	TB1- P: 44 - 51	Lecture
Lecture 7	Synchronization primitives: Semaphores	TB1- P: 53 - 57	Lecture
Lecture 8	Synchronization primitives: Lock types	TB1- P: 57 - 60	Lecture
Lecture 9	Synchronization primitives: Monitors	TB1- P: 60 - 62	Lecture
Lecture 10	<b>UNIT II: Process</b>	TB2- P: 92 - 112	Lecture
Lecture 11	Threads	TB2- P: 113 - 119	Lecture
Lecture 12	Inter Process Communication	TB2- P: 119 - 128	Lecture
Lecture 13	Shared Memory Model	Vlink2	Video Lecture
Lecture 14	Remote Procedure Call	TB2- P: 131 - 135	Lecture
Lecture 15	Message Passing Model	TB2- P: 136 - 140	Lecture
Lecture 16	Usage of Streams, Pipes, FIFO, Sockets In Interprocess Communication*	TB2- P: 140 - 143	Lecture
Lecture 17	Starvation	TB2- P: 143 - 145	Lecture
Lecture 18	Deadlock and Livelock, Deadlock Prevention	TB2- P: 146 - 149	Lecture
Lecture 19	Issues and Challenges	Link1	Lecture
Lecture 20	Recent Trends in Concurrent Programming	Link2	Lecture
Lecture 21	<b>UNIT III: Parallel Algorithms - Introduction</b>	R1 - P: 25 - 27	Lecture/ Video Lecture



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Lecture 22	Data Structures – Linear array, Binary tree*	R1 - P: 27 - 29	Lecture
Lecture 23	2D Mesh, Shared Variable*	R1 - P: 29 - 31	Lecture
Lecture 24	Sorting in linear array and binary tree	R1 - P: 31 - 33	Lecture
Lecture 25	Sorting in 2D Mesh and Shared Variable	R1 - P: 34 - 35	Lecture
Lecture 26	Prefix sum algorithm	R1 - P: 35 - 37	Lecture
Lecture 27	Ranking and Parallelism	TB9 - P: 38 - 39	Think Pair share
Lecture 28	Parallel algorithm models	TB9 - P: 01 - 04	Lecture
Lecture 29	Parallel Sorting Algorithms	TB9 - P: 27 - 31	Lecture
Lecture 30	Parallel Searching Algorithms	TB9 - P: 32 - 36	Lecture
Lecture 31	Parallel Traversal Algorithms	TB9 - P: 36 - 40	Lecture
Lecture 32	<b>UNIT IV: Parallel programming paradigms - Introduction</b>	TB9 - P: 01 - 04	Lecture
Lecture 33	Data parallel model	TB9 - P: 05 - 07	Lecture
Lecture 34	Task parallel model	TB9 - P: 07 - 09	Lecture
Lecture 35	Shared memory model	TB2- P: 128 - 130	Lecture
Lecture 36	Message passing model	TB2- P: 136 - 140	Lecture
Lecture 37	Parallel Architectures	Link3	Lecture
Lecture 38	Pipeline Processing	Link3	Lecture
Lecture 39	Arithmetic Pipelines	Link3	Lecture
Lecture 40	Vector Processing	Link3	Lecture
Lecture 41	Array Processing	Link3	Lecture
Lecture 42	Superscalar Processing	Link3	Lecture
Lecture 43	VLIW architecture	Link3	Lecture
Lecture 44	Multithreaded processors	Link3	Lecture
Lecture 45	GPGPU - Introduction	Link4	Lecture
Lecture 46	Implementation of GPGPU	Link4	Lecture
Lecture 47	GPU Vs CPU*	Link4	Lecture
Lecture 48	GPU Programming Concepts	Link4	Lecture
Lecture 49	Applications of GPGPU	Link4	Lecture
Lecture 50	POSIX Threads	Link5	Lecture
Lecture 51	Thread design patterns	Link5	Lecture
Lecture 52	Implementations of Pthreads*	Link5	Lecture
Lecture 53	Synchronization primitives	Link6	Lecture



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Lecture 54	Software Transaction Memory (STM)	Link6	Lecture
Lecture 55	Transactional Locking	Link6	Lecture
Lecture 56	UNIT V: OpenMP - Introduction	Link7/ Vlink4	Lecture/ Video Lecture
Lecture 57	Implementations, History	Link7	Lecture
Lecture 58	OpenCL – Introduction, History	TB10 - P: 350 - 354	Lecture
Lecture 59	Versions, Implementations, Performance	TB10 - P: 355 - 357	Lecture
Lecture 60	Host API	TB10 - P: 358 - 360	Seminar
Lecture 61	Cilk++ - Introduction	Link8/ Vlink5	Lecture/ Video Lecture
Lecture 62	Implementation	Link8	Lecture
Lecture 63	Intel TBB: Introduction	Link9/ Vlink6	Lecture/ Video Lecture
Lecture 64	TBB Architecture and Implementation	Link9	Lecture
Lecture 65	CUDA: Introduction	TB8- P: 23 – 29/ Vlink7	Video Lecture
Lecture 66	Programs, Libraries	TB8- P: 29 - 39	Lecture
Lecture 67	CUDA Vs CPU*	TB8- P: 39 - 40	Lecture
Lecture 68	UNIT VI: Need of Heterogeneous Computing*	TB10 – P: 17 – 20	Lecture
Lecture 69	C++ AMP Introduction	Link10/ Vlink8	Lecture
Lecture 70	Programs	Link11	Lecture
Lecture 71	OpenCL in Heterogeneous Computing	TB10 – P: 358 – 360	Lecture

### \*Topics beyond Syllabus

#### TEXT BOOKS:

**TB1:** Mordechai Ben-Ari. Principles of Concurrent and Distributed Programming, Prentice-Hall International.

**TB2:** Greg Andrews. Concurrent Programming: Principles and Practice, Addison Wesley.

**TB3:** Gadi Taubenfeld, Synchronization Algorithms and Concurrent Programming, Pearson.

**TB4:** M. Ben-Ari. Principles of Concurrent Programming, Prentice Hall.

**TB5:** Fred B. Schneider. On Concurrent Programming, Springer.

**TB6:** Brinch Hansen. The Origins of Concurrent Programming: From Semaphores to RPCs

**TB7:** Introduction to Parallel Computing by AnanthGrama, Anshul Gupta, Vipin Kumar – Pearson

**TB8:** CUDA Programming – David Kirk.

**TB9:** Parallel Algorithms – Joseph Ja Ja.

**TB10:** Heterogeneous Computing with OpenCL by Ben Gaster, Lee Howes et al (Morgan Kaufmann)



320  
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## REFERENCE TEXT BOOKS:

R1: Introduction to Parallel Processing - Algorithms and Architectures by Behrooz Parhami

## Web Links:

Link1. [https://subscription.packtpub.com/book/application\\_development/9781785886126/1/ch01/v1/sec09/possible-problems-in-concurrent-applications](https://subscription.packtpub.com/book/application_development/9781785886126/1/ch01/v1/sec09/possible-problems-in-concurrent-applications)

Link2. <https://www.researchgate.net/publication/272377248>

Link3. <https://byu.instructure.com/courses/617/files/81241/download?verifier=Ft9w26pUkCXHIZvLVPzJNYRPwIte70ncvYmukCBW>

Link4. [https://en.wikipedia.org/wiki/General-purpose\\_computing\\_on\\_graphics\\_processing\\_units](https://en.wikipedia.org/wiki/General-purpose_computing_on_graphics_processing_units)

Link5. <https://randu.org/tutorials/threads/#threads>

Link6. [https://en.wikipedia.org/wiki/Software\\_transactional\\_memory](https://en.wikipedia.org/wiki/Software_transactional_memory)

Link7. <https://en.wikipedia.org/wiki/OpenMP>

Link8. <https://link.springer.com/referencework/10.1007/978-0-387-09766-4>

Link9. <https://www.threadingbuildingblocks.org/intel-tCB-tutorial>

Link10. <https://docs.microsoft.com/en-us/cpp/parallel/amp/cpp-amp-overview?view=vs-2019>

Link11. <https://docs.microsoft.com/en-us/cpp/parallel/amp/cpp-amp-cpp-accelerated-massive-parallelism?view=vs-2019>

## Video Links:

Vlink1. <https://youtu.be/MmUER47yJk>

Vlink2. <https://youtu.be/AyN85RtGreE>

Vlink3. <https://youtu.be/umku9-eQk9Q>

Vlink4. <https://youtu.be/6tcjojBoJn8>

Vlink5. <https://youtu.be/GMnXrSNfkpl>

Vlink6. [https://youtu.be/Xis\\_2CR2kjs](https://youtu.be/Xis_2CR2kjs)

Vlink7. [https://youtu.be/9bB\\_G9865zU](https://youtu.be/9bB_G9865zU)

Vlink8. [https://youtu.be/\\_qO7PNda\\_ss](https://youtu.be/_qO7PNda_ss)



COURSE COORDINATOR



HEAD OF THE DEPARTMENT



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**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

Course Name: <b>Concurrent and Parallel Programming (CPP)</b>	Course Code: <b>C412</b>
Year/ Sem /Sec : <b>IV B TECH II SEM A</b>	Regulation: <b>R16</b>
Admitted Batch: <b>2018</b>	Academic Year: <b>2021-22</b>
Teaching Methodology: <b>SEMINAR</b>	No. of Students: <b>66</b>
Faculty: : <b>Mrs. SK. Rahimunnisa</b>	No. of Students Present: <b>63</b>
	No. of Students Absent: <b>3</b>

**Student Name: SABBAVARAPU CHANDU(18NM1A05D0)**

**Topic: Host API**

**Activity Outcome:**

- Identifying the functions to control devices on your system.
- Explain the host program structure of host API.

**Host-API**

Open CL gives a set of functions to control devices on your system. The Device does not know what to do the Host-API control the whole system. Bellow we have the major components of the Host-API

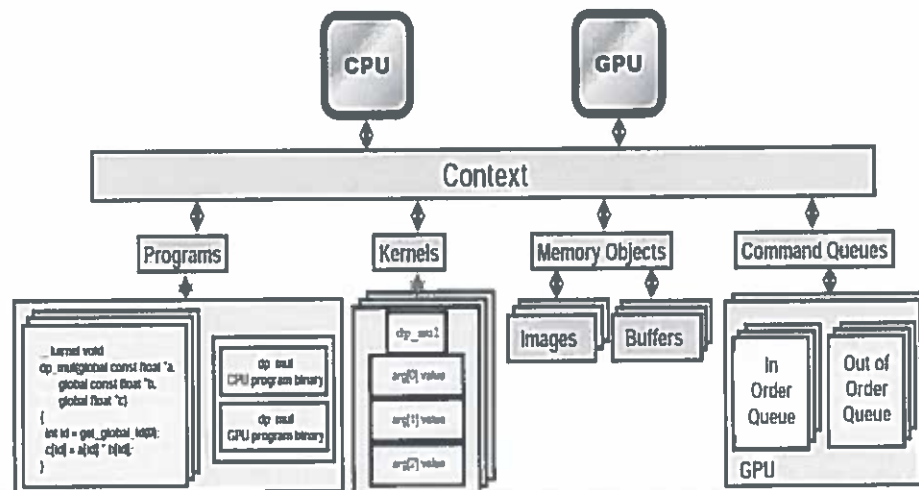
- Platform
- Context
- Programs
- Asynchronous Device calls

**Platform**

Platforms are OpenCL implementation. Imagine as a device driver that expose the devices that are available on the Heterogeneous for you. For example a desktop computer with 2 Gpus, 1 FPGA card and one big 32 cores CPU. The Platform API discover the devices available to you.



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### Context

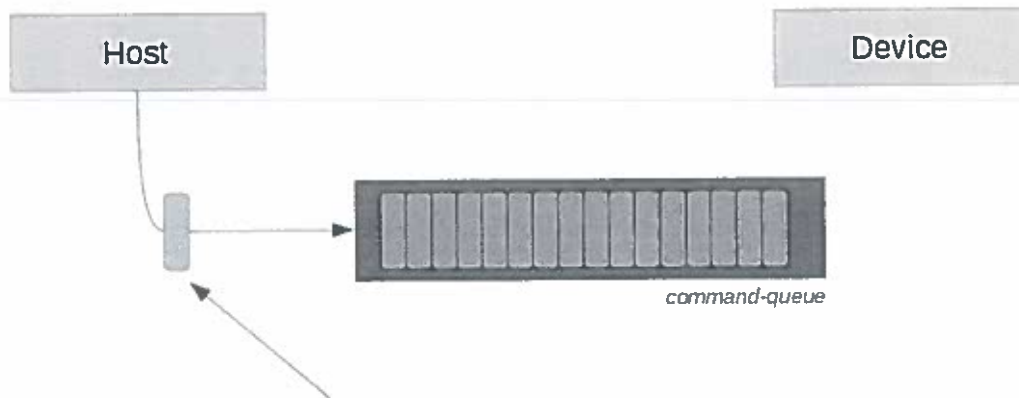
The Context allows you to group multiple devices on some specific platform. Imagine that you want to make available all the compute units of all devices. The context have devices and memory.

### Programs

Just a collection of kernels, that need to be compiled and/or loaded.

### Asynchronous Device calls

The Host API provide functions to issue commands to the devices (clEnque\*). Those functions are asynchronous so the host will not freeze while the devices is executing a command.



Foo command is generated and placed into command-queue



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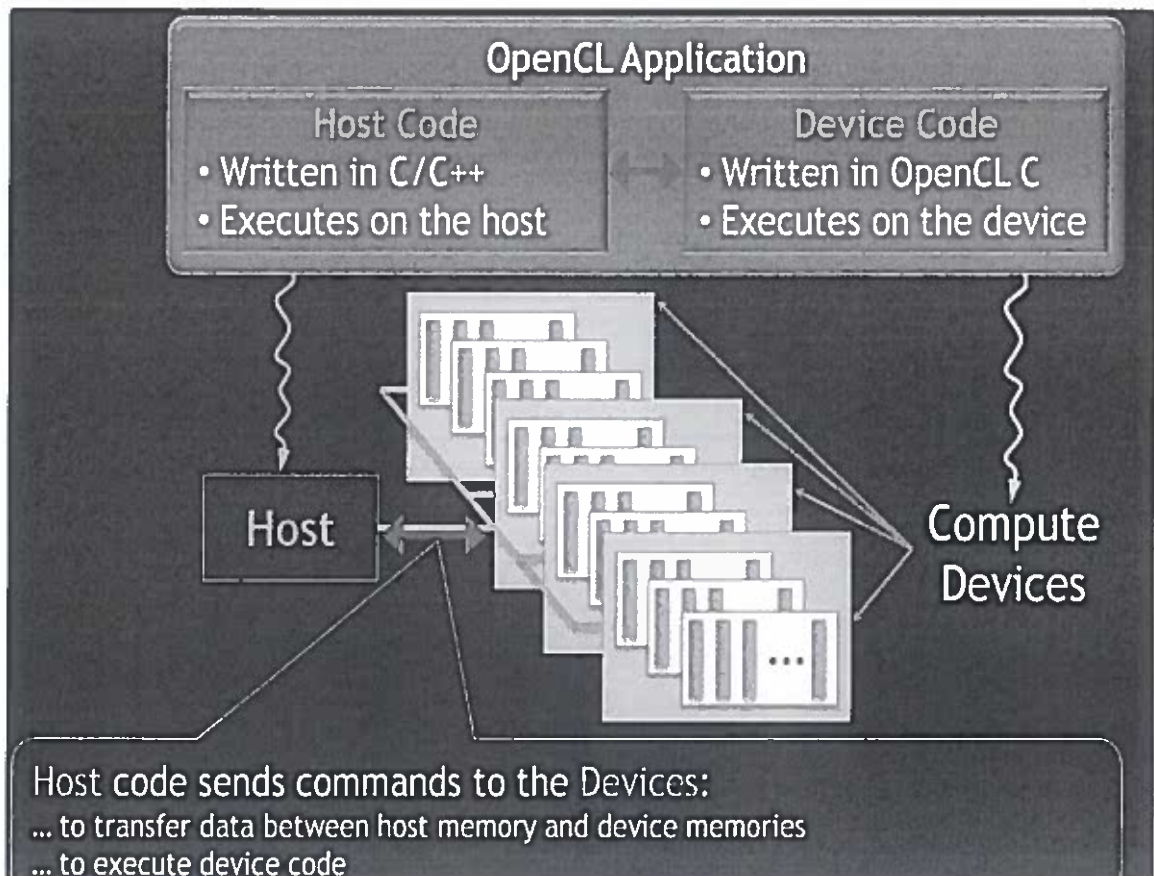
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### Host program Structure

Most of the OpenCL Host programs has the following structure

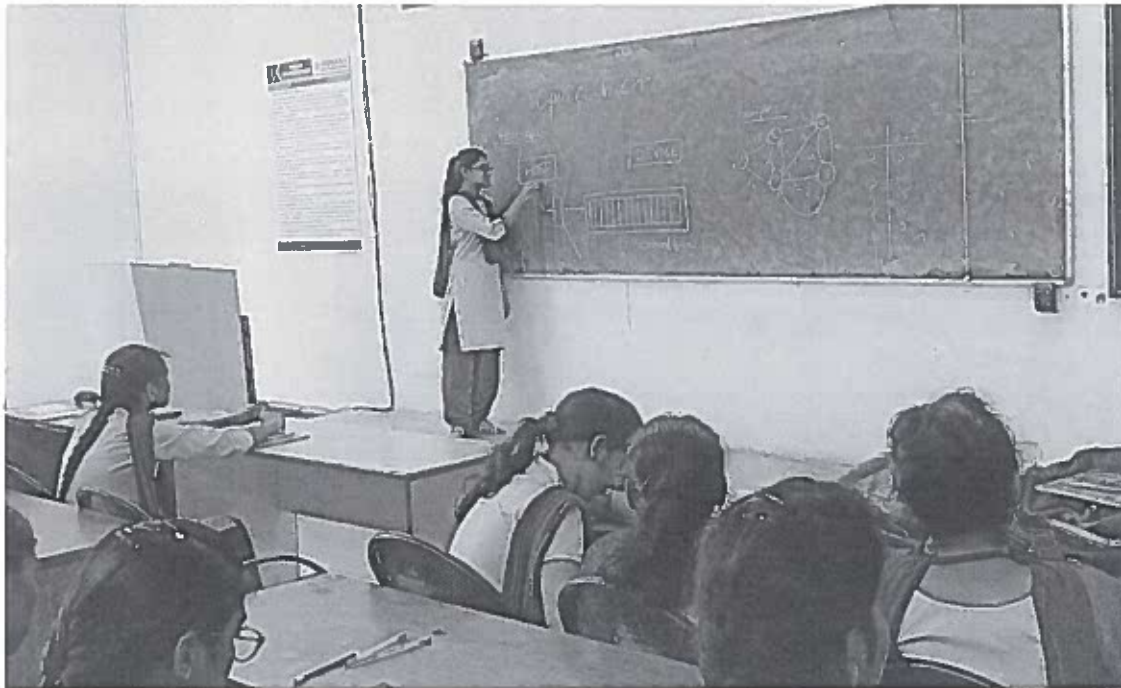
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**Figure: Student presenting the seminar**

**Impact Analysis:**

- Increase in problem-solving skills of the student by participation.
- Promote self-learning and independent thinking.
- Improve the communication skills.
- Develop the scope for active participation

**Activity Outcome to PO Mapping:**

Activity Outcome	Mapping to PO's and PSO's
Identifying the functions to control devices on your system.	PO1, PO2, PO3, PO4, PSO2
Explain the host program structure of host API	PO1, PO2, PO3, PO4, PSO2

**Post Implications:**


- Students are interactive and motivated to study and analyse the seminar topics in detail.
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Subject Faculty

  
Module Coordinator

  
Head of the Department



  
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**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

Course Name: <b>Concurrent and Parallel Programming (CPP)</b>	Course Code: <b>C412</b>
Year/ Sem /Sec : <b>IV B TECH II SEM B</b>	Regulation: <b>R16</b>
Admitted Batch: <b>2018</b>	Academic Year: <b>2021-22</b>
Teaching Methodology: <b>SEMINAR</b>	No. of Students: <b>65</b>
Faculty: : <b>Mrs. N. Sowjanya Kumari</b>	No. of Students Present: <b>63</b>
	No. of Students Absent: <b>2</b>

**Student Name: GULLIPALLI LOCHANA (19NM5A0503)**

**Topic: Host API**

**Activity Outcome:**

- Identifying the functions to control devices on your system
- Explain the host program structure of host API.

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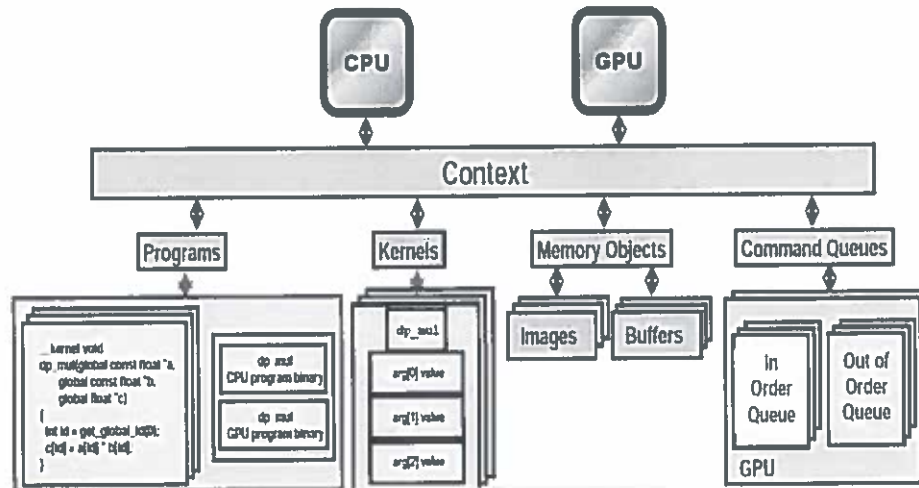
- Platform
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### Context

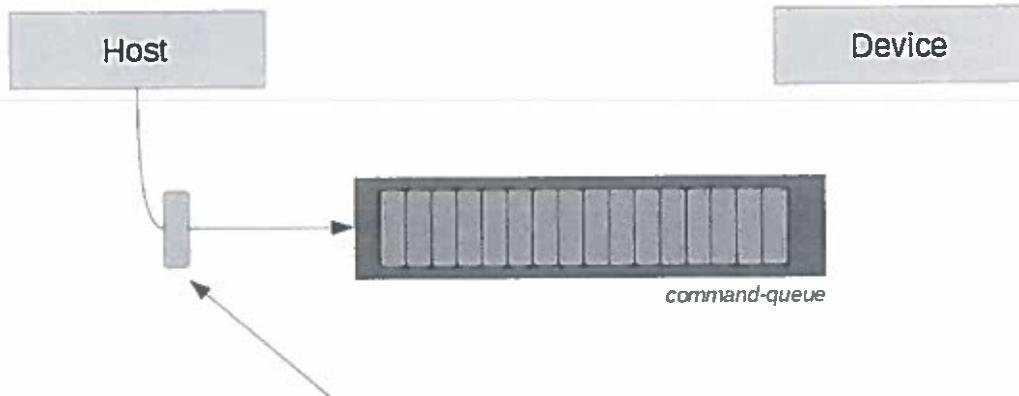
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1. Define (query) platform and create a command queue
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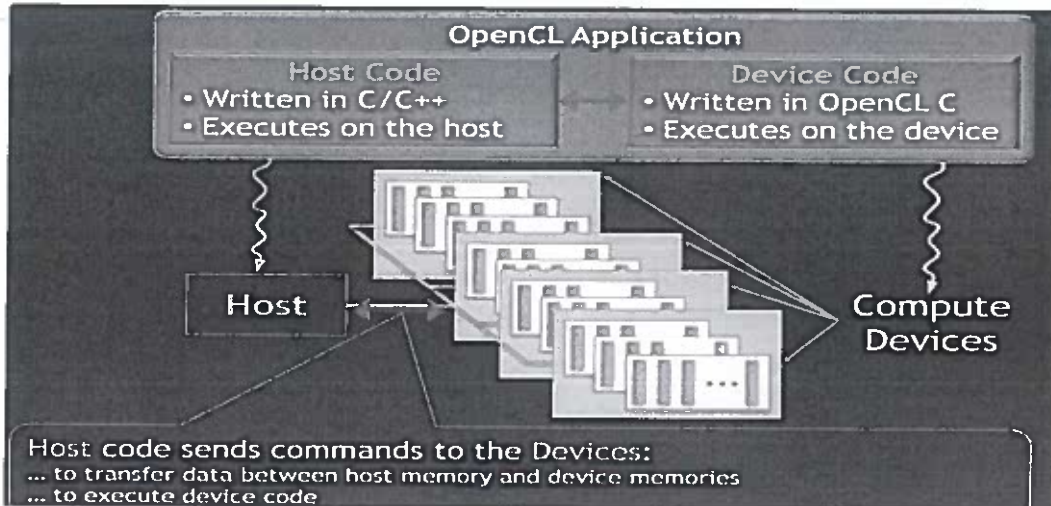
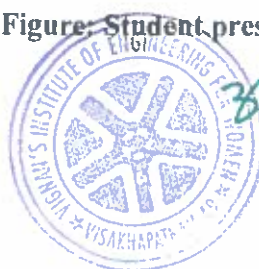


Figure: Student presenting the seminar



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**Subject Faculty**

**Module Coordinator**

**Head of the Department**



**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

Course Name: <b>Concurrent and Parallel Programming (CPP)</b>	Course Code: <b>C412</b>
Year/ Sem /Sec : <b>IV B TECH II SEM C</b>	Regulation: <b>R16</b>
Admitted Batch: <b>2018</b>	Academic Year: <b>2021-22</b>
Teaching Methodology: <b>SEMINAR</b>	No. of Students: <b>66</b>
Faculty: : <b>Mrs. M Mamatha Laxmi</b>	No. of Students Present: <b>64</b>
	No. of Students Absent: <b>2</b>

**Student Name: PUSHPA KANDA (18NM1A05C3)**

**Topic: Host API**

**Activity Outcome:**

- Identifying the functions to control devices on your system.
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**Host-API**

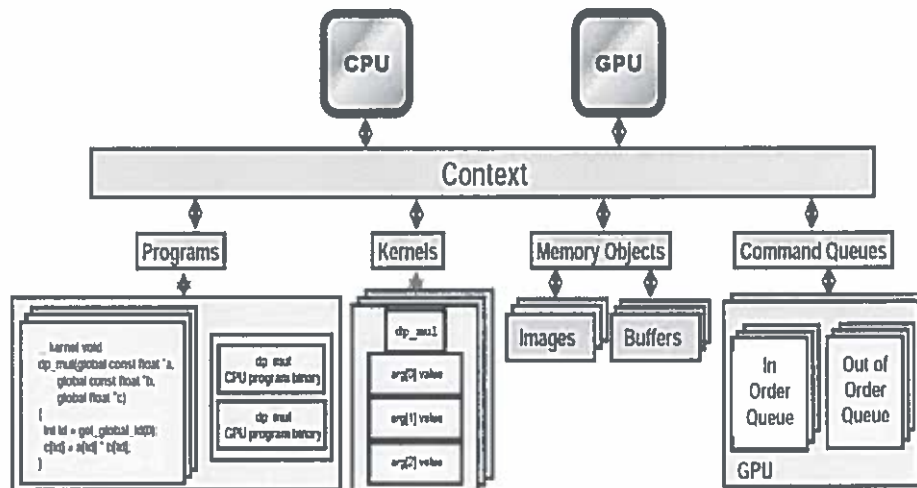
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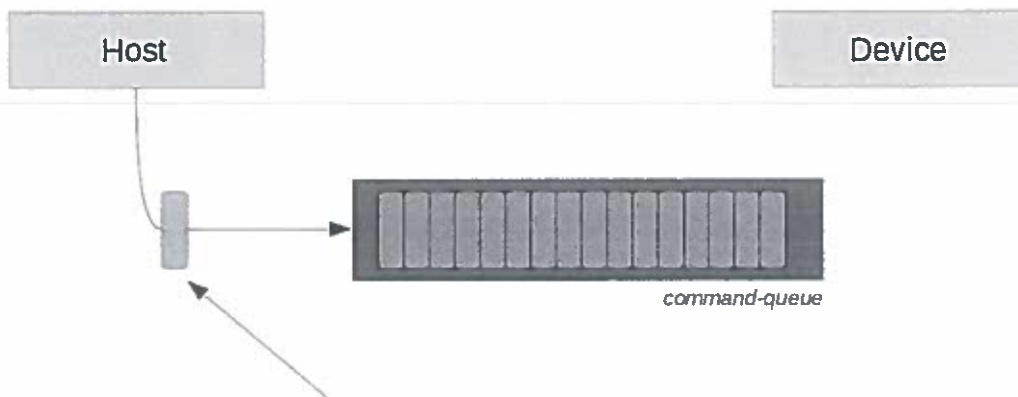
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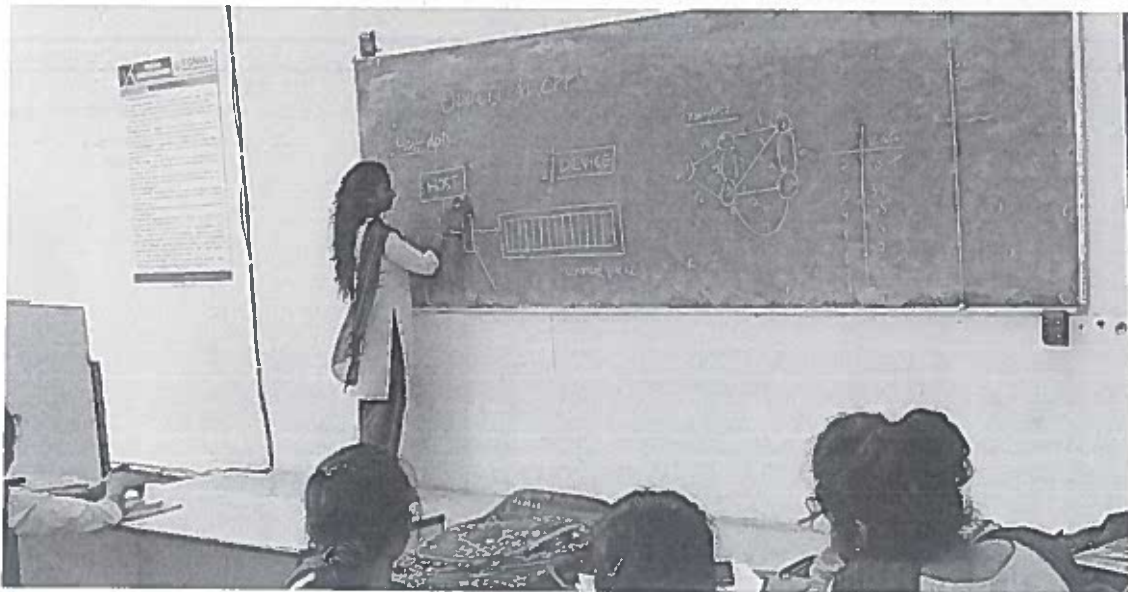
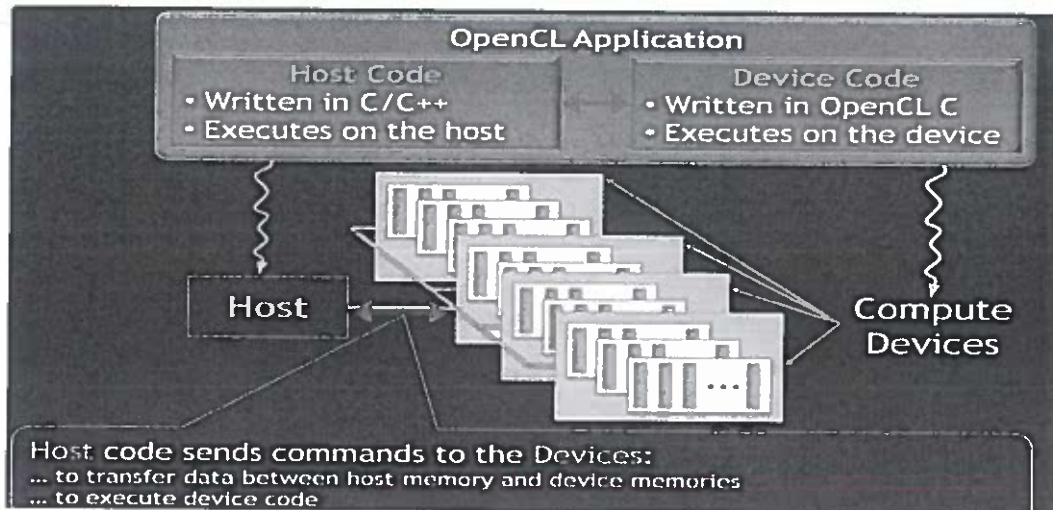
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*Signature*

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## Activity Outcome to PO Mapping:

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Subject Faculty

Module Coordinator

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**VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN**

Approved by AICTE, New Delhi, Affiliated to JNTU Kakinada

Kapujaggarajupeta, VSEZ(Post), Visakhapatnam-530049, AP

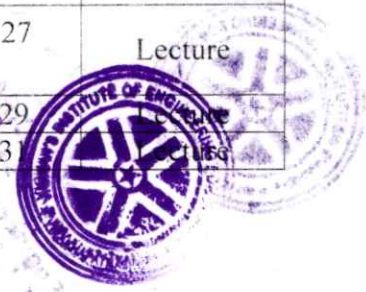
**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**LECTURE PLAN**

Course Name: <b>Concurrent and Parallel Programming</b>	Course Code: <b>C412</b>
Year/ Sem : <b>IV B TECH II SEM</b>	Regulation: <b>R16</b>
Admitted Batch: <b>2017</b>	Academic Year: <b>2020-21</b>
Number of Lectures per week: <b>06</b>	
Course Coordinator : <b>Dr. P. Vijaya Bharati</b>	
Course handled: Section A- <b>Mrs. G. Sandhya</b>	
Course handled: Section B – <b>Dr.T.V.Madhusudhan Rao</b>	
Course handled: Section C – <b>Dr. P. Vijaya Bharati</b>	

Lecture No.	Topic name	Source	Teaching Methodology
Lecture 1	<b>UNIT I:</b> Introduction to concurrent and parallel programming	TB1- P: 11 – 15/ Vlink1	Lecture
Lecture 2	Concurrent versus sequential programming differences	TB1- P: 15 - 17	Lecture
Lecture 3	Basic need of Concurrent Programming *	TB1- P: 17 - 20	Lecture
Lecture 4	Concurrent programming constructs: Interleaving , Mutual Exclusion, safety	TB1- P: 28 - 37	Lecture
Lecture 5	Concurrent programming constructs: Liveness , semaphore, monitor	TB1- P: 37 - 44	Lecture
Lecture 6	Concurrent programming constructs: Channels, Message Passing	TB1- P: 44 - 51	Lecture
Lecture 7	Synchronization primitives: Semaphores	TB1- P: 53 - 57	Lecture
Lecture 8	Synchronization primitives: Lock types	TB1- P: 57 - 60	Lecture
Lecture 9	Synchronization primitives: Monitors	TB1- P: 60 - 62	Lecture
Lecture 10	<b>UNIT II:</b> Process	TB2- P: 92 - 112	Lecture
Lecture 11	Threads	TB2- P: 113 - 119	Lecture
Lecture 12	Inter Process Communication	TB2- P: 119 - 128	Lecture
Lecture 13	Shared Memory Model	Vlink2	Lecture
Lecture 14	Remote Procedure Call	TB2- P: 131 - 135	Lecture
Lecture 15	Message Passing Model	TB2- P: 136 - 140	Lecture
Lecture 16	Usage of Streams, Pipes, FIFO, Sockets In Interprocess Communication	TB2- P: 140 - 143	Lecture
Lecture 17	Starvation	TB2- P: 143 - 145	Lecture
Lecture 18	Deadlock and Livelock, Deadlock Prevention	TB2- P: 146 - 149	Reciprocal Questioning
Lecture 19	Issues and Challenges	Link1	Lecture
Lecture 20	Recent Trends in Concurrent Programming	Link2	Lecture
Lecture 21	<b>UNIT III:</b> Parallel Algorithms - Introduction	R1 - P: 25 – 27	Lecture
Lecture 22	Data Structures – Linear array, Binary tree	Vol 3 P: 27 - 29	Lecture
Lecture 23	2D Mesh, Shared Variable	P: 29 - 31	Lecture

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Lecture 24	Sorting in linear array and binary tree	R1 - P: 31 - 33	Lecture
Lecture 25	Sorting in 2D Mesh and Shared Variable	R1 - P: 34 - 35	Lecture
Lecture 26	Prefix sum algorithm	R1 - P: 35 - 37	Lecture
Lecture 27	Ranking and Parallelism	TB9 - P: 38 - 39	Lecture
Lecture 28	Parallel algorithm models	TB9 - P: 01 - 04	Lecture
Lecture 29	Parallel Sorting Algorithms	TB9 - P: 27 - 31	Lecture
Lecture 30	Parallel Searching Algorithms	TB9 - P: 32 - 36	Lecture
Lecture 31	Parallel Traversal Algorithms	TB9 - P: 36 - 40	Lecture
Lecture 32	<b>UNIT IV: Parallel programming paradigms – Introduction</b>	TB9 - P: 01 - 04	Lecture
Lecture 33	Data parallel model	TB9 - P: 05 - 07	Lecture
Lecture 34	Task parallel model	TB9 - P: 07 - 09	Lecture
Lecture 35	Shared memory model	TB2- P: 128 - 130	Lecture
Lecture 36	Message passing model	TB2- P: 136 - 140	Lecture
Lecture 37	Parallel Architectures	Link3	Lecture
Lecture 38	Pipeline Processing	Link3	Lecture
Lecture 39	Arithmetic Pipelines	Link3	Lecture
Lecture 40	Vector Processing	Link3	Lecture
Lecture 41	Array Processing	Link3	Lecture
Lecture 42	Superscalar Processing	Link3	Lecture
Lecture 43	VLIW architecture	Link3	Lecture
Lecture 44	Multithreaded processors	Link3	Lecture
Lecture 45	GPGPU – Introduction	Link4	Lecture
Lecture 46	Implementation of GPGPU	Link4	Lecture
Lecture 47	GPU Vs CPU	Link4	Lecture
Lecture 48	GPU Programming Concepts	Link4	Lecture
Lecture 49	Applications of GPGPU	Link4	Lecture
Lecture 50	POSIX Threads	Link5	Lecture
Lecture 51	Thread design patterns	Link5	Lecture
Lecture 52	Implementations of Pthreads	Link5	Lecture
Lecture 53	Synchronization primitives	Link6	Lecture
Lecture 54	Software Transaction Memory (STM)	Link6	Lecture
Lecture 55	Transactional Locking	Link6	Lecture
Lecture 56	<b>UNIT V: OpenMP - Introduction</b>	Link7/ Vlink5	Lecture
Lecture 57	Implementations, History	Link7	Lecture
Lecture 58	OpenCL – Introduction, History	TB10 - P: 350 - 354	Lecture
Lecture 59	Versions, Implementations, Performance	TB10 - P: 355 - 360	Lecture
Lecture 60	Cilk++ - Introduction	Link8/ Vlink5	Lecture
Lecture 61	Implementation	Link8	Lecture
Lecture 62	Intel TBB: Introduction	Link9/ Vlink6	Lecture
Lecture 63	TBB Architecture and Implementation	Link9	Lecture
Lecture 64	CUDA: Introduction	TB8- P: 23 – 29/ Vlink7	Lecture
Lecture 65	Programs, Libraries	TB8- P: 29 - 39	Lecture
Lecture 66	<b>UNIT VI: Need of Heterogeneous Computing</b>	TB10 – P: 17 – 20	Lecture
Lecture 67	C++ AMP Introduction	Link10/ Vlink8	Lecture
Lecture 68	Programs	Link11	Lecture
Lecture 69	OpenCL in Heterogeneous Computing	TB10 – P: 358 – 360	Lecture
Lecture 70	Steps to initialize an OpenCL application*	Link12	Lecture



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 Visakhapatnam-531124

## \*Topics beyond Syllabus

### TEXT BOOKS:

- TB1:** Mordechai Ben-Ari. Principles of Concurrent and Distributed Programming, Prentice-Hall International.  
**TB2:** Greg Andrews. Concurrent Programming: Principles and Practice, Addison Wesley.  
**TB3:** Gadi Taubenfeld, Synchronization Algorithms and Concurrent Programming, Pearson.  
**TB4:** M. Ben-Ari. Principles of Concurrent Programming, Prentice Hall.  
**TB5:** Fred B. Schneider. On Concurrent Programming, Springer.  
**TB6:** Brinch Hansen. The Origins of Concurrent Programming: From Semaphore to RPCs  
**TB7:** Introduction to Parallel Computing by Ananth Grama, Anshul Gupta, Vipin Kumar – Pearson  
**TB8:** CUDA Programming – David Kirk.  
**TB9:** Parallel Algorithms – Joseph Ja Ja.  
**TB10:** Heterogeneous Computing with OpenCL by Ben Gaster, Lee Howes et al (Morgan Kaufmann)

### REFERENCE TEXT BOOKS:

**R1:** Introduction to Parallel Processing - Algorithms and Architectures by Behrooz Parhami

### Web Links:

- Link 1. [https://subscription.packtpub.com/book/application\\_development/9781785886126/1/ch011v11sec09/parallel-problems-in-concurrent-applications](https://subscription.packtpub.com/book/application_development/9781785886126/1/ch011v11sec09/parallel-problems-in-concurrent-applications)  
Link 2. <https://www.researchgate.net/publication/272377248>  
Link 3. <https://byu.instructure.com/courses/617/files/81241/download?verifier=Ft9w26pUkCXHIZvLVPzJNYRPwltE70ncvYmukCBW>  
Link 4. [https://en.wikipedia.org/wiki/General-purpose\\_computing\\_on\\_graphics\\_processing\\_units](https://en.wikipedia.org/wiki/General-purpose_computing_on_graphics_processing_units)  
Link 5. <https://randu.org/tutorials/threads/#pthreads>  
Link 6. [https://en.wikipedia.org/wiki/Software\\_transactional\\_memory](https://en.wikipedia.org/wiki/Software_transactional_memory)  
Link 7. <https://en.wikipedia.org/wiki/OpenMP>  
Link 8. <https://link.springer.com/referencework/10.1007/978-0-387-09766-4>  
Link 9. <https://www.threadingbuildingblocks.org/intel-tCB-tutorial>  
Link 10. <https://docs.microsoft.com/en-us/cpp/parallel/amp/cpp-amp-overview?view=vs-2019>  
Link 11. <https://docs.microsoft.com/en-us/cpp/parallel/amp/cpp-amp-cpp-accelerated-massive-parallelism?view=vs-2019>  
Link 12. <https://www.slideshare.net/TomaszBednarz1/introduction-to-opencl-2010>

### Video Links:

- Vlink 1. <https://youtu.be/MmUER47yJjk>  
Vlink 2. <https://youtu.be/AyN85RtGreE>  
Vlink 3. <https://youtu.be/umku9-eQk9Q>  
Vlink 4. <https://youtu.be/6tcjojBoJn8>  
Vlink 5. <https://youtu.be/GMnXrSNfkpl>  
Vlink 6. [https://youtu.be/Xis\\_2CR2kjs](https://youtu.be/Xis_2CR2kjs)  
Vlink 7. [https://youtu.be/9bB\\_G9865zU](https://youtu.be/9bB_G9865zU)  
Vlink 8. [https://youtu.be/\\_qO7PNda\\_ss](https://youtu.be/_qO7PNda_ss)

  
COURSE COORDINATOR

  
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**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

Course Name: <b>Concurrent and Parallel Programming</b>	Course Code: <b>C412</b>
Year/ Sem /Sec : <b>IV B TECH II SEM A</b>	Regulation: <b>R16</b>
Admitted Batch: <b>2017</b>	Academic Year: <b>2020-21</b>
Teaching Methodology: <b>Reciprocal Questioning</b>	Topic: <b>Deadlock and Livelock, Deadlock Prevention</b>
Faculty: <b>Ms. G.Sandhya</b>	No. of Students: <b>64</b>
No. of Students Present: <b>59</b>	No. of Students Absent: <b>5</b>

**Learning Objective:**

- Identify the Deadlock and Livelock in Concurrent and Parallel Programming
- Apply Deadlock Prevention techniques to handle the deadlock problem

**Pre-Class Activity:**

- 1) What is Deadlock? (1M)
- 2) What is Resource allocation graph? (1 M)
- 3) What will happen when Resource allocation graph is having cycles? (1 M)
- 4) What is Livelock? (1 M)
- 5) What is Resource starvation? (1 M)

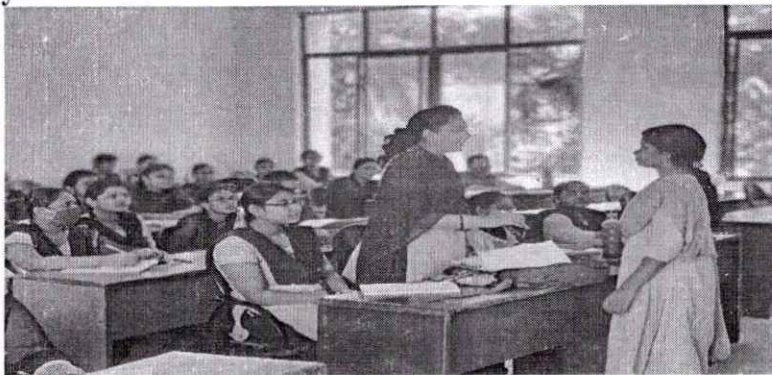
**In-Class Activity**

1. How to solve dining philosopher's problem? (4 M)
2. Mention the four conditions which are necessary for deadlock? (4 M)
3. What is the need of acquiring resources predefined order? (4 M)
4. What is Synchronization resources ? (4 M)
5. What is data race condition? (4 M)

**Post-Class Activity**

1. Explain the conditions for prevention of Dead lock? (5 M)

**Class room activity:**



**Some Photos on implementation of the method**



*30/2/21*  
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 Engineering for Women  
 Kapujaggarajupeta, VSEZ (P.O.)  
 Visakhapatnam-49

**Table: Sample assessment sheet for Inquiry based activity**

No	Regd.No	Name of the Student	Pre-Class Activity (5M)	In-Class Activity (20 M)	Post-Class Activity (5M)	Total (30M)	Improvement in Mark
1	17NM1A0501	A V K Pravallika	4	19	5	28	1
2	17NM1A0502	Adapa Sai Santhoshi	4	19	5	28	1
3	17NM1A0503	Addala Lakshmi	5	20	5	30	0
4	17NM1A0504	Agathamudi Manasa	4	19	5	28	1
5	17NM1A0505	Allu Uma Sai Naga Durga Chinni	A	A	A	A	A

6	17NM1A0506	Alluri Bhavana	4	20	5	29	1
7	17NM1A0507	Ambati Sireesha	3	15	4	22	1
8	17NM1A0508	Anga Deepika	2	11	3	16	1
9	17NM1A0509	Anne Sri Rekha	2	11	4	17	2
10	17NM1A0510	Aripaka Suvarna Geetha	4	20	5	29	1
11	17NM1A0511	Arnipalli Shivani	4	17	4	25	0
12	17NM1A0512	Ayithi Deepika	4	19	5	28	1
13	17NM1A0513	Baliboyena Divya	5	20	5	30	0
14	17NM1A0514	Balusu Charishma Naga Sai Sarada	4	19	4	27	0
15	17NM1A0515	Basana Harshini	3	19	5	27	2
16	17NM1A0516	Batchu Sushmita	4	19	5	28	1
17	17NM1A0517	Behara Anusha	4	19	5	28	1
18	17NM1A0518	Bhimuni Bhargavi	2	11	3	16	1
19	17NM1A0519	Birlangi Sirisha	2	11	4	17	2
20	17NM1A0520	Bodda Akhila	A	A	A	A	A
21	17NM1A0521	Boddeda Utteja	4	19	5	28	1
22	17NM1A0522	Bokka Sri Sai Manasa	2	11	4	17	2
23	17NM1A0523	Bollapragada Lalitha Ananta Kiranmai	4	17	4	25	0
24	17NM1A0524	Bonam Roshini	4	19	5	28	1
25	17NM1A0525	Borra Sunitha	5	20	5	30	1
26	17NM1A0526	Boyidi Supriya	A	A	A	A	A
27	17NM1A0527	Chevveti Virinchita	4	20	5	29	1
28	17NM1A0528	Chidapareddi Monisha	3	15	4	22	1
29	17NM1A0529	Chilakalapalli Sai Likhita	4	19	5	28	1
30	17NM1A0530	Chintada Alekhya	3	19	5	27	2
31	17NM1A0531	Chongali Madhulika	5	20	5	30	0
32	17NM1A0532	Choppa Nandini	4	19	5	28	1
33	17NM1A0533	D Priya	2	11	4	17	2
34	17NM1A0534	Dadala Charanya	4	20	5	29	1
35	17NM1A0535	Dadi Sowmya	3	15	4	22	1
36	17NM1A0536	Dandabathini Ankitha	4	17	4	25	0
37	17NM1A0537	Deredla Vineetha Sri	4	19	5	28	1
38	17NM1A0538	Dulam Layasree	4	19	5	28	1
39	17NM1A0539	Dunna Sindhu	4	19	5	28	1
40	17NM1A0540	Dwarapudi Joshitha	5	20	5	30	0
41	17NM1A0541	Edharapalli Sirisha Rani	4	19	5	28	1
42	17NM1A0542	Eluri Harsha Vardhini	2	11	3	16	1
43	17NM1A0543	G Nagamani	2	11	4	17	2
44	17NM1A0544	G Poojitha Sri Lakshmi	4	17	4	25	0
45	17NM1A0545	Gadidala Vathsalya	4	19	5	28	1
46	17NM1A0546	Gali Tejaswini	4	19	5	28	1
47	17NM1A0548	Gantla Joshna	2	11	4	17	2
48	17NM1A0549	Gavireddy Manasa	A	A	A	A	A
49	17NM1A0550	Gavva Rani	5	20	5	30	0
50	17NM1A0551	Gedela Ananda Bhavani	2	11	3	16	1
51	17NM1A0552	Gogula Subbalakshmi Sirisha	2	11	4	17	2
52	17NM1A0553	Gompa Nikhila	3	19	5	27	2
53	17NM1A0554	Gorusu Sravani	A	A	A	A	A
54	17NM1A0555	Gullipalli Jahnvi	4	20	5	29	1
55	17NM1A0556	Gummadi Sai Chandana	4	19	5	28	1
56	17NM1A0557	Gunna Madhusri	5	20	5	30	0
57	17NM1A0558	Isukapatla Ramya	4	19	4	27	0
58	17NM1A0559	Jakkuva Manasa	5	20	5	30	0
59	17NM1A0560	Jampa Geetha Krishna Satya Sree Sowmya	4	19	5	28	1
60	17NM1A0561	Jerripothula Nadiya	3	19	5	27	2
61	17NM1A0562	Joba Kumari	2	11	3	16	1



320  
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62	16NM1A0580	Naripalli Balamaheswari	4	17	5	25	1
63	17A61A0507	Challa Renuka Devi	4	19	5	28	1
64	17NN1A05B5	Vuppala Manisha	4	19	5	28	1

**Activity Outcomes:**

- To understand different optimization techniques and its importance.
- To optimize the code using different techniques of Machine Independent optimization.

**Activity Outcome to POs& PSOs Mapping:**

Activity outcome	Mapping to POs and PSOs
Identify the Deadlock and Livelock in Concurrent and Parallel Programming	PO1,PO2, PO3,
Apply Deadlock Prevention techniques to handle the deadlock problem	PO3,PO4, PSO1, PSO2

**Post Implications:**

- From pre class activity to in class activity all students actively participated in every stage of the activity.
- Students at the end of this reciprocal questioning are able to optimize the code using machine independent optimization techniques.

  
Subject Faculty

  
Module Coordinator

  
Head of the Department

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Computer Science & Engineering  
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# VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN

Approved by AICTE, New Delhi, Affiliated to JNTU Kakinada

Kapujaggarajupeta, VSEZ(Post), Visakhapatnam-530049,AP

## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Course Name: <b>Concurrent and Parallel Programming</b>	Course Code: <b>C412</b>
Year/ Sem /Sec : <b>IV B TECH II SEM B</b>	Regulation: <b>R16</b>
Admitted Batch: <b>2017</b>	Academic Year: <b>2020-21</b>
Teaching Methodology: <b>Reciprocal Questioning</b>	Topic: <b>Deadlock and Livelock, Deadlock Prevention</b>
Faculty: <b>Dr.T.V.Madhusudhan Rao</b>	No. of Students: <b>64</b>
No. of Students Present: <b>62</b>	No. of Students Absent: <b>2</b>

### Learning Objective:

- Identify the Deadlock and Livelock in Concurrent and Parallel Programming
- Apply Deadlock Prevention techniques to handle the deadlock problem

### Pre-Class Activity:

- 1) What is Deadlock? (1M)
- 2) What is Resource allocation graph? (1 M)
- 3) What will happen when Resource allocation graph is having cycles? (1 M)
- 4) What is Livelock? (1 M)
- 5) What is Resource starvation? (1 M)

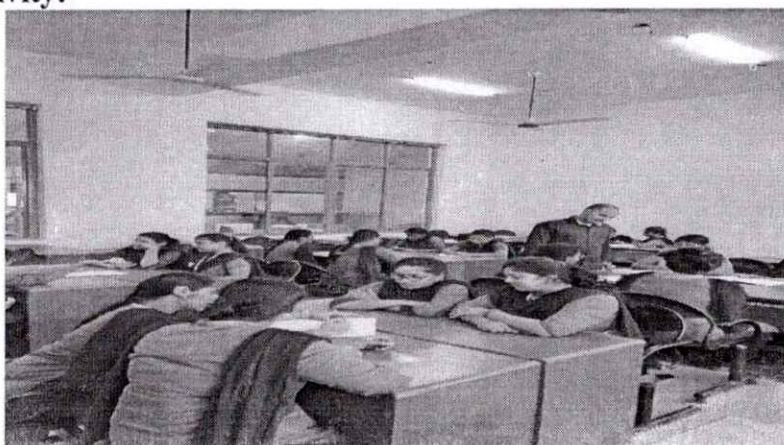
### In-Class Activity

1. How to solve dining philosopher's problem? (4 M)
2. Mention the four conditions which are necessary for deadlock? (4 M)
3. What is the need of acquiring resources predefined order? (4 M)
4. What is Synchronization resources ? (4 M)
5. What is data race condition? (4 M)

### Post-Class Activity

1. Explain the conditions for prevention of Dead lock? (5 M)

### Class room activity:



Some Photos on implementation of the method

Table: Sample assessment sheet for Inquiry based activity



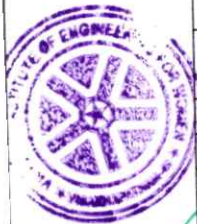
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No	Regd.No	Name of the Student	Pre-Class Activity (5M)	In-Class Activity (20 M)	Post-Class Activity (5M)	Total (30M)	Improvement in Mark
1	17NM1A0563	Jogavajhula Poornima	2	11	3	16	1
2	17NM1A0564	Jonnakuti Sai Harshitha	2	11	4	17	2
3	17NM1A0565	Kadagala Hari Swetha	2	11	3	16	1



4	17NM1A0566	Kakara Lavanya	4	19	5	28	1
5	17NM1A0567	Kakkala Joga Sandhya	2	11	4	17	2
6	17NM1A0568	Kalaga Sahitya	4	17	4	25	0
7	17NM1A0569	Kalepu Sreeja	4	19	5	28	1
8	17NM1A0570	Kalidindi Supriya	5	20	5	30	0
9	17NM1A0571	Kalla Divya	2	11	4	17	2
10	17NM1A0572	Kallada Yamuna	4	20	5	29	1
11	17NM1A0573	Kallepalli Vijaya Varshini	4	17	4	25	0
12	17NM1A0574	Kammili Tanuja	4	19	5	28	1
13	17NM1A0576	Kandrika Soumya	5	20	5	30	0
14	17NM1A0577	Kankipati Bhagyavarsha	4	19	4	27	0
15	17NM1A0578	Karada Pooja	3	19	5	27	2
16	17NM1A0579	Karaka Jyoshna	4	19	5	28	1
17	17NM1A0580	Karanam Pooja	4	19	5	28	1
18	17NM1A0581	Kola Lavanya	2	11	3	16	1
19	17NM1A0582	Kolli Lalitha	2	11	4	17	2
20	17NM1A0583	Kolli Sowjanya	A	A	A	A	A
21	17NM1A0584	Komanapalli Satya Priya	4	19	5	28	1
22	17NM1A0585	Kommi Charishma Chowdary	2	11	4	17	2
23	17NM1A0586	Kommineni Srivallika	4	17	4	25	1
24	17NM1A0587	Konda Basheera	4	19	5	28	0
25	17NM1A0588	Kosuri Lavanya	5	20	5	30	0
26	17NM1A0589	Kovela Hema Sri	A	A	A	A	A
27	17NM1A0590	Kunchala Vennela	4	20	5	29	1
28	17NM1A0591	Kundrapu Divya	3	15	4	22	1
29	17NM1A0592	Kycharla Leelavathi	4	19	5	28	1
30	17NM1A0593	L Trisha	3	19	5	27	2
31	17NM1A0594	Lanka Sruthi	5	20	5	30	0
32	17NM1A0595	Madaka Sai Mounica	4	19	5	28	1
33	17NM1A0596	Maddi Annapurna	2	11	4	17	2
34	17NM1A0597	Made Ratna Shivani	4	20	5	29	1
35	17NM1A0598	Madhavarapu Venkata Sai Pravallika	3	15	4	22	1
36	17NM1A0599	Madimi Deborah Zenifer	4	17	4	25	0
37	17NM1A05A0	Manikonda Rithwikaa	4	19	5	28	1
38	17NM1A05A1	Marada Sai Bhavana	4	19	5	28	1
39	17NM1A05A2	Medisetti Jyothsna	4	19	5	28	0
40	17NM1A05A3	Mojjada Uma Maheswari	5	20	5	30	0
41	17NM1A05A5	Molleti Shailaja Preethi	4	19	5	28	1
42	17NM1A05A6	Mylapilli Rajaya Lakshmi Charanmai	2	11	3	16	1
43	17NM1A05A7	Nagireddy Swarupa	2	11	4	17	2
44	17NM1A05A8	Nallabati Anusha	4	17	4	25	0
45	17NM1A05A9	Nallana Poojitha	4	19	5	28	1
46	17NM1A05B0	Namburi Ramadevi	4	19	5	28	1
47	17NM1A05B1	Nandamuri Sai Sravani Krishna	5	20	5	30	0
48	17NM1A05B2	Nandavarapu Padma	2	11	4	17	2
49	17NM1A05B3	Nannapaneni Sai Sandhya	4	20	5	29	1
50	17NM1A05B4	Natti Poornima	4	17	4	25	0
51	17NM1A05B5	Nukala Sruthii	4	19	5	28	1
52	17NM1A05B6	Nupur Das	5	20	5	30	0
53	17NM1A05B7	Padilam Gnaneswari	4	19	5	28	1
54	17NM1A05B8	Palem Sushma	5	20	5	30	0
55	17NM1A05B9	Palli Vasanthi	2	11	4	17	2
56	18NM5A0501	Allavarapu Hemalatha	4	20	5	29	1
57	18NM5A0502	Bailapudi Yamuna Kumari	4	17	4	25	0
58	18NM5A0503	Kalla Pavani	4	19	5	28	1



379  
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59	18NM5A0504	Kambala Hema	5	20	5	30	0
60	18NM5A0505	Karanam Poorna	3	19	5	27	2
61	18NM5A0506	Kolaparathi Uma Sai Sirisha	2	11	3	16	1
62	18NM5A0507	Kundhi Kiranmai	2	11	4	17	2
63	18NM5A0508	Kundrapu Pavani	4	20	5	29	1
64	18NM5A0509	Madaka Padmaja	4	17	4	25	0

### Activity Outcomes:

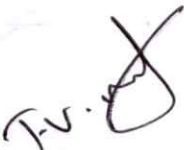
- To understand different optimization techniques and its importance.
- To optimize the code using different techniques of Machine Independent optimization.

### Activity Outcome to POs& PSOs Mapping:

Activity outcome	Mapping to POs and PSOs
Identify the Deadlock and Livelock in Concurrent and Parallel Programming	PO1,PO2, PO3,
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### Post Implications:

- From pre class activity to in class activity all students actively participated in every stage of the activity.
- Students at the end of this reciprocal questioning are able to optimize the code using machine independent optimization techniques.

  
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**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

Course Name: <b>Concurrent and Parallel Programming</b>	Course Code: <b>C412</b>
Year/ Sem /Sec : <b>IV B TECH II SEM C</b>	Regulation: <b>R16</b>
Admitted Batch: <b>2017</b>	Academic Year: <b>2020-21</b>
Teaching Methodology: <b>Reciprocal Questioning</b>	Topic: <b>Deadlock and Livelock, Deadlock Prevention</b>
Faculty: <b>Dr. P.Vijaya Bharati</b>	No. of Students: <b>67</b>
No. of Students Present: <b>65</b>	No. of Students Absent: <b>2</b>

**Learning Objective:**

- Identify the Deadlock and Livelock in Concurrent and Parallel Programming
- Apply Deadlock Prevention techniques to handle the deadlock problem

**Pre-Class Activity:**

- 1) What is Deadlock? (1M)
- 2) What is Resource allocation graph? (1 M)
- 3) What will happen when Resource allocation graph is having cycles? (1 M)
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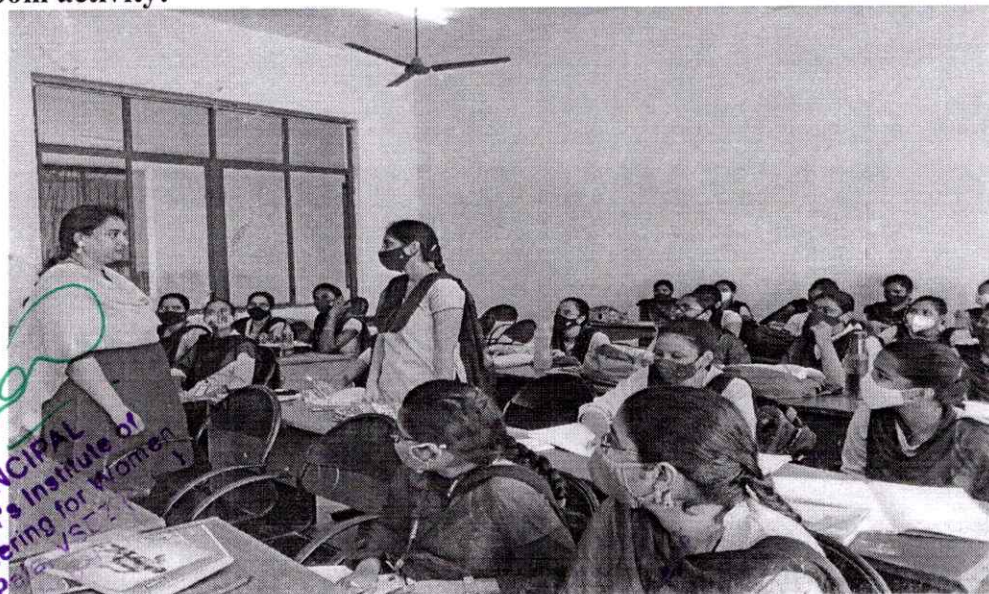
**In-Class Activity**

1. How to solve dining philosopher's problem? (4 M)
2. Mention the four conditions which are necessary for deadlock? (4 M)
3. What is the need of acquiring resources predefined order? (4 M)
4. What is Synchronization resources ? (4 M)
5. What is data race condition? (4 M)

**Post-Class Activity**

1. Explain the conditions for prevention of Dead lock? (5 M)

**Class room activity:**



**Some Photos on implementation of the method**



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Engineering for Women  
K.J. P... VSEZ  
Visakhapatnam



**Table: Sample assessment sheet for Inquiry based activity**

S.No	Regd.No	Name of the Student	Pre-Class Activity (5M)	In-Class Activity (20 M)	Post-Class Activity (5M)	Total (30M)	Improvement in Mark
1	17NM1A05C0	Pamula Gayathri	4	20	5	29	1
2	17NM1A05C1	Pappu Sri Sai Keerthi	3	15	4	22	1
3	17NM1A05C2	Paricharla Lahari	2	11	3	16	1
4	17NM1A05C3	Pasala Anusha	2	11	4	17	2
5	17NM1A05C4	Peddada Jaya Chandrika	4	20	5	29	1
6	17NM1A05C5	Peethala Rama Lakshmi	4	17	4	25	0
7	17NM1A05C6	Pentakota Venkata Satya Likhitha	4	19	5	28	1
8	17NM1A05C7	Petakamsetty Sri Jyothi Meghana	5	20	5	30	0
9	17NM1A05C8	Pilla Mounika	4	19	4	27	0
10	17NM1A05C9	Poliseti Teja Sai Sree	3	19	5	27	2
11	17NM1A05D0	Ponnada Bhavya	4	19	5	28	1
12	17NM1A05D1	Pothula Jahnvi	4	19	5	28	1
13	17NM1A05D2	Pulidindi Krishna Priya	4	20	5	29	1
14	17NM1A05D3	Pureti Likhitha	3	15	4	22	1
15	17NM1A05D4	Pusapati Revathi	4	19	5	28	1
16	17NM1A05D6	Ragolu Sadhana	3	19	5	27	2
17	17NM1A05D7	Ramadalai Keerthi	5	20	5	30	0
18	17NM1A05D8	Rayapureddy Anusha	4	19	5	28	1
19	17NM1A05D9	Rayudu L V Srujana	2	11	4	17	2
20	17NM1A05E0	Rongala Bharathi Jyothi	4	20	5	29	1
21	17NM1A05E1	Rongali Tanuja	3	15	4	22	1
22	17NM1A05E2	Rudraraju Yamini Varma	4	17	4	25	0
23	17NM1A05E3	Sai Rakshitha Pulagala	4	19	5	28	1
24	17NM1A05E4	Sanaboyina Sri Varshini	4	19	5	28	1
25	17NM1A05E5	Sanam Rupa Sri	4	19	5	28	1
26	17NM1A05E6	Sanapathi Bhagyasri	5	20	5	30	0
27	17NM1A05E7	Sanapathi Sravani	4	19	5	28	1
28	17NM1A05E8	Sappa Sandhya Rani	2	11	3	16	1
29	17NM1A05E9	Seekari Rama Devi	2	11	4	17	2
30	17NM1A05F0	Seeramreddi Namratha	4	17	4	25	0
31	17NM1A05F1	Silaparasetty Sushma	4	19	5	28	1
32	17NM1A05F2	Singampalli Ramya	4	19	5	28	1
33	17NM1A05F3	Singampalli Sandhya Rani	2	11	3	16	1
34	17NM1A05F4	Singampalli Yamini	2	11	4	17	2
35	17NM1A05F5	Sivala Deepika	4	17	4	25	0
36	17NM1A05F6	Sivaratri Uma Devi	4	19	5	28	1
37	17NM1A05F7	Sonti Jahanavi	4	19	5	28	1
38	17NM1A05F8	Srisailapu Sireesha	2	11	4	17	2
39	17NM1A05F9	Sunkara Vijayalaxmi	A	A	A	A	A
40	17NM1A05G0	Surada Haritha	5	20	5	30	0
41	17NM1A05G2	Tadisetti Leela Bhavani	2	11	3	16	1
42	17NM1A05G3	Talluri Meghana	2	11	4	17	2
43	17NM1A05G4	Tanari Jnana Narayana Suryakumari	3	19	5	27	2
44	17NM1A05G5	Tokachichu Poojitha	A	A	A	A	A
45	17NM1A05G6	Vabbalisetty Kapthana	4	20	5	29	1
46	17NM1A05G7	Vantaku Kusumanjali	4	19	5	28	1
47	17NM1A05G9	Vasreddy Swapnuka	5	20	5	30	0



**Dr. P. S. Srinivasulu Reddy**  
**K. J. Peta, V. S. Puram**  
**Visakhapatnam**

48	17NM1A05H0	Vedula Shaankari	4	19	4	27	0
49	17NM1A05H1	Velaga Devi Lakshmi Rajeswari	5	20	5	30	0
50	17NM1A05H2	Veturu Ramyalakshmi	4	19	5	28	1
51	17NM1A05H3	Vishnumolakala Vijaya Lakshmi	3	19	5	27	2
52	17NM1A05H4	Vurukuti Mounica	2	11	3	16	1
53	17NM1A05H5	Yelleti Yamini	4	17	5	25	1
54	17NM1A05H6	Yerra Dharani Naga Sai Bhanusri	4	19	5	28	1
55	17NM1A05H7	Yeshaswini Bheemarasetti	4	19	5	28	1
56	18NM5A0511	Nagala Chandini	5	20	5	30	0
57	18NM5A0512	Neeli Koti Siva Sai Priyanka	4	19	4	27	0
58	18NM5A0513	Nidrabingi Krishna Veni	5	20	5	30	0
59	18NM5A0514	Penaganti Devi	4	19	5	28	1
60	18NM5A0515	Polaki Swathi	3	19	5	27	2
61	18NM5A0516	Ramireddi Chandini	2	11	3	16	1
62	18NM5A0517	Sammingi Nirmala	2	11	3	16	1
63	18NM5A0518	Siyadri Naga Laxmi Yamini	2	11	4	17	2
64	18NM5A0519	Tekkali Roopa Sravani	4	17	4	25	0
65	18NM5A0520	Vasupilli Harini	4	19	5	28	1
66	18NM5A0521	Magapu Priya Mounika	4	19	5	28	1
67	17NM1A05H8	Chinta Meghana	2	11	3	16	1

#### Activity Outcomes:

- To understand different optimization techniques and its importance.
- To optimize the code using different techniques of Machine Independent optimization.

#### Activity Outcome to POs& PSOs Mapping:

Activity outcome	Mapping to POs and PSOs
Identify the Deadlock and Livelock in Concurrent and Parallel Programming	PO1,PO2, PO3,
Apply Deadlock Prevention techniques to handle the deadlock problem	PO3,PO4, PSO1, PSO2

#### Post Implications:

- From pre class activity to in class activity all students actively participated in every stage of the activity.
- Students at the end of this reciprocal questioning are able to optimize the code using machine independent optimization techniques.

Subject Faculty

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Module Coordinator



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**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**LECTURE PLAN**

Course Name: <b>Concurrent and Parallel Programming</b>	Course Code: <b>C412</b>
Year/ Sem : <b>IV B TECH II SEM</b>	Regulation: <b>R16</b>
Admitted Batch: <b>2016</b>	Academic Year: <b>2019-20</b>
Number of Lectures per week: <b>06</b>	
Course Coordinator : <b>Mrs. B. Madhavi</b>	
Course handled: Section A- <b>Dr. P. Vijaya Bharati</b>	
Course handled: Section B - <b>Mrs. B. Madhavi</b>	
Course handled: Section C - <b>Mrs. B. Madhavi</b>	

Lecture No.	Topic name	Source	Teaching Methodology
Lecture 1	<b>UNIT I:</b> Introduction to concurrent and parallel programming	TB1- P: 11 – 15/ Vlink1	Lecture
Lecture 2	Concurrent versus sequential programming differences	TB1- P: 15 - 17	Lecture
Lecture 3	Basic need of Concurrent Programming *	TB1- P: 17 - 20	Lecture
Lecture 4	Concurrent programming constructs: Interleaving , Mutual Exclusion, safety	TB1- P: 28 - 37	Lecture
Lecture 5	Concurrent programming constructs: Liveness , semaphore, monitor	TB1- P: 37 - 44	Lecture
Lecture 6	Concurrent programming constructs: Channels, Message Passing	TB1- P: 44 - 51	Lecture
Lecture 7	Synchronization primitives: Semaphores	TB1- P: 53 - 57	Lecture
Lecture 8	Synchronization primitives: Lock types	TB1- P: 57 - 60	Lecture
Lecture 9	Synchronization primitives: Monitors	TB1- P: 60 - 62	Lecture
Lecture 10	<b>UNIT II:</b> Process	TB2- P: 92 - 112	Lecture
Lecture 11	Threads	TB2- P: 113 - 119	Lecture
Lecture 12	Inter Process Communication	TB2- P: 119 - 128	Lecture
Lecture 13	Shared Memory Model	Vlink2	Lecture
Lecture 14	Remote Procedure Call	TB2- P: 131 - 135	Lecture
Lecture 15	Message Passing Model	TB2- P: 136 - 140	Lecture
Lecture 16	Usage of Streams, Pipes, FIFO, Sockets In Interprocess Communication	TB2- P: 140 - 143	Lecture
Lecture 17	Starvation	TB2- P: 143 - 145	Lecture
Lecture 18	Deadlock and Livelock, Deadlock Prevention	TB2- P: 146 - 149	Reciprocal Questioning
Lecture 19	Issues and Challenges	Link1	Lecture
Lecture 20	Recent Trends in Concurrent Programming	Link2	Lecture
Lecture 21	<b>UNIT III:</b> Parallel Algorithms - Introduction	R1 - P: 25 – 27 Vlink3	Lecture
Lecture 22	Data Structures – Linear array, Binary tree	R1 - P: 27 - 29	Lecture

Lecture 23	2DMesh, Shared Variable	R1 - P: 29 - 31	Lecture
Lecture 24	Sorting in linear array and binary tree	R1 - P: 31 - 33	Lecture
Lecture 25	Sorting in 2DMesh and Shared Variable	R1 - P: 34 - 35	Lecture
Lecture 26	Prefix sum algorithm	R1 - P: 35 - 37	Lecture
Lecture 27	Ranking and Parallelism	TB9 - P: 38 - 39	Lecture
Lecture 28	Parallel algorithm models	TB9 - P: 01 - 04	Lecture
Lecture 29	Parallel Sorting Algorithms	TB9- P: 27 - 31	Lecture
Lecture 30	Parallel Searching Algorithms	TB9 - P: 32 - 36	Lecture
Lecture 31	Parallel Traversal Algorithms	TB9 - P: 36 - 40	Lecture
Lecture 32	<b>UNIT IV:</b> Parallel programming paradigms – Introduction	TB9 - P: 01 - 04	Lecture
Lecture 33	Data parallel model	TB9 - P: 05 - 07	Lecture
Lecture 34	Task parallel model	TB9 - P: 07 - 09	Lecture
Lecture 35	Shared memory model	TB2- P: 128 - 130	Lecture
Lecture 36	Message passing model	TB2- P: 136 - 140	Lecture
Lecture 37	Parallel Architectures	Link3	Lecture
Lecture 38	Pipeline Processing	Link3	Lecture
Lecture 39	Arithmetic Pipelines	Link3	Lecture
Lecture 40	Vector Processing	Link3	Lecture
Lecture 41	Array Processing	Link3	Lecture
Lecture 42	Superscalar Processing	Link3	Lecture
Lecture 43	VLIW architecture	Link3	Lecture
Lecture 44	Multithreaded processors	Link3	Lecture
Lecture 45	GPGPU – Introduction	Link4	Lecture
Lecture 46	Implementation of GPGPU	Link4	Lecture
Lecture 47	GPU Vs CPU	Link4	Lecture
Lecture 48	GPU Programming Concepts	Link4	Lecture
Lecture 49	Applications of GPGPU	Link4	Lecture
Lecture 50	POSIX Threads	Link5	Lecture
Lecture 51	Thread design patterns	Link5	Lecture
Lecture 52	Implementations of Pthreads	Link5	Lecture
Lecture 53	Synchronization primitives	Link6	Lecture
Lecture 54	Software Transaction Memory (STM)	Link6	Lecture
Lecture 55	Transactional Locking	Link6	Lecture
Lecture 56	<b>UNIT V:</b> OpenMP - Introduction	Link7/ Vlink5	Lecture

Lecture 57	Implementations, History	Link7	Lecture
Lecture 58	OpenCL – Introduction, History	TB10 - P: 350 - 354	Lecture
Lecture 59	Versions, Implementations, Performance	TB10 - P: 355 - 360	Lecture
Lecture 60	Cilk++ - Introduction	Link8/ Vlink5	Lecture
Lecture 61	Implementation	Link8	Lecture
Lecture 62	Intel TBB: Introduction	Link9/ Vlink6	Lecture
Lecture 63	TBB Architecture and Implementation	Link9	Lecture
Lecture 64	CUDA: Introduction	TB8- P: 23 – 29/ Vlink7	Lecture
Lecture 65	Programs, Libraries	TB8- P: 29 - 39	Lecture
Lecture 66	<b>UNIT VI: Need of Heterogeneous Computing</b>	TB10 – P: 17 – 20	Lecture
Lecture 67	C++ AMP Introduction	Link10/ Vlink8	Lecture
Lecture 68	Programs	Link11	Lecture
Lecture 69	OpenCL in Heterogeneous Computing	TB10 – P: 358 – 360	Lecture

### \*Topics beyond Syllabus

#### TEXT BOOKS:

**TB1:** Mordechai Ben-Ari. Principles of Concurrent and Distributed Programming, Prentice-Hall International.

**TB2:** Greg Andrews. Concurrent Programming: Principles and Practice, Addison Wesley.

**TB3:** Gadi Taubenfeld, Synchronization Algorithms and Concurrent Programming, Pearson.

**TB4:** M. Ben-Ari. Principles of Concurrent Programming, Prentice Hall.

**TB5:** Fred B. Schneider. On Concurrent Programming, Springer.

**TB6:** Brinch Hansen. The Origins of Concurrent Programming: From Semaphore to RPCs

**TB7:** Introduction to Parallel Computing by Ananth Grama, Anshul Gupta, Vipin Kumar – Pearson

**TB8:** CUDA Programming – David Kirk.

**TB9:** Parallel Algorithms – Joseph Ja Ja.

**TB10:** Heterogeneous Computing with OpenCL by Ben Gaster, Lee Howes et al (Morgan Kaufmann)

#### REFERENCE TEXT BOOKS:

**R1:** Introduction to Parallel Processing - Algorithms and Architectures by Behrooz Parhami

#### Web Links:

Link1. [https://subscription.packtpub.com/book/application\\_development/9781785886126/1/ch01/v1/sec09/possible-problems-in-concurrent-applications](https://subscription.packtpub.com/book/application_development/9781785886126/1/ch01/v1/sec09/possible-problems-in-concurrent-applications)

Link2. <https://www.researchgate.net/publication/272377248>

Link3. <https://byu.instructure.com/courses/617/files/81241/download?verifier=Ft9w26pUkCXHIZvLVPzJNYRPwlte70nevYmukCBW>



Link4. [https://en.wikipedia.org/wiki/General-purpose\\_computing\\_on\\_graphics\\_processing\\_units](https://en.wikipedia.org/wiki/General-purpose_computing_on_graphics_processing_units)  
Link5. <https://randu.org/tutorials/threads/#pthreads>  
Link6. [https://en.wikipedia.org/wiki/Software\\_transactional\\_memory](https://en.wikipedia.org/wiki/Software_transactional_memory)  
Link7. <https://en.wikipedia.org/wiki/OpenMP>  
Link8. <https://link.springer.com/referencework/10.1007/978-0-387-09766-4>  
Link9. <https://www.threadingbuildingblocks.org/intel-tCB-tutorial>  
Link10. <https://docs.microsoft.com/en-us/cpp/parallel/amp/cpp-amp-overview?view=vs-2019>  
Link11. <https://docs.microsoft.com/en-us/cpp/parallel/amp/cpp-amp-cpp-accelerated-massive-parallelism?view=vs-2019>

**Video Links:**

Vlink1. <https://youtu.be/MmUER47yJJk>  
Vlink2. <https://youtu.be/AyN85RtGreE>  
Vlink3. <https://youtu.be/umku9-eQk9Q>  
Vlink4. <https://youtu.be/6tcjojBoJn8>  
Vlink5. <https://youtu.be/GMnXrSNfkpl>  
Vlink6. [https://youtu.be/Xis\\_2CR2kjs](https://youtu.be/Xis_2CR2kjs)  
Vlink7. [https://youtu.be/9bB\\_G9865zU](https://youtu.be/9bB_G9865zU)  
Vlink8. [https://youtu.be/\\_qO7PNda\\_ss](https://youtu.be/_qO7PNda_ss)

*B. AA*

**COURSE COORDINATOR**



**HEAD OF THE DEPARTMENT**

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Kapujaggaraju Peta, VSEZ(Post), Visakhapatnam-530049,AP

## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Course Name: Concurrent and Parallel Programming	Course Code: C412
Year/ Sem /Sec : IV B TECH II SEM A	Regulation: R16
Admitted Batch: 2016	Academic Year: 2019-20
Teaching Methodology: JIGSAW- Collaborative	Topic: C++ AMP
Faculty: Dr. P. Vijaya Bharati	No. of Students: 61
No. of Students Present:59	No. of Students Absent:2

### JIGSAW (Collaborative Learning):

Collaborative learning is one of the best approach in engineering education where the students form into group and share their ideas to solve complex problems.

In this activity two student groups, HOME (JIGSAW) groups and EXPERT groups are formed. The size of each group is 06 students for this activity. The HOME group consists of heterogeneous learners and the EXPERT group consists of leaders of the HOME group.

### Implementation of Activity

Course	: CONCURRENT AND PARALLEL PROGRAMMING
Class	: IV CSE, I SEM A
Topic	: C++ AMP
Activity Chosen	: JIGSAW

### Concept for activity:

1. Importance of Parallel Programming.
2. Usage of techniques in implementing parallel computing.
3. Primary Components Of C++ Amp (Index Class, Extend Class, Array Class, Array View Class, Parallel\_For\_Each Class, Tiles, Barriers, Textures, Concurrency Visualizer, Compute Domain, Lambda Expressions, Creating C++ Amp Objects).

### Goals of this activity:

At the end of this activity, students will be able to:

1. Understand the implementation of parallel programming
2. Explain the various techniques to develop parallel computing.
3. Explain the implementation of heterogeneous programming using different techniques.

### Outcome of the Activity:

- Give Examples for different types of parallelism.
- Interpret the mechanism of Automatic parallelization.
- Illustrate working of any real time application using application checkpoint.

### Time planned:

Time required to execute the event is maximum 150 min (3 sessions) including survey of student learning styles, JIGSAW and EXPERT groups formation, peer discussion, student evaluation.

320  
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### Quiz Marks for Homogeneous Teams

Group No.	Expert Group Name	Student Roll No	Member ID	Student learning ability	Topic Assigned to group
1	EG1	16NM1A0502	A1- Leader	Strong Global Learner	Cross
		16NM1A0503	B1-Leader	Strong Global Learner	
		16NM1A0522	C1-Leader	Strong Global Learner	
		16NM1A0534	D1-Leader	Strong Global Learner	
		16NM1A0535	E1-Leader	Strong Global Learner	
		16NM1A0542	F1-Leader	Strong Global Learner	
2	EG2	16NM1A0524	G1-Leader	Strong Active Learner	Distinct
		16NM1A0551	H1-Leader	Strong Active Learner	
		16NM1A0554	I1-Leader	Strong Active Learner	
		16NM1A0559	J1-Leader	Strong Active Learner	
3	EG3	16NM1A0504	K1-Leader	Strong Active Learner	Filter
		16NM1A0509	L1-Leader	Strong Active Learner	
		16NM1A0506	A4	Strong Active Learner	
		16NM1A0507	B4	Strong Active Learner	
4	EG4	16NM1A0512	C4	Strong Active Learner	Foreach
		16NM1A0515	D4	Strong Active Learner	
		16NM1A0539	E4	Strong Active Learner	
		16NM1A0545	F4	Strong Active Learner	
5	EG5	16NM1A0552	G4	Strong Active Learner	Group/ Cogroup
		16NM1A0556	H4	Strong Active Learner	
		16NM1A0557	I4	Strong Active Learner	
		16NM1A0549	J4	Strong Active Learner	
6	EG6	16NM1A0558	K4	Strong Active Learner	Join
		16NM1A0562	L4	Strong Active Learner	
		16NM1A0508	A3	Strong Visual Learner	
		16NM1A0514	B3	Strong Visual Learner	
		16NM1A0518	C3	Strong Visual Learner	
7	EG7	16NM1A0519	D3	Strong Visual Learner	Sample
		16NM1A0520	E3	Strong Visual Learner	
		16NM1A0523	F3	Strong Visual Learner	
		16NM1A0530	F5	Strong Visual Learner	
		16NM1A0536	G3	Strong Visual Learner	
8	EG8	16NM1A0553	G5	Strong Visual Learner	Split
		16NM1A0537	H2	Strong Visual Learner	
		16NM1A0538	H5	Strong Visual Learner	
		16NM1A0548	I2	Strong Visual Learner	
9	EG9	16NM1A0543	I5	Strong Visual Learner	Order
		16NM1A0555	J2	Strong Visual Learner	
		16NM1A0546	J5	Strong Visual Learner	
		16NM1A0560	K2	Strong Visual Learner	
		16NM1A0544	K5	Strong Visual Learner	
10	EG10	16NM1A0561	L2	Strong Visual Learner	Union
		16NM1A0547	L5	Strong Visual Learner	
		16NM1A0501	A2	Strong Sequential Learner	
		16NM1A0505	B2	Strong Sequential Learner	
1	EG11	16NM1A0511	C2	Strong Sequential Learner	Distinct
		16NM1A0513	D2	Strong Sequential Learner	
		16NM1A0527	E2	Strong Sequential Learner	



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		16NM1A0529	F2	Strong Sequential Learner	
		16NM1A0555	G2	Strong Sequential Learner	
12	EG12	16NM1A0510	A5	Strong Reflective Learner	Group/Co group
		16NM1A0516	B5	Strong Reflective Learner	
		16NM1A0517	C5	Strong Reflective Learner	
13	EG13	16NM1A0531	J3	Strong Intuitive Learner	Join
		16NM1A0536	K3	Strong Intuitive Learner	
		16NM1A0541	L3	Strong Intuitive Learner	
14	EG14	16NM1A0521	D5	Strong Sensing Learner	Order
		16NM1A0525	E5	Strong Sensing Learner	
15	EG15	16NM1A0526	H3	Strong Verbal Learner	Sample
		16NM1A0528	I3	Strong Verbal Learner	

**Table 1: formation of Homogeneous Groups**

**Formation of EXPERT groups (Homogeneous)**

S. No	Expert Group Name	Expert Group Members
1.	EG1	A1,B1,C1,D1,E1,F1
2.	EG2	G1,H1,I1,J1,K1
3.	EG3	L1,A4,B4,C4,D4
4.	EG4	E4,F4,G4,H4
5.	EG5	I4,J4,K4,L4
6.	EG6	A3,B3,C3,D3,E3
7.	EG7	F3,F5,G3,G5,H2
8.	EG8	H5, I2,I5,J2
9.	EG9	J5,K2,K5,L2,L5
10.	EG10	A2,B2,C2,D2
11.	EG11	E2,F2,G2
12.	EG12	A5,B5,C5
13.	EG13	J3,K3,L3
14.	EG14	D5,E5
15.	EG15	H3,I3

**Table 2: Formation of Expert Groups**



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**Figure 1: JIGSAW method in Classroom**



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Group No.	JIGSAW Home Group	Student Roll No	Member ID	Student learning ability	Topic Assigned to group
1	A.P.J Abdul Kalam (A)	16NM1A0502	A1- Leader	Strong Global Learner	Cross
		16NM1A0501	A2	Strong Sequential Learner	
		16NM1A0523	A3	Strong Visual Learner	
		16NM1A0563	A4	Strong Active Learner	
		16NM1A0510	A5	Strong Reflective Learner	
2	Chandra sekhara Venkata Raman (B)	16NM1A0542	B1-Leader	Strong Global Learner	Distinct
		16NM1A0505	B2	Strong Sequential Learner	
		16NM1A0524	B3	Strong Visual Learner	
		16NM1A0509	B4	Strong Active Learner	
		16NM1A0516	B5	Strong Reflective Learner	
3	Srinivasa Ramanujan (C)	16NM1A0550	C1-Leader	Strong Global Learner	Filter
		16NM1A0527	C2	Strong Sequential Learner	
		16NM1A0526	C3	Strong Visual Learner	
		16NM1A0514	C4	Strong Active Learner	
		16NM1A0543	C5	Strong Reflective Learner	
4	Satyendra Nath Bose (E)	16NM1A0551	D1-Leader	Strong Global Learner	Foreach Group/Cogroup
		16NM1A0529	D2	Strong Sequential Learner	
		16NM1A0528	D3	Strong Visual Learner	
		16NM1A0515	D4	Strong Active Learner	
		16NM1A0513	D5	Strong Sensing Learner	
5	Satyendra Nath Bose (F)	16NM1A0554	E1-Leader	Strong Global Learner	Join
		16NM1A0530	E2	Strong Sequential Learner	
		16NM1A0531	E3	Strong Visual Learner	
		16NM1A0538	E4	Strong Active Learner	
		16NM1A0521	E5	Strong Sensing Learner	
6	M. S. Swaminathan (G)	16NM1A0559	F1-Leader	Strong Global Learner	Group/Cogroup
		16NM1A0548	F2	Strong Sequential Learner	
		16NM1A0533	F3	Strong Visual Learner	
		16NM1A0547	F4	Strong Active Learner	
		16NM1A0537	F5	Strong Visual Learner	
7	Raj Reddy (H)	16NM1A0503	G1-Leader	Strong Active Learner	Order
		16NM1A0555	G2	Strong Sequential Learner	
		16NM1A0536	G3	Strong Visual Learner	
		16NM1A0552	G4	Strong Active Learner	
		16NM1A0541	G5	Strong Visual Learner	
8	Har Gobind Khorana (K)	16NM1A0512	H1-Leader	Strong Active Learner	Join
		16NM1A0504	H2	Strong Visual Learner	
		16NM1A0508	H3	Strong Verbal Learner	
		16NM1A0556	H4	Strong Active Learner	
		16NM1A0544	H5	Strong Visual Learner	
9	K. S. Chandrasekharan (I)	16NM1A0525	I1-Leader	Strong Active Learner	Sample
		16NM1A0518	I2	Strong Visual Learner	
		16NM1A0549	I3	Strong Verbal Learner	
		16NM1A0506	I4	Strong Active Learner	
		16NM1A0545	I5	Strong Visual Learner	
10	Archimedes (J)	16NM1A0534	J1-Leader	Strong Active Learner	Join
		16NM1A0519	J2	Strong Visual Learner	
		16NM1A0517	J3	Strong Intuitive Learner	
		16NM1A0507	J4	Strong Active Learner	
		16NM1A0546	J5	Strong Visual Learner	



370  
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11	Rutherford (K)	16NM1A0539	K1-Leader	Strong Active Learner	Sample
		16NM1A0520	K2	Strong Visual Learner	
		16NM1A0535	K3	Strong Intuitive Learner	
		16NM1A0561	K4	Strong Active Learner	
		16NM1A0557	K5	Strong Visual Learner	
12	James Maxwell (L)	16NM1A0562	L1-Leader	Strong Active Learner	Split Order
		16NM1A0522	L2	Strong Visual Learner	
		16NM1A0553	L3	Strong Intuitive Learner	
		16NM1A0511	L4	Strong Active Learner	
		16NM1A0558	L5	Strong Visual Learner	
		16NM1A0560	L6	Strong Visual Learner	

**Table 3 Formation of JIGSAW Home Groups (Heterogeneous Groups)**

Learning Styles	Number of students	Percentage of students (%)
Active	16	26.67
Reflective	3	5.00
Sensing	3	5.00
Intuitive	3	5.00
Visual	21	35.00
Verbal	2	3.33
Sequential	7	11.67
Global	6	10.00

**Table 4: The student learning styles score**

#### **Significance of results & reflective critique:**

At the end of activity, we asked the students to give their opinion about this activity. Students gave different kinds of answers saying that it is good, OK. But batch 3 4 7 & 10 team leaders they fully involved and enjoyed the activity. They reported that this activity is excellent, and we learnt a lot on our own. The students are posed three poll questions to students in order to determine their positive and negative views on cooperative learning environment and JIGSAW technique;

#### **Question 1**

What can you say about the aspects of JIGSAW practices which have positive effects on you?

Student responses: Out of 59 great many students reported that 'JIGSAW technique was very 'Instructive', 'Created interest on the subject', 'responded positively', affected the interaction and cooperation in the classroom', and it was 'enjoyable'

Instructive: 52  
Created interest on the subject: 52

Positive response: 56

Enjoyable: 57

Good interaction and Cooperation in class: 50





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S.No	Regdt. No.	Name of the Student	Instructive	Created Interest on the Subject	Positive Response	Enjoyable	Good Interaction and Cooperation in the class
1	16NM1A0501	Ahamed Umnisa	Y	Y	Y	Y	Y
2	16NM1A0502	Aishwarya Gantayath	Y	Y	Y	Y	Y
3	16NM1A0503	Ampolu Soundarya	Y	Y	Y	Y	Y
4	16NM1A0504	Anantapalli Sai Vaishnavi	Y	Y	Y	Y	Y
5	16NM1A0505	Ande Sowmya Sri	Y	Y	Y	Y	Y
6	16NM1A0506	Anjali Sowgandhi Piridi	Y	Y	Y	Y	Y
7	16NM1A0507	Appikonda Leelaveni	Y	Y	Y	Y	Y
8	16NM1A0508	Appikonda Surya Sai Supriya	Y	Y	Y	Y	Y
9	16NM1A0509	Asuri Sukanya	Y	Y	Y	Y	Y
10	16NM1A0510	Atta Lavanya	Y	Y	Y	Y	Y
11	16NM1A0511	Balaka Harika	Y	Y	Y	Y	Y
12	16NM1A0512	Baliboyana Niharika	Y	Y	Y	Y	Y
13	16NM1A0513	Balireddy Soniya Shyne	Y	Y	Y	Y	Y
14	16NM1A0514	Bammidi Saritha	Y	Y	Y	Y	Y
15	16NM1A0515	Bandaru Roshinidevi	Y	Y	Y	Y	Y
16	16NM1A0516	Basheerunnisa Begum	Y	Y	Y	Y	Y
17	16NM1A0517	B Devi	Y	Y	Y	Y	Y
18	16NM1A0518	Bera Mamala Sridevi	Y	Y	Y	Y	Y
19	16NM1A0519	Bhairi Surya Teja	Y	Y	Y	Y	Y
20	16NM1A0520	Bondhi Anjali	Y	Y	Y	Y	Y
21	16NM1A0521	Bonugu Sushmitha	Y	Y	Y	Y	Y
22	16NM1A0522	Borigi Bhanusree	Y	Y	Y	Y	Y
23	16NM1A0523	Chakka Swapna	Y	Y	Y	Y	Y
24	16NM1A0524	Ch S L Navya Bharathi	Y	Y	Y	Y	Y
25	16NM1A0525	Chintalapudi Deekshitha	Y	Y	Y	Y	Y
26	16NM1A0526	Chittuluri Alekya	Y	Y	Y	Y	Y
27	16NM1A0527	Chukka Ramya	Y	Y	Y	Y	Y
28	16NM1A0528	Dadi Jyothisna	Y	Y	Y	Y	Y
29	16NM1A0529	Damuluri Anusha	Y	Y	Y	Y	Y

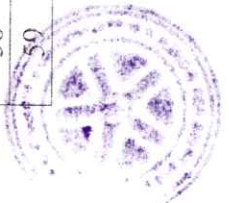
30	16NM1A0530	Dasari Vandana Sri	Y	Y	Y	Y	Y	Y	Y
31	16NM1A0531	Devupalli Sirisha	Y	Y	Y	Y	Y	Y	Y
32	16NM1A0532	Dokala Jayanthi	Y	Y	Y	Y	Y	Y	Y
33	16NM1A0533	Dunna Yamuna	Y	Y	Y	Y	Y	Y	Y
34	16NM1A0534	Duvvada Vandana	Y	Y	Y	Y	Y	Y	Y
35	16NM1A0535	Ejji Deepika	Y	Y	Y	Y	Y	Y	Y
36	16NM1A0536	Gandhi Mounika	Y	Y	Y	Y	Y	Y	Y
37	16NM1A0537	G Krishna Kumar Sowmya	Y	Y	Y	Y	Y	Y	Y
38	16NM1A0538	Gannu Rupa Santhi Sree	Y	Y	Y	Y	Y	Y	Y
39	16NM1A0539	Ghattamaneni Praharsha	Y	Y	Y	Y	Y	Y	Y
40	16NM1A0540	Gottapu Usha Rani	Y	Y	Y	Y	Y	Y	Y
41	16NM1A0541	Gowripattapu Anusha	Y	Y	Y	Y	Y	Y	Y
42	16NM1A0542	Gujjari Priyanka	Y	Y	Y	Y	Y	Y	Y
43	16NM1A0543	Gunda Mounika	Y	Y	Y	Y	Y	Y	Y
44	16NM1A0544	Gunisetty Naga Sai Lalitha	Y	Y	Y	Y	Y	Y	Y
45	16NM1A0545	Guntrothu Devi	Y	Y	Y	Y	Y	Y	Y
46	16NM1A0546	Gunturu Lakshmi Tulasi	Y	Y	Y	Y	Y	Y	Y
47	16NM1A0547	Indala Bhagya Lakshmi	Y	Y	Y	Y	Y	Y	Y
48	16NM1A0548	Jaggapu Swetha	Y	Y	Y	Y	Y	Y	Y
49	16NM1A0549	Jaggina Divya	Y	Y	Y	Y	Y	Y	Y
50	16NM1A0550	Jajula Poornima	Y	Y	Y	Y	Y	Y	Y
51	16NM1A0551	Kakara Padmavathi	Y	Y	Y	Y	Y	Y	Y
52	16NM1A0552	Kandregula Bhagya Sri	Y	Y	Y	Y	Y	Y	Y
53	16NM1A0553	Kandula Sai Praneetha	Y	Y	Y	Y	Y	Y	Y
54	16NM1A0554	Karanam Mary Prathyusha	Y	Y	Y	Y	Y	Y	Y
55	16NM1A0555	Kaza Prathyusha	Y	Y	Y	Y	Y	Y	Y
56	16NM1A0556	Kesanakurthi Chinni	Y	Y	Y	Y	Y	Y	Y
57	16NM1A0557	Kodukula Amrutha Sarvani	Y	Y	Y	Y	Y	Y	Y
58	16NM1A0558	Koduru Santoshi	Y	Y	Y	Y	Y	Y	Y
59	16NM1A0559	Kolluru Sai Sadhana	Y	Y	Y	Y	Y	Y	Y

Table 5: Student Feedback about the Activity

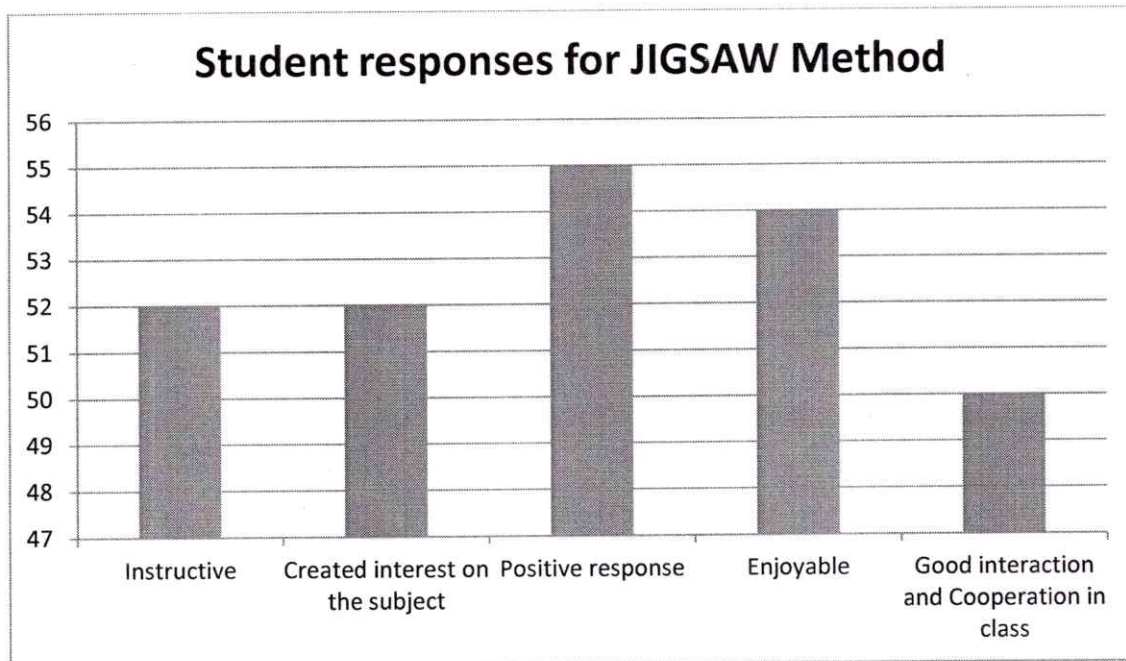


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**Figure 2: Student responses for JIGSAW method**

**Question 2**

What can you say about the sides of the JIGSAW technique with negative effects in your opinion?

Student responses: Few students reported that JIGSAW technique was 'time-consuming', "Their friends with low achievement made them tired" and "The noise occurred during group works was disturbing". Besides, 2 - 3 students expressed that it would be more effective if the topic was taught by the teacher instead of using this method.

After considering their feelings, we noticed that they are slow learners in my class and their native language is Telugu (a local language)

**Question 3**

What are the changes you have observed after application of this technique?

Most students reported that this technique enhanced our learning capacity', 'it increased our self-confidence', 'provided peer interaction and cooperation', 'and they felt that we were more 'active', 'learned a lot on our own'.



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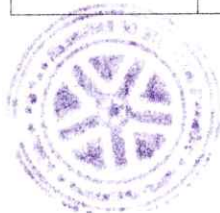
Team No	JIGSAW Team	Home Group Member ID	Formative Assessment		Summative Assessment		Final Score (50M)	Median :43 Performed more than Median Score (Yes/No)
			Individual Observation (10M)	Group Observation (10M)	Individual Quiz (15M)	Group Quiz (15M)		
1	A.P.J Abdul Kalam (A)	A1- Leader	10	10	14	13	48	YES
		A2	8				44	YES
		A3	9				45	YES
		A4	8				46	YES
		A5	10				45	YES
2	Chandrasekhara Venkata Raman (B)	B1- Leader	10	10	15	15	50	YES
		B2	9				46	YES
		B3	8				46	YES
		B4	7				46	YES
		B5	6				44	YES
3	Srinivasa Ramanujan (C)	C1- Leader	9	8	15	14	46	YES
		C2	7				41	NO
		C3	9				45	YES
		C4	10				45	YES
		C5	8				45	YES
4	Satyendra Nath Bose (E)	D1	10	10	15	13	48	YES
		D2	9				46	YES
		D3	8				46	YES
		D4	10				47	YES
		D5	10				48	YES
5	Satyendra Nath Bose (F)	E1- Leader	10	10	15	12	47	YES
		E2	8				44	YES
		E3	9				44	YES
		E4	9				43	YES
		E5	8				44	YES
6	M. S. Swaminathan (G)	F1- Leader	9	9	15	15	48	YES
		F2	8				46	YES
		F3	7				44	YES
		F4	9				48	YES
		F5	10				42	NO

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7	Raj Reddy (H)	G1-Leader	10	8	14	14	44	YES
		G2	9				44	YES
		G3	7				41	NO
		G4	8				43	YES
		G5	9				46	YES
8	Har Gobind Khorana (K)	H1-Leader	10	8	13	14	45	YES
		H3	9				43	YES
		H4	7				42	NO
		H5	6				39	NO
		I1-Leader	8				44	YES
9	K. S. Chandrasekharan (I)	I2	9	10	12	14	46	YES
		I3	10				45	YES
		I4	9				43	YES
		I5	8				41	NO
		J1-Leader	8				45	YES
10	Archimedes (J)	J2	9	10	15	14	49	YES
		J3	10				49	YES
		J4	9				47	YES
		J5	7				46	YES
		K1-Leader	9				43	YES
11	Rutherford (K)	K2	8	8	14	14	45	YES
		K4	9				45	YES
		K5	6				41	NO
		L1-Leader	10				45	YES
		L2	8				44	YES
12	James Maxwell (L)	L3	9	9	14	14	46	YES
		L4	7				45	YES
		L5	6				43	YES
		L6	7				43	YES

Table 6: Assessment sheet for JIGSAW activity



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**Activity Outcomes to PO Mapping:**

Activity Outcomes	Mapping to POs
Give Examples for different types of parallelism checkpoint.	PO1, PO2, PO3, PO4, PO5, PSO1, PSO2
Interpret the mechanism of Automatic parallelization.	PO1, PO2, PO3, PO4, PO5, PSO1, PSO2
Illustrate working of any real time application using application	PO1, PO2, PO3, PO4, PO5, PSO1, PSO2

**Post Implications:**

1. Developed social skills in all students.
2. As students work as a team, they receive more support from their teammates, therefore gains confidence.

  
FACULTY SIGNATURE

  
MODULE COORDINATOR

  
HEAD OF THE DEPARTMENT

HEAD OF THE DEPARTMENT  
Computer Science & Engineering  
VIGNAN'S INSTITUTE OF  
ENGINEERING FOR WOMEN  
Kapujaggaraipeta, Visakhapatnam-530003

  
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# VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN

Approved by AICTE, New Delhi, Affiliated to JNTU Kakinada

Kapujaggarajupeta, VSEZ(Post), Visakhapatnam-530049, AP

## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Course Name: <b>Concurrent And Parallel Programming</b>	Course Code: <b>C412</b>
Year/ Sem /Sec : <b>IV B TECH II SEM B</b>	Regulation: <b>R16</b>
Admitted Batch: <b>2016</b>	Academic Year: <b>2019-20</b>
Teaching Methodology: <b>JIGSAW- Collaborative</b>	Topic: <b>C++ AMP</b>
Faculty: <b>Mrs. B. Madhavi</b>	No. of Students: 62
No. of Students Present: 56	No. of Students Absent: 6

### JIGSAW (Collaborative Learning):

Collaborative learning is one of the best approach in engineering education where the students form into group and share their ideas to solve complex problems.

In this activity two student groups, HOME (JIGSAW) groups and EXPERT groups are formed. The size of each group is 06 students for this activity. The HOME group consists of heterogeneous learners and the EXPERT group consists of leaders of the HOME group.

### Implementation of Activity

<b>Course</b>	: Concurrent and Parallel Programming
<b>Class</b>	: IV CSE, II SEM B
<b>Topic</b>	: C++ AMP
<b>Activity Chosen</b>	: JIGSAW

### Concept for activity:

1. Importance of Parallel Programming.
2. Usage of techniques in implementing parallel computing.
3. Primary Components of C++ AMP (Index Class, Extend Class, Array Class, Array View Class, Parallel\_For\_Each Class, Tiles, Barriers, Textures, Concurrency Visualizer, Compute Domain, Lambda Expressions, Creating C++ Amp Objects).

### Goals of this activity:

At the end of this activity, students will be able to:

1. Understand the implementation of parallel programming
2. Explain the various techniques to develop parallel computing.
3. Explain the implementation of heterogeneous programming using different techniques.

### Outcome of the Activity:

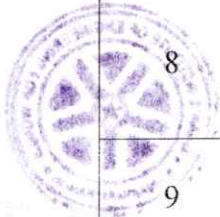
- Give Examples for different types of parallelism.
- Interpret the mechanism of Automatic parallelization.
- Illustrate working of any real time application using application based project.



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### Quiz Marks for Homogeneous Teams

Group No.	Expert Group Name	Student Roll No	Member ID	Student learning ability	Topic Assigned to group
1	EG1	16NM1A0565	A1- Leader	Strong Global Learner	Index Class
		16NM1A0569	B1-Leader	Strong Global Learner	
		16NM1A0574	C1-Leader	Strong Global Learner	
		16NM1A0586	D1-Leader	Strong Global Learner	
		16NM1A0588	E1-Leader	Strong Global Learner	
		16NM1A0589	F1-Leader	Strong Global Learner	
2	EG2	16NM1A0591	G1-Leader	Strong Active Learner	Extend Class
		16NM1A05A0	A4	Strong Active Learner	
		16NM1A0567	B4	Strong Active Learner	
		16NM1A05B6	C4	Strong Active Learner	
		16NM1A05C0	K1-Leader	Strong Active Learner	
3	EG3	16NM1A0596	H1-Leader	Strong Active Learner	Array Class
		16NM1A0584	D4	Strong Active Learner	
		16NM1A05B8	E4	Strong Active Learner	
		16NM1A05A7	F4	Strong Active Learner	
		16NM1A0572	G4	Strong Active Learner	
4	EG4	16NM1A05C2	L1-Leader	Strong Active Learner	Array_View Class
		16NM1A0573	H4	Strong Active Learner	
		16NM1A0574	I4	Strong Active Learner	
		16NM1A0561	K4	Strong Active Learner	
		16NM1A05B5	L4	Strong Active Learner	
5	EG5	16NM1A05A9	J1-Leader	Strong Active Learner	Parallel_For_Each Class
		16NM1A0598	J4	Strong Active Learner	
		16NM1A05C4	K4	Strong Active Learner	
6	EG6	16NM1A0581	A3	Strong Visual Learner	TILES
		16NM1A0564	B3	Strong Visual Learner	
		16NM1A05A2	C3	Strong Visual Learner	
		16NM1A0568	D3	Strong Visual Learner	
		16NM1A0585	E3	Strong Visual Learner	
7	EG7	16NM1A0571	F3	Strong Visual Learner	Barriers
		16NM1A05B0	H2	Strong Visual Learner	
		16NM1A05B9	F5	Strong Visual Learner	
		16NM1A0590	G3	Strong Visual Learner	
		16NM1A05A8	G5	Strong Visual Learner	
8	EG8	16NM1A566	A2	Strong Sequential Learner	Textures
		16NM1A0583	C2	Strong Sequential Learner	
		16NM1A05A3	D2	Strong Sequential Learner	
		16NM1A05A4	E2	Strong Sequential Learner	
9	EG9	16NM1A0582	B2	Strong Sequential Learner	Concurrency Visualizer
		16NM1A0587	F2	Strong Sequential Learner	
		16NM1A0598	G2	Strong Sequential Learner	
10	EG10	16NM1A0599	A5	Strong Reflective Learner	Concurrency Visualizer
		16NM1A05A1	B5	Strong Reflective Learner	
		16NM1A0576	C5	Strong Reflective Learner	
11	EG11	16NM1A05B7	D5	Strong Sensing Learner	Creating C++ Amp
		16NM1A0570	E5	Strong Sensing Learner	
12	EG12	16NM1A0595	K3	Strong Intuitive Learner	Compute Domain
		16NM1A05597	L3	Strong Intuitive Learner	



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		15NM1A05A7	K6	Strong Intuitive Learner	
13	EG13	16NM1A0593	I3	Strong Verbal Learner	Array Class

**Table 1: formation of Homogeneous Groups**

**Formation of EXPERT groups (Homogeneous)**

S. No	Expert Group Name	Expert Group Members
1.	EG1	A1,B1,C1,D1,E1,F1
2.	EG2	G1,A4,B4,C4,K1
3.	EG3	H1,F4,G4,E4,D4
4.	EG4	L1, H4, I4,L4,K4
5.	EG5	J1, K1, K4
6.	EG6	A3,B3,C3,D3,E3
7.	EG7	F3, F5,G3,G5,H2
8.	EG8	A2, C2, D2, E2
9.	EG9	B2, F2, G2
10.	EG10	A5,B5, C5
11.	EG11	D5, E5
12.	EG12	K3,L3, K6
13.	EG13	I3

**Table 2: Formation of Expert Group**



**Figure 1: JIGSAW method in Classroom**



Group No.	JIGSAW Home Group	Student Roll No	Member ID	Student learning ability	Topic Assigned to group
1	A.P.J Abdul Kalam (A)	16NM1A0565	A1- Leader	Strong Global Learner	INDEX CLASS
		16NM1A566	A2	Strong Sequential Learner	
		16NM1A0581	A3	Strong Visual Learner	
		16NM1A05A0	A4	Strong Active Learner	
		16NM1A0599	A5	Strong Reflective Learner	
2	Chandrasekhara Venkata Raman (B)	16NM1A0569	B1-Leader	Strong Global Learner	EXTEND CLASS
		16NM1A0582	B2	Strong Sequential Learner	
		16NM1A0564	B3	Strong Visual Learner	
		16NM1A0567	B4	Strong Active Learner	
		16NM1A05A1	B5	Strong Reflective Learner	
3	Srinivasa	16NM1A0574	C1-Leader	Strong Global Learner	ARRAY

	Ramanujan (C)	16NM1A0583	C2	Strong Sequential Learner	CLASS
		16NM1A05A2	C3	Strong Visual Learner	
		16NM1A05B6	C4	Strong Active Learner	
		16NM1A0543	C5	Strong Reflective Learner	
4	Satyendra Nath Bose (E)	16NM1A0586	D1-Leader	Strong Global Learner	ARRAY_VIEW CLASS
		16NM1A05A3	D2	Strong Sequential Learner	
		16NM1A0568	D3	Strong Visual Learner	
		16NM1A0584	D4	Strong Active Learner	
		16NM1A05B7	D5	Strong Sensing Learner	
5	Satyendra Nath Bose (F)	16NM1A0588	E1-Leader	Strong Global Learner	PARALLEL_FOR_EACH CLASS
		16NM1A05A4	E2	Strong Sequential Learner	
		16NM1A0585	E3	Strong Visual Learner	
		16NM1A05B8	E4	Strong Active Learner	
		16NM1A0570	E5	Strong Sensing Learner	
6	M. S. Swaminathan (G)	16NM1A0589	F1-Leader	Strong Global Learner	TILES
		16NM1A0587	F2	Strong Sequential Learner	
		16NM1A0571	F3	Strong Visual Learner	
		16NM1A05A7	F4	Strong Active Learner	
		16NM1A05B9	F5	Strong Visual Learner	
7	Raj Reddy (H)	16NM1A0591	G1-Leader	Strong Active Learner	BARRIERARS
		16NM1A0598	G2	Strong Sequential Learner	
		16NM1A0590	G3	Strong Visual Learner	
		16NM1A0572	G4	Strong Active Learner	
		16NM1A05A8	G5	Strong Visual Learner	
8	Har Gobind Khorana (K)	16NM1A0596	H1-Leader	Strong Active Learner	TEXTURES
		16NM1A05B0	H2	Strong Visual Learner	
		16NM1A0592	H3	Strong Verbal Learner	
		16NM1A0573	H4	Strong Active Learner	
		16NM1A05C1	H5	Strong Visual Learner	
9	K. S. Chandrasekharan (I)	16NM1A05A5	I1-Leader	Strong Active Learner	CONCURENCY VISUALIZER
		16NM1A05B2	I2	Strong Visual Learner	
		16NM1A0593	I3	Strong Verbal Learner	
		16NM1A0574	I4	Strong Active Learner	
		16NM1A05C3	I5	Strong Visual Learner	
10	Archimedes (J)	16NM1A05A9	J1-Leader	Strong Active Learner	COMPUTE DOMAIN
		16NM1A0594	J2	Strong Visual Learner	
		16NM1A0578	J3	Strong Intuitive Learner	
		16NM1A0598	J4	Strong Active Learner	
		16NM1A05B3	J5	Strong Visual Learner	
11	Rutherford (K)	16NM1A05C0	K1-Leader	Strong Active Learner	LAMDA EXPRESSIONS
		16NM1A05B4	K2	Strong Visual Learner	
		16NM1A0595	K3	Strong Intuitive Learner	
		16NM1A05C4	K4	Strong Active Learner	
		16NM1A05C6	K5	Strong Visual Learner	
		15NM1A05A7	K6	Strong Intuitive Learner	
James Maxwell (L)		16NM1A05C2	L1-Leader	Strong Active Learner	CREATING C++ AMP OBJECTS
		16NM1A0576	L2	Strong Visual Learner	
		16NM1A05597	L3	Strong Intuitive Learner	
		16NM1A05B5	L4	Strong Active Learner	
		16NM1A05C5	L5	Strong Visual Learner	
		16NM1A0577	L6	Strong Visual Learner	

Table 3: Formation of JIGSAW Home Groups (Heterogeneous Groups)



Learning Styles	Number of students	Percentage of students (%)
Active	16	26.67
Reflective	3	5.00
Sensing	3	5.00
Intuitive	4	6.00
Visual	21	35.00
Verbal	2	3.33
Sequential	7	11.67
Global	6	10.00

**Table 4: The student learning styles score**

**Significance of results & reflective critique:**

At the end of activity, we asked the students to give their opinion about this activity. Students gave different kinds of answers saying that it is good, OK. But batch 3 4 7 & 10 team leaders they fully involved and enjoyed the activity. They reported that this activity is excellent, and we learnt a lot on our own. The students are posed three poll questions to students in order to determine their positive and negative views on cooperative learning environment and JIGSAW technique;

**Question 1**

What can you say about the aspects of JIGSAW practices which have positive effects on you?

Student responses: Out of 56 great many students reported that 'JIGSAW technique was very 'Instructive', 'Created interest on the subject', 'responded positively ', affected the interaction and cooperation in the classroom', and it was 'enjoyable'

Instructive: 55

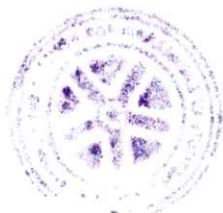
Created interest on the subject: 52

Positive response: 56

Enjoyable: 55

Good interaction and Cooperation in class: 53

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Handwritten notes and signatures in blue ink, including a date '20/05/2023' and a name 'Dr. ...'.

S.No	Regd. No.	Name of the Student	Instructive	Created Interest on the Subject	Positive Response	Enjoyable	Good Interaction and Cooperation in the class
1	16NM1A0564	Kulla Sai Siri Sowjanya	Y	Y	Y	Y	Y
2	16NM1A0565	Kurella Navya Sree	Y	Y	Y	Y	Y
3	16NM1A0566	Lagudu Anusha	Y	Y	Y	Y	Y
4	16NM1A0567	Lankada Vineetha	Y	Y	Y	Y	Y
5	16NM1A0568	Madala Amulya	Y	Y	Y	Y	Y
6	16NM1A0569	Mallidi Sindhu	Y	Y	Y	Y	Y
7	16NM1A0570	Manasa Sagori	Y	Y	Y	Y	Y
8	16NM1A0571	Manga Venkata Satya Bhavani	Y	Y	Y	Y	Y
9	16NM1A0572	Manne Geethasri	Y	Y	Y	Y	Y
10	16NM1A0573	Matta Roshini	Y	Y	Y	Y	Y
11	16NM1A0574	Mattaparthi Samyuktha	Y	Y	Y	Y	Y
12	16NM1A0575	Medisetty Joshna	Y	Y	Y	Y	Y
13	16NM1A0576	Mummina Pravalika	Y	Y	Y	Y	Y
14	16NM1A0577	Munagapaka Sailaja	Y	Y	Y	Y	Y
15	16NM1A0578	Musudi Poorna Jyothsna	Y	Y	Y	Y	Y
16	16NM1A0579	Narava Bhagya Lakshmi	Y	Y	Y	Y	Y
17	16NM1A0581	Neelapu Sriranjini	Y	Y	Y	Y	Y
18	16NM1A0582	Nisha Mary Vincent	Y	Y	Y	Y	Y
19	16NM1A0583	Palakurthi Anusha	Y	Y	Y	Y	Y
20	16NM1A0584	Palavayi Jyothi Priya	Y	Y	Y	Y	Y
21	16NM1A0585	Parapati Neela Veni	Y	Y	Y	Y	Y
22	16NM1A0586	Pasem Harshitha	Y	Y	Y	Y	Y
23	16NM1A0587	Patro Yamini	Y	Y	Y	Y	Y
24	16NM1A0588	Pediredla Vasudha	Y	Y	Y	Y	Y
25	16NM1A0589	Pendyala Veenavaibhavi	Y	Y	Y	Y	Y
26	16NM1A0590	Penmatsa Lavanya	Y	Y	Y	Y	Y
27	16NM1A0591	Perumalla Manasa	Y	Y	Y	Y	Y
28	16NM1A0592	Pilla Pooja	Y	Y	Y	Y	Y
29	16NM1A0593	Pilla Praveena	Y	Y	Y	Y	Y
30	16NM1A0594	Pola Manju	Y	Y	Y	Y	Y
31	16NM1A0595	Polimera Guna Varshini	Y	Y	Y	Y	Y
32	16NM1A0596	Polumahanti Sowmya	Y	Y	Y	Y	Y
33	16NM1A0597	Potnuru Ankitha	Y	Y	Y	Y	Y

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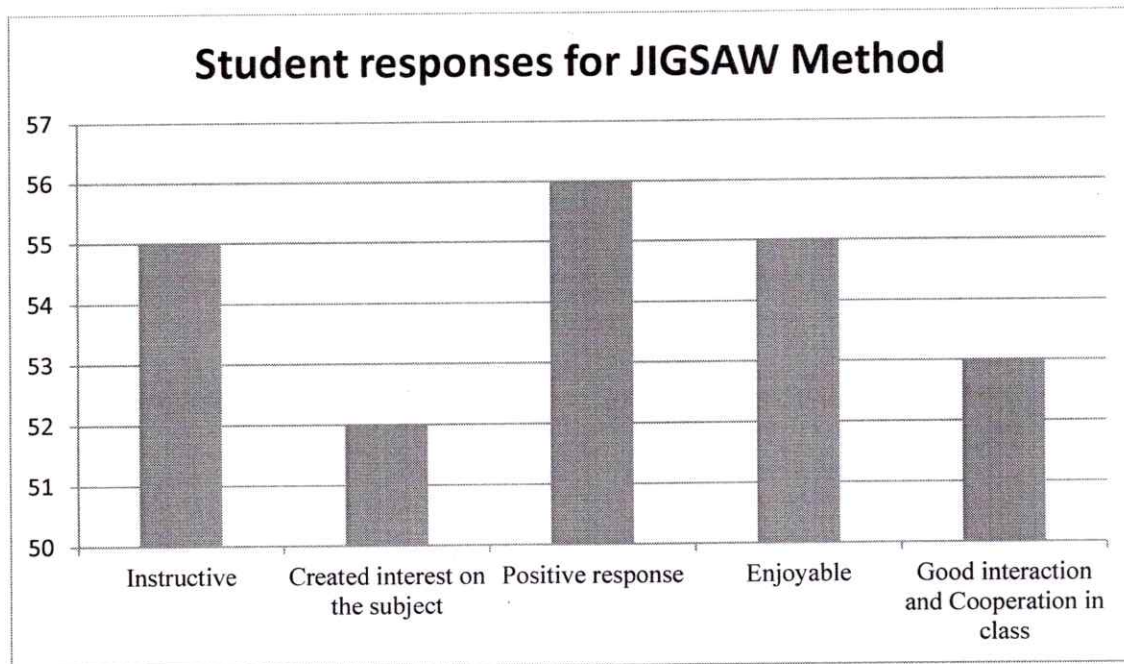


34	16NM1A0599	Rajagiri Anu Radha	Y	Y	Y	Y	Y	Y	Y	Y
35	16NM1A05A0	Ravupalli Sai Priya	Y	Y	Y	Y	Y	Y	Y	Y
36	16NM1A05A1	Repaka Sravani Sandhya	Y	Y	Y	Y	Y	Y	Y	Y
37	16NM1A05A2	Sabbavarapu Suguna	Y	Y	Y	Y	Y	Y	Y	Y
38	16NM1A05A3	Sahukaru Snigitha	Y	Y	Y	Y	Y	Y	Y	Y
39	16NM1A05A4	Sakalabathula Jyothsna	Y	Y	Y	Y	Y	Y	Y	Y
40	16NM1A05A5	Sanapathi Kavitha	Y	Y	Y	Y	Y	Y	Y	Y
41	16NM1A05A6	S Laila Shantosh Bhanu Sri	Y	Y	Y	Y	Y	Y	Y	Y
42	16NM1A05A7	Shabnam	Y	Y	Y	Y	Y	Y	Y	Y
43	16NM1A05A9	Sravya S	Y	Y	Y	Y	Y	Y	Y	Y
44	16NM1A05B0	Surampudi Likhitha	Y	Y	Y	Y	Y	Y	Y	Y
45	16NM1A05B1	Thamira Pooja	Y	Y	Y	Y	Y	Y	Y	Y
46	16NM1A05B2	Totharamudi Sahithi	Y	Y	Y	Y	Y	Y	Y	Y
47	16NM1A05B3	Triveni Possarla	Y	Y	Y	Y	Y	Y	Y	Y
48	16NM1A05B4	Tummapala Jaya	Y	Y	Y	Y	Y	Y	Y	Y
49	16NM1A05B5	Tumpala Kusuma Sarika	Y	Y	Y	Y	Y	Y	Y	Y
50	16NM1A05B6	U G V S Deepika	Y	Y	Y	Y	Y	Y	Y	Y
51	16NM1A05B7	Vanamoju Prathyusha	Y	Y	Y	Y	Y	Y	Y	Y
52	16NM1A05B8	V K K Mahalakshmi	Y	Y	Y	Y	Y	Y	Y	Y
53	16NM1A05C0	Velaga Prathyusha	Y	Y	Y	Y	Y	Y	Y	Y
54	16NM1A05C1	Vurukuti Keerthi	Y	Y	Y	Y	Y	Y	Y	Y
55	16NM1A05C2	Y Prasanna Lakshmi	Y	Y	Y	Y	Y	Y	Y	Y
56	16NM1A05C3	Yegi Sriya	Y	Y	Y	Y	Y	Y	Y	Y

Table 5: Students Feedback for the Activity



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**Figure 2: Student responses for JIGSAW method**

**Question 2**

What can you say about the sides of the JIGSAW technique with negative effects in your opinion?

Student responses: Few students reported that JIGSAW technique was 'time-consuming', "Their friends with low achievement made them tired" and "The noise occurred during group works was disturbing". Besides, 2 - 3 students expressed that it would be more effective if the topic was taught by the teacher instead of using this method.

After considering their feelings, we noticed that they are slow learners in my class and their native language is Telugu (a local language)

**Question 3**

What are the changes you have observed after application of this technique?

Most students reported that this technique enhanced our learning capacity', 'it increased our self-confidence', 'provided peer interaction and cooperation', 'and they felt that we were more 'active', 'learned a lot on our own'.

2802

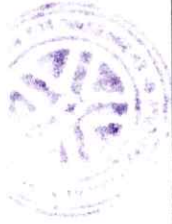
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Team No	JIGSAW Team	Home Group Member ID	Formative Assessment		Summative Assessment		Final Score (50M)	Median :43 Performed more than Median Score (Yes/No)
			Individual Observation (10M)	Group Observation (10M)	Individual Quiz (15M)	Group Quiz (15M)		
1	A.P.J Abdul Kalam (A)	A1- Leader	10	10		14	49	YES
		A2	8					
		A3	9					
		A4	8					
		A5	10					
2	Chandrasek hara Venkata Raman (B)	B1- Leader	10	10		15	50	YES
		B2	9					
		B3	8					
		B4	7					
		B5	6					
3	Srinivasa Ramanujan (C)	C1- Leader	9	8		15	46	YES
		C2	7					
		C3	9					
		C4	10					
		D1	10					
4	Satyendra Nath Bose (E)	D2	9	10		15	48	YES
		D3	8					
		D4	10					
		D5	10					
		E1- Leader	10					
5	Satyendra Nath Bose (F)	E3	9	10		13	44	YES
		E4	9					
		E5	8					
		F1- Leader	9					
		F2	8					
6	M. S. Swaminathan (G)	F3	7	9		14	46	YES
		F4	9					
		F5	8					
		G1- Leader	9					
		G2	8					
7	Raj Reddy (H)	H1- Leader	8	8		14	46	NO
		H2	13					



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8	Har Gobind Khorana (K)	G4	8	8	13	13	43	YES
		G5	9		15		46	YES
		H1-Leader	10		14		45	YES
		H2	8		15		44	YES
		H3	9		13		43	YES
H4	7	14	42	NO				
H5	6	12	39	NO				
10	K. S. Chandrasekharan (I)	I1-Leader	8	10	14	12	44	YES
		I2	9		15		46	YES
		I4	9		12		43	YES
		I5	8		11		41	NO
		J1-Leader	8		12		45	YES
11	Archimedes (J)	J2	9	10	15	15	49	YES
		J3	10		14		49	YES
		J5	7		14		46	YES
		K1-Leader	9		12		43	YES
		K2	8		15		45	YES
12	Rutherford (K)	K3	10	8	13	14	45	YES
		K4	9		14		45	YES
		K6	8		14		44	YES
		L1-Leader	10		12		45	YES
		L2	8		13		44	YES
12	James Maxwell (L)	L3	9	9	14	14	46	YES
		L4	7		15		45	YES
		L5	6		14		43	YES
		L6	8		15		46	YES

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Table 6: Assessment sheet for JIGSAW activity

**Activity Outcomes to PO Mapping:**

Activity Outcomes	Mapping to POs
Give Examples for different types of parallelism.	PO1, PO2, PO3, PO4, PO5, PSO1 and PSO2
Interpret the mechanism of Automatic parallelization.	PO1, PO2, PO3, PO4, PO5, PSO1 and PSO2
Illustrate working of any real time application using application checkpoint.	PO1, PO2, PO3, PO4, PO5, PSO1 and PSO2

**Post Implications:**

1. Weak students expand their knowledge with the peer students in the class.
2. All grades of the students have increased the understanding level of the topic in more creative and effective way.

*B.A.*

FACULTY SIGNATURE

*TR*

MODULE COORDINATOR

*[Handwritten Signature]*

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## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Course Name: <b>Concurrent and Parallel Programming</b>	Course Code: <b>C412</b>
Year/ Sem /Sec : <b>IV B TECH II SEM C</b>	Regulation: <b>R16</b>
Admitted Batch: <b>2016</b>	Academic Year: <b>2019-20</b>
Teaching Methodology: <b>JIGSAW- Collaborative</b>	Topic: <b>C++ AMP</b>
Faculty: <b>Mrs. B. Madhavi</b>	No. of Students: <b>66</b>
No. of Students Present: <b>62</b>	No. of Students Absent: <b>4</b>

### JIGSAW (Collaborative Learning):

Collaborative learning is one of the best approach in engineering education where the students form into group and share their ideas to solve complex problems.

In this activity two student groups, HOME (JIGSAW) groups and EXPERT groups are formed. The size of each group is 06 students for this activity. The HOME group consists of heterogeneous learners and the EXPERT group consists of leaders of the HOME group.

### Implementation of Activity

**Course** : CONCURRENT AND PARALLEL PROGRAMMING  
**Class** : IV CSE, I SEM C  
**Topic** : C++ AMP  
**Activity Chosen** : JIGSAW

### Concept for activity:

1. Importance of Parallel Programming.
2. Usage of techniques in implementing parallel computing.
3. Primary Components Of C++ Amp (Index Class, Extend Class, Array Class, Array View Class, Parallel\_For\_Each Class, Tiles, Barriers, Textures, Concurrency Visualizer, Compute Domain, Lambda Expressions, Creating C++ Amp Objects).

### Goals of this activity:

At the end of this activity, students will be able to:

1. Understand the implementation of parallel programming
2. Explain the various techniques to develop parallel computing.
3. Explain the implementation of heterogeneous programming using different techniques.

### Outcome of the Activity:

- Give Examples for different types of parallelism.
- Interpret the mechanism of Automatic paralleliz
- Illustrate working of any real time application us

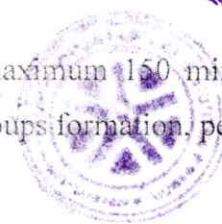
### Time planned:

Time required to execute the event is maximum 150 min (3 sessions) including survey of student learning styles, JIGSAW and EXPERT groups formation, peer discussion, student evaluation.



2402

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### Quiz Marks for Homogeneous Teams

Group No.	Expert Group Name	Student Roll No	Member ID	Student learning ability	Topic Assigned to group
1	EG1	16NM1A05C9	A1- Leader	Strong Global Learner	Index Class
		16NM1A05D2	B1-Leader	Strong Global Learner	
		16NM1A05D5	C1-Leader	Strong Global Learner	
		16NM1A05D9	D1-Leader	Strong Global Learner	
		16NM1A05E3	E1-Leader	Strong Global Learner	
		16NM1A05E7	F1-Leader	Strong Global Learner	
2	EG2	16NM1A05F8	G1-Leader	Strong Active Learner	Extend Class
		16NM1A05G0	H1-Leader	Strong Active Learner	
		16NM1A05G8	I1-Leader	Strong Active Learner	
		16NM1A05G9	J1-Leader	Strong Active Learner	
		16NM1A05H3	K1-Leader	Strong Active Learner	
3	EG3	17NM5A0502	L1-Leader	Strong Active Learner	Array Class
		16NM1A05E0	A4	Strong Active Learner	
		16NM1A05F4	B4	Strong Active Learner	
		16NM1A05D0	C4	Strong Active Learner	
		16NM1A05H0	D4	Strong Active Learner	
4	EG4	16NM1A05H2	E4	Strong Active Learner	Array_View Class
		16NM1A05F9	F4	Strong Active Learner	
		16NM1A05H6	G4	Strong Active Learner	
		17NM5A0506	H4	Strong Active Learner	
		16NM1A05D6	I4	Strong Active Learner	
5	EG5	17NM5A0512	I6	Strong Active Learner	Parallel_For_Each Class
		17NM5A0510	J4	Strong Active Learner	
		17NM5A0508	K4	Strong Active Learner	
		16NM1A05F0	L4	Strong Active Learner	
6	EG6	16NM1A05F3	A3	Strong Visual Learner	Tiles
		16NM1A05E1	B3	Strong Visual Learner	
		16NM1A05E2	C3	Strong Visual Learner	
		16NM1A05D1	D3	Strong Visual Learner	
		16NM1A05E5	E3	Strong Visual Learner	
7	EG7	16NM1A05D3	F3	Strong Visual Learner	Barrierars
		16NM1A05H4	F5	Strong Visual Learner	
		16NM1A05G1	G3	Strong Visual Learner	
		17NM5A0505	G5	Strong Visual Learner	
8	EG8	16NM1A05H7	H2	Strong Visual Learner	Textures
		16NM1A05G2	H5	Strong Visual Learner	
		16NM1A05H8	I2	Strong Visual Learner	
		16NM1A05G3	I5	Strong Visual Learner	
9	EG9	16NM1A05D7	J2	Strong Visual Learner	Concurency Visualizer
		16NM1A05G4	J5	Strong Visual Learner	
		16NM1A05F1	K2	Strong Visual Learner	
		16NM1A05G6	K5	Strong Visual Learner	
10	EG10	16NM1A05F2	L2	Strong Visual Learner	Compute Domain
		17NM5A0514	L5	Strong Visual Learner	
		14NM1A0505	L5	Strong Visual Learner	
11	EG11	16NM1A0505	L5	Strong Sequential Learner	Lamda Expressions
		16NM1A0505	L5	Strong Sequential Learner	
		16NM1A0505	L5	Strong Sequential Learner	



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Group No.	JIGSAW Home Group	Student Roll No	Member ID	Student learning ability	Topic Assigned to group
1	A.P.J Abdul Kalam (A)	16NM1A05C9	A1- Leader	Strong Global Learner	Index Class
		16NM1A5C7	A2	Strong Sequential Learner	
		16NM1A05F3	A3	Strong Visual Learner	
		16NM1A05E0	A4	Strong Active Learner	
		16NM1A05G7	A5	Strong Reflective Learner	
2	Chandrasek hara Venkata Raman (B)	16NM1A05D2	B1-Leader	Strong Global Learner	Extend Class
		16NM1A05H1	B2	Strong Sequential Learner	
		16NM1A05E1	B3	Strong Visual Learner	
		16NM1A05F4	B4	Strong Active Learner	
		17NM5A0501	B5	Strong Reflective Learner	
3	Srinivasa Ramanujan (C)	16NM1A05D5	C1-Leader	Strong Global Learner	Array Class
		16NM1A05G8	C2	Strong Sequential Learner	
		16NM1A05E2	C3	Strong Visual Learner	
		16NM1A05D0	C4	Strong Active Learner	
		16NM1A05F5	C5	Strong Reflective Learner	
4	Satyendra Nath Bose (E)	16NM1A05D9	D1-Leader	Strong Global Learner	Array_View Class
		16NM1A05E4	D2	Strong Sequential Learner	
		16NM1A05D1	D3	Strong Visual Learner	
		16NM1A05H0	D4	Strong Active Learner	
		16NM1A05F6	D5	Strong Sensing Learner	
5	Satyendra Nath Bose (F)	16NM1A05E3	E1-Leader	Strong Global Learner	Parallel_For_Each Class
		16NM1A05F7	E2	Strong Sequential Learner	
		16NM1A05E5	E3	Strong Visual Learner	
		16NM1A05H2	E4	Strong Active Learner	
		17NM5A0503	E5	Strong Sensing Learner	
6	M. S. Swaminathan (G)	16NM1A05E7	F1-Leader	Strong Global Learner	Tiles
		17NM5A0504	F2	Strong Sequential Learner	
		16NM1A05D3	F3	Strong Visual Learner	
		16NM1A05F9	F4	Strong Active Learner	
		16NM1A05H4	F5	Strong Visual Learner	
7	Raj Reddy (H)	16NM1A05F8	G1-Leader	Strong Active Learner	Barrierars
		16NM1A05E6	G2	Strong Sequential Learner	
		16NM1A05G1	G3	Strong Visual Learner	
		16NM1A05H6	G4	Strong Active Learner	
		17NM5A0505	G5	Strong Visual Learner	
8	Har Gobind Khorana (K)	16NM1A05G0	H1-Leader	Strong Active Learner	Textures
		16NM1A05H7	H2	Strong Visual Learner	
		16NM1A05E8	H3	Strong Verbal Learner	
		17NM5A0506	H4	Strong Active Learner	
		16NM1A05G2	H5	Strong Visual Learner	
9	K. S. Chandrasekharan (I)	16NM1A05G8	I1-Leader	Strong Active Learner	Concurrency Visualizer
		16NM1A05H8	I2	Strong Visual Learner	
		16NM1A05E9	I3	Strong Verbal Learner	
		16NM1A05D6	I4	Strong Active Learner	
		16NM1A05G3	I5	Strong Visual Learner	
		17NM5A0512	I6	Strong Active Learner	
10	Archimedes (J)	16NM1A05G9	J1-Leader	Strong Active Learner	Compute Domain
		16NM1A05A7	J2	Strong Visual Learner	
		16NM1A05A8	J3	Strong Intuitive Learner	
		16NM1A05A9	J4	Strong Reflective Learner	



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		16NM1A05E4	D2	Strong Sequential Learner	
		16NM1A05F7	E2	Strong Sequential Learner	
		17NM5A0504	F2	Strong Sequential Learner	
		16NM1A05E6	G2	Strong Sequential Learner	
12	EG12	16NM1A05C7	A2	Strong Sequential Learner	Creating C++ Amp Objects
		16NM1A05H1	B2	Strong Sequential Learner	
		16NM1A05G8	C2	Strong Sequential Learner	
13	EG13	16NM1A05F6	D5	Strong Sensing Learner	Compute Domain
		17NM5A0503	E5	Strong Sensing Learner	
14	EG14	16NM1A05E8	H3	Strong Verbal Learner	Array Class
		16NM1A05E9	I3	Strong Verbal Learner	
15	EG15	17NM5A0507	J3	Strong Intuitive Learner	Tiles
		17NM5A0513	J6	Strong Intuitive Learner	
		16NM1A05D8	K3	Strong Intuitive Learner	
		17NM5A0511	K6	Strong Intuitive Learner	
		16NM1A05G6	L3	Strong Intuitive Learner	

**Table 1: formation of Homogeneous Groups**

**Formation of EXPERT groups (Homogeneous)**

S. No	Expert Group Name	Expert Group Members
1.	EG1	A1,B1,C1,D1,E1,F1
2.	EG2	G1,H1,I1,J1,K1
3.	EG3	L1,A4,B4,C4,D4
4.	EG4	E4,F4,G4,H4,I4
5.	EG5	I6,J4,K4,L4
6.	EG6	A3,B3,C3,D3,E3
7.	EG7	F3,F5,G3,G5
8.	EG8	H2,H5,I2,I5
9.	EG9	J2,J5,K2,K5
10.	EG10	L2,L5,L6
11.	EG11	A2,B2,C2,D2,E2,F2,G2
12.	EG12	D5,E5
13.	EG13	H3,I3
14.	EG14	J3,J6,K3,K6,L3



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**Figure 1: JIGSAW method in Classroom**

		16NM1A05G4	J5	Strong Visual Learner	
		17NM5A0513	J6	Strong Intuitive Learner	
11	Rutherford (K)	16NM1A05H3	K1-Leader	Strong Active Learner	Compute Domain
		16NM1A05F1	K2	Strong Visual Learner	
		16NM1A05D8	K3	Strong Intuitive Learner	
		17NM5A0508	K4	Strong Active Learner	
		16NM1A05G6	K5	Strong Visual Learner	
		17NM5A0511	K6	Strong Intuitive Learner	
12	James Maxwell (L)	17NM5A0502	L1-Leader	Strong Active Learner	Array Class
		16NM1A05F2	L2	Strong Visual Learner	
		16NM1A05G6	L3	Strong Intuitive Learner	
		16NM1A05F0	L4	Strong Active Learner	
		17NM5A0514	L5	Strong Visual Learner	
		14NM1A05D8	L6	Strong Visual Learner	

**Table 3: Formation of JIGSAW Home Groups (Heterogeneous Groups)**

Learning Styles	Number of students	Percentage of students (%)
Active	17	27.60
Reflective	3	5.00
Sensing	3	5.00
Intuitive	5	8.00
Visual	21	35.00
Verbal	2	3.33
Sequential	7	11.67
Global	6	10.00

**Table 4: The student learning styles score**

### Significance of results & reflective critique:

At the end of activity, we asked the students to give their opinion about this activity. Students gave different kinds of answers saying that it is good, OK. But batch 3 4 7 & 10 team leaders they fully involved and enjoyed the activity. They reported that this activity is excellent, and we learnt a lot on our own. The students are posed three poll questions to students in order to determine their positive and negative views on cooperative learning environment and JIGSAW technique;

#### Question 1

What can you say about the aspects of JIGSAW practices which have positive effects on you?

Student responses: Out of 62 great many students reported that 'JIGSAW technique was very 'Instructive', 'Created interest on the subject', 'responded positively', affected the interaction and cooperation in the classroom', and it was 'enjoyable'

Instructive: 55

Created interest on the subject: 54

Positive response: 57

Enjoyable: 56

Good interaction and Cooperation in class: 58



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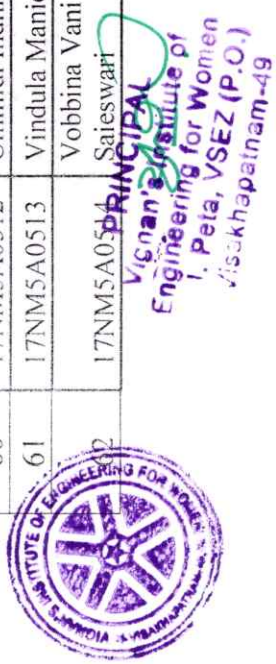
S.No	Regd. No.	Name of the Student	Instructive	Created Interest on the Subject	Positive Response	Enjoyable	Good Interaction and Cooperation in the class
1	16NM1A05C7	A Deepika Ratnanjali Devi	Y	Y	Y	Y	Y
2	16NM1A05C8	Adapa Anusha	Y	Y	Y	Y	Y
3	16NM1A05C9	Adari Vindya Sree	Y	Y	Y	Y	Y
4	16NM1A05D0	B Hyndavi	Y	Y	Y	Y	Y
5	16NM1A05D1	B Shivani	Y	Y	Y	Y	Y
6	16NM1A05D2	Bagi Sai Keerthi	Y	Y	Y	Y	Y
7	16NM1A05D3	Bhavya Sri Vankadara	Y	Y	Y	Y	Y
8	16NM1A05D4	Bitra Sai Sowmya	Y	Y	Y	Y	Y
9	16NM1A05D5	Bodda Jhansi Lakshmi	Y	Y	Y	Y	Y
10	16NM1A05D6	Borra V S S Madhuri	Y	Y	Y	Y	Y
11	16NM1A05D7	Buddha Niharika	Y	Y	Y	Y	Y
12	16NM1A05D8	Chekuri Divya Sri	Y	Y	Y	Y	Y
13	16NM1A05D9	Chekuri Venkata	Y	Y	Y	Y	Y
14	16NM1A05E0	Chintalapati Sai Rakshitha	Y	Y	Y	Y	Y
15	16NM1A05E1	D Santhosh Haritha	Y	Y	Y	Y	Y
16	16NM1A05E2	Devara Vandana	Y	Y	Y	Y	Y
17	16NM1A05E3	Dharmala Jhansi Reddy	Y	Y	Y	Y	Y
18	16NM1A05E4	Doki Meghana	Y	Y	Y	Y	Y
19	16NM1A05E5	Gajjala Nithisha	Y	Y	Y	Y	Y
20	16NM1A05E6	Galla Hyndavi	Y	Y	Y	Y	Y
21	16NM1A05E7	Galla Mounika	Y	Y	Y	Y	Y
22	16NM1A05E9	Guntureddy Kusuma	Y	Y	Y	Y	Y
23	16NM1A05F0	Gunuru Devaharshini	Y	Y	Y	Y	Y
24	16NM1A05F1	Guruva Yasaawani	Y	Y	Y	Y	Y
25	16NM1A05F3	K Lahari	Y	Y	Y	Y	Y
26	16NM1A05F4	K Monika	Y	Y	Y	Y	Y
27	16NM1A05F5	Kalla Raga Deepika	Y	Y	Y	Y	Y
28	16NM1A05F6	Kasamsetty Kavaya Sree	Y	Y	Y	Y	Y
29	16NM1A05F7	Kasu Anjali	Y	Y	Y	Y	Y
30	16NM1A05F8	Keerthi Hima Bindu	Y	Y	Y	Y	Y
31	16NM1A05F9	Kirthi Chowdhary Chekuri	Y	Y	Y	Y	Y
32	16NM1A05G0	Kodali Sri Harshitha	Y	Y	Y	Y	Y



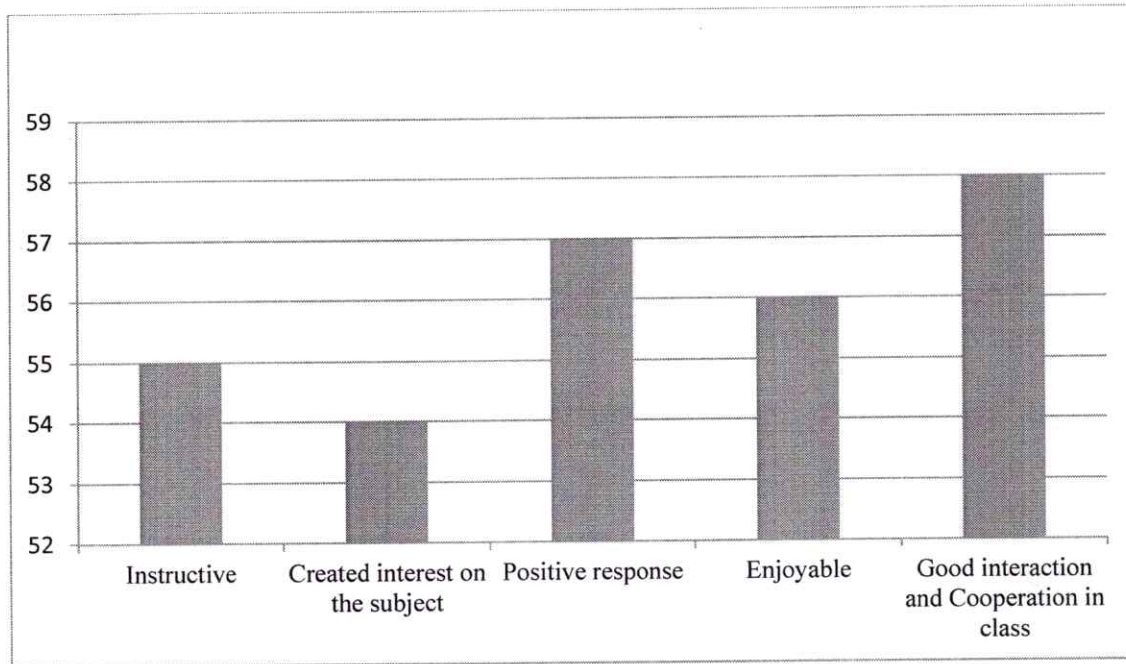
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 Visc. No. 1527 of 2015

33	16NM1A05G1	Kommoju Katyayani	Y			Y		Y		Y		Y
34	16NM1A05G2	Kukra Usha	Y		Y	Y		Y		Y		Y
35	16NM1A05G3	Kunisetty Divya Sri	Y		Y	Y		Y		Y		Y
36	16NM1A05G5	Mandava Nikitha			Y	Y		Y		Y		Y
37	16NM1A05G6	M Naga Santosha Roopa			Y	Y		Y		Y		Y
38	16NM1A05G7	Muntha Keerthi	Y		Y	Y		Y		Y		Y
39	16NM1A05G8	P Tanmay	Y		Y	Y		Y		Y		Y
40	16NM1A05G9	Pilla Harshika	Y		Y	Y		Y		Y		Y
41	16NM1A05H0	Pothina Bhargavi	Y		Y	Y		Y		Y		Y
42	16NM1A05H1	R Lochana Sai Mamba	Y		Y	Y		Y		Y		Y
43	16NM1A05H2	Salapu Divya	Y		Y	Y		Y		Y		Y
44	16NM1A05H3	Sathvika Ranguri	Y		Y	Y		Y		Y		Y
45	16NM1A05H4	Shaik Jasmine	Y		Y	Y		Y		Y		Y
46	16NM1A05H5	Shivani Kumari	Y		Y	Y		Y		Y		Y
47	16NM1A05H6	Tamarana Nishitha	Y		Y	Y		Y		Y		Y
48	16NM1A05H8	Valleti Harshini Chowdary	Y		Y	Y		Y		Y		Y
49	17NM5A0501	A Rajeswari Laxmi			Y	Y		Y		Y		Y
50	17NM5A0502	Bellala Siva Sai Naga	Y		Y	Y		Y		Y		Y
51	17NM5A0503	Dharmala Vasantha			Y	Y		Y		Y		Y
52	17NM5A0504	Galla Sailaja	Y		Y	Y		Y		Y		Y
53	17NM5A0505	Ganagalla Anusha	Y		Y	Y		Y		Y		Y
54	17NM5A0506	Geddam Durga Bhavani	Y		Y	Y		Y		Y		Y
55	17NM5A0507	Majji Kasturi	Y		Y	Y		Y		Y		Y
56	17NM5A0508	Pedapati Bala Rama Jyothi	Y		Y	Y		Y		Y		Y
57	17NM5A0509	Rapeti Hemeswari			Y	Y		Y		Y		Y
58	17NM5A0510	Savalapu Girija	Y		Y	Y		Y		Y		Y
59	17NM5A0511	Surada Rajeswari	Y		Y	Y		Y		Y		Y
60	17NM5A0512	Ummidi Indhira	Y		Y	Y		Y		Y		Y
61	17NM5A0513	Vindula Manichandana	Y		Y	Y		Y		Y		Y
62	17NM5A0514	Vobbina Vani Venkata Saieswari	Y		Y	Y		Y		Y		Y

Table 5: Student Feedback about the Activity



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**Figure 2: Student responses for JIGSAW method**

**Question 2**

What can you say about the sides of the JIGSAW technique with negative effects in your opinion?

Student responses: Few students reported that JIGSAW technique was 'time-consuming', "Their friends with low achievement made them tired" and "The noise occurred during group works was disturbing". Besides, 2 - 3 students expressed that it would be more effective if the topic was taught by the teacher instead of using this method.

After considering their feelings, we noticed that they are slow learners in my class and their native language is Telugu (a local language)

**Question 3**

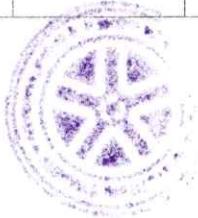
What are the changes you have observed after application of this technique?

Most students reported that this technique enhanced our learning capacity', 'it increased our self-confidence', 'provided peer interaction and cooperation', 'and they felt that we were more 'active', 'learned a lot on our own'.

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Team No	JIGSAW Team	Home Group Member ID	Formative Assessment			Summative Assessment		Final Score (50M)	Median :44 Performed more than Median Score (Yes/No)
			Individual Observation (10M)	Group Observation (10M)	Individual Quiz (15M)	Group Quiz (15M)			
1	A.P.J Abdul Kalam (A)	A1- Leader	10	10	14	13	42	NO	
		A2	8				44	YES	
		A3	9				45	YES	
		A4	8				46	YES	
		A5	10				45	YES	
2	Chandrasekhara Venkata Raman (B)	B1- Leader	10	10	15	15	50	YES	
		B2	9				46	YES	
		B3	8				46	YES	
		B4	7				46	YES	
		B5	6				44	YES	
3	Srinivasa Ramanujan (C)	C1- Leader	9	8	12	14	46	YES	
		C2	7				41	NO	
		C3	9				45	YES	
		C4	10				45	YES	
		C5	8				45	YES	
4	Satyendra Nath Bose (E)	D1	10	10	15	13	48	YES	
		D2	9				46	YES	
		D3	8				46	YES	
		D4	10				47	YES	
		D5	10				48	YES	
5	Satyendra Nath Bose (F)	E1- Leader	10	10	15	12	47	YES	
		E3	9				44	YES	
		E4	9				43	NO	
		E5	8				44	YES	
		F1- Leader	9				48	YES	
6	M. S. Swaminath an (G)	F2	8	9	14	15	46	YES	
		F3	7				44	YES	
		F4	9				48	YES	
		F5	10				44	YES	
		G1- Leader	10				45	YES	
7	Rajnikant Venkata Srinivasa Ramanujan (H)	G3	7	8	12	14	41	NO	
		G4	8				43	NO	
		G5	9				46	YES	



Anna University  
 Department of Mechanical Engineering  
 Anna University, Chennai  
 Date: \_\_\_\_\_  
 Signature: \_\_\_\_\_  
 Name: \_\_\_\_\_



8	Har Gobind Khorana (K)	H1-Leader	10	8	14	13	45	YES
		H2	8				44	YES
		H3	9				43	NO
		H4	7				42	NO
		H5	6				39	NO
9	K. S. Chandrase kharan (I)	I1-Leader	8	10	12	44	YES	
		I2	9			46	YES	
		I3	10			45	YES	
		I4	9			43	NO	
		I5	8			41	NO	
		I6	8			42	NO	
10	Archimede s (J)	J1-Leader	8	10	15	45	YES	
		J2	9			49	YES	
		J3	10			49	YES	
		J4	9			47	YES	
		J5	7			46	YES	
		J6	8			45	YES	
11	Rutherford (K)	K1-Leader	9	8	14	43	NO	
		K2	8			45	YES	
		K3	10			45	YES	
		K4	9			45	YES	
		K5	6			41	NO	
		K6	8			44	YES	
12	James Maxwell (L)	L1-Leader	10	9	14	45	YES	
		L2	8			44	YES	
		L3	9			46	YES	
		L4	7			45	YES	
		L5	6			43	NO	
		L6	8			46	YES	

Table 6: Assessment sheet for JIGSAW activity



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Vignana Park, VSEZ (P. V. V.)  
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### Activity Outcomes to PO Mapping:

Activity Outcomes	Mapping to POs
Give Examples for different types of parallelism.	PO1, PO2, PO3, PO4, PO5, PSO11, PSO12
Interpret the mechanism of Automatic parallelization.	PO1, PO2, PO3, PO4, PO5, PSO11, PSO12
Illustrate working of any real time application using application checkpoint.	PO1, PO2, PO3, PO4, PO5, PSO11, PSO12

### Post Implications:

- Weak students will get more knowledge by interacting with other students.
- This activity useful to the students to improve their creativity in exploring new ideas.
- Both advance and slow learners actively participated in the activity.



FACULTY SIGNATURE



MODULE COORDINATOR



HEAD OF THE DEPARTMENT

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Computer Science & Engineering  
VIGNAN'S INSTITUTE OF  
ENGINEERING FOR WOMEN  
Kapujaggaraupeta, Visakhapatnam-49



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**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

TIME TABLE

07.02.2022

Academic Year :2021-22

IV B.Tech II Semester

Regulation R16

**SECTION A**

Class Incharge: Mrs.RahimunnisaShaik

	09:30 - 10:20	10:20- 11:10	11:30 - 12:20	12:20- 01:10	02:00- 02:50	02:50 - 03:40	04:00 - 04:50
MON	CPP						
TUES							
WED	CPP						
THR			CPP				
FRI		CPP					
SAT		CPP	CPP				

**SECTION B**

Class Incharge: Mrs.N.SowjanyaKumari

	09:30 - 10:20	10:20- 11:10	11:30 - 12:20	12:20- 01:10	02:00- 02:50	02:50 - 03:40	04:00 - 04:50
MON		CPP					
TUES				CPP			
WED		CPP					
THR	CPP						
FRI	CPP						
SAT			CPP				

**SECTION C**

Class Incharge: Ms.Y.VineelaSravya

	09:30 - 10:20	10:20- 11:10	11:30 - 12:20	12:20- 01:10	02:00- 02:50	02:50 - 03:40	04:00 - 04:50
MON				CPP			
TUES		CPP					
WED		CPP					
THR	CPP						
FRI				CPP			
SAT			CPP				

Subject Name	Section A	Section B	Section C
Concurrent and Parallel Programming (CPP)	Mrs. Sheik Rahamuinissa	Mrs. N. SowjanyaKumari	Mrs. M. MamathaLaxmi

  
Coordinator

  
Head of the Department

  
Principal



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## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### COURSE TIME TABLE

Course Name : Concurrent and Parallel Programming	Course Code: C412
Year/ Sem : IV B TECH II SEM	Regulation: R16
Admitted Batch: 2017	Academic Year: 2020-21

Sec A	09:20 - 10:10	10:10- 11:00	11:20 - 12:10	12:10 - 01:00	01:50 - 02:40	02:40 - 03:30	03:50 - 04:40
MON				CPP			
TUE	CPP						
WED				CPP			
THRU		CPP					
FRI		CPP					
SAT			CPP				

CPP - Concurrent and Parallel Programming - Ms.G.Sandhya

Sec B	09:20 - 10:10	10:10- 11:00	11:20 - 12:10	12:10 - 01:00	01:50 - 02:40	02:40 - 03:30	03:50 - 04:40
MON				CPP			
TUE		CPP	CPP				
WED			CPP	CPP			
THRU							
FRI				CPP			
SAT							

CPP - Concurrent and Parallel Programming - Dr.T.V.Madhusudhan Rao

Sec C	09:20 - 10:10	10:10- 11:00	11:20 - 12:10	12:10 - 01:00	01:50 - 02:40	02:40 - 03:30	03:50 - 04:40
MON	CPP						
TUE		CPP		CPP			
WED							
THRU				CPP			
FRI		CPP					
SAT		CPP					

CPP - Concurrent and Parallel Programming - Dr.P. Jayalaxmi Bharati

Course Coordinator



Head of the Department

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**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**COURSE TIME TABLE**

Course Name: <b>Concurrent and Parallel Programming</b>	Course Code: <b>C412</b>
Year/ Sem : <b>IV B TECH II SEM</b>	Regulation: <b>R16</b>
Admitted Batch: <b>2016</b>	Academic Year: <b>2019-20</b>

**SECTION A**

	09:20 - 10:10	10:10- 11:00	11:20 - 12:10	12:10 - 01:00	01:50 - 02:40	02:40 - 03:30	03:50 - 04:40
<b>MON</b>	CPP						
<b>TUES</b>		CPP					
<b>WED</b>			CPP				
<b>THR</b>				CPP			
<b>FRI</b>	CPP						
<b>SAT</b>		CPP					

CPP Concurrent & Parallel Programming Dr.P Vijaya Bharathi

**SECTION B**

Class Incharge: Mrs.B Madhavai

	09:20 - 10:10	10:10- 11:00	11:20 - 12:10	12:10 - 01:00	01:50 - 02:40	02:40 - 03:30	03:50 - 04:40
<b>MON</b>		CPP					
<b>TUES</b>	CPP						
<b>WED</b>			CPP				
<b>THR</b>	CPP						
<b>FRI</b>				CPP			
<b>SAT</b>	CPP						

CPP Concurrent & Parallel Programming Mrs.B Madhavi

**SECTION C**

	09:20 - 10:10	10:10- 11:00	11:20 - 12:10	12:10 - 01:00	01:50 - 02:40	02:40 - 03:30	03:50 - 04:40
<b>MON</b>	CPP						
<b>TUES</b>				CPP			
<b>WED</b>	CPP						
<b>THR</b>		CPP					
<b>FRI</b>	CPP						
<b>SAT</b>			CPP				

CPP Concurrent & Parallel Programming Mrs.B.Madhavi

Course Coordinator

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

**IMPORTANT QUESTIONS**

Course Name: <b>Concurrent and Parallel Programming</b>	Course Code: <b>C412</b>
Year/ Sem : <b>IV B TECH II SEM</b>	Regulation: <b>R16</b>

**UNIT-I**

1. Differentiate sequential and parallel programming?
2. Explain different types of concurrent programming constructs?
3. What is race condition?
4. Discuss in detail the synchronization primitives?

**UNIT-II**

1. Explain the concept of Interprocess communication?
2. What is starvation?
3. Explain the situation of livelock with an example?
4. What is Deadlock? How to avoid deadlock situation?
5. Illustrate the recent trends in concurrent programming?

**UNIT-III**

1. Explain the different structures in parallel algorithms?
2. Discuss prefix sum computation and its implementation with an example?
3. Discuss various parallel sorting algorithms?
4. Discuss various parallel searching algorithms?
5. Illustrate parallel ranking algorithm?

**UNIT-IV**

1. Discuss parallel architecture in detail?
2. Explain the implementation of Posix Threads?
3. Differentiate GPU and CPU?
4. Illustrate the concepts of STM?

**UNIT-V**



1. Discuss about OpenMP and its implementations?
2. Discuss about OpenCL and its implementations?
3. Explain the working of Intel TBB?
4. Write a Cilk++ program for Quicksort?
5. What is CUDA. Discuss its use and implementation?

**UNIT-VI**

1. Explain the usage of OpenCL in heterogeneous computing?
2. Discuss the syntax and semantics of C++ AMP?

  
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**MULTIPLE CHOICE QUESTIONS**

Course Name : <b>CONCURRENT AND PARALLEL PROGRAMMING</b>	Course Code: <b>C412</b>
Year/ Sem : <b>IV B TECH II SEM</b>	Regulation: <b>R16</b>

1) A collection of lines that connects several devices is called .....

- A. bus
- B. peripheral connection wires
- C. Both a and b
- D. internal wires

Answer: A. bus

2) A complete microcomputer system consist of .....

- A. microprocessor
- B. memory
- C. peripheral equipment
- D. all of the above

Answer: D. all of the above

3) PC Program Counter is also called .....

- A. instruction pointer
- B. memory pointer
- C. data counter
- D. file pointer

Answer: A. instruction pointer

4) In a single byte how many bits will be there?

- A. 8
- B. 16
- C. 4
- D. 32

Answer: A. 8

5) CPU does not perform the operation .....

- A. data transfer
- B. logic operation
- C. arithmetic operation
- D. all of the above

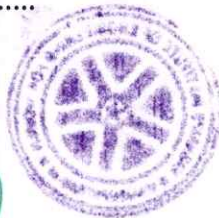
Answer: A. data transfer

6) The access time of memory is..... the time required for performing any single CPU operation.

- A. Longer than
- B. Shorter than
- C. Negligible than

319

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D. Same as

Answer: A. Longer than

7) Memory address refers to the successive memory words and the machine is called as .....

A. word addressable

B. byte addressable

C. bit addressable

D. Terra byte addressable

Answer: A. word addressable

8) A microprogram written as string of 0's and 1's is a .....

A. Symbolic microinstruction

B. binary microinstruction

C. symbolic microinstruction

D. binary micro-program

Answer: D. binary micro-program

9) A pipeline is like .....

A. an automobile assembly line

B. house pipeline

C. both a and b

D. a gas line

Answer: A. an automobile assembly line

10) Data hazards occur when .....

A. Greater performance loss

B. Pipeline changes the order of read/write access to operands

C. Some functional unit is not fully pipelined

D. Machine size is limited

Answer: B. Pipeline changes the order of read/write access to operands

11) Processors of all computers, whether micro, mini or mainframe must have

A. ALU

B. Primary Storage

C. Control unit

D. All of above

Answer: D. All of above

12) What is the control unit's function in the CPU?

A. To transfer data to primary storage

B. to store program instruction

C. to perform logic operations

D. to decode program instruction

Answer: D. to decode program instruction

13) What is meant by a dedicated computer?

A. which is used by one person only

B. which is assigned to one and only one task

C. which does one kind of software

D. which is meant for application software only

Answer: B. which is assigned to one and only one task

14) The most common addressing techniques employed by a CPU is



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- A. immediate
- B. direct
- C. indirect
- D. register
- E. all of the above

Answer: E. all of the above

15) Pipeline implement

- A. fetch instruction
- B. decode instruction
- C. fetch operand
- D. calculate operand
- E. execute instruction
- F. all of above

Answer: F. all of above

16) Which of the following code is used in present day computing was developed by IBM corporation?

- A. ASCII
- B. Hollerith Code
- C. Baudot code
- D. EBCDIC code

Answer: D. EBCDIC code

17) When a subroutine is called, the address of the instruction following the CALL instructions stored in/on the

- A. stack pointer
- B. accumulator
- C. program counter
- D. Stack

Answer: D. Stack

18) A microprogram written as string of 0's and 1's is a

- A. symbolic microinstruction
- B. binary microinstruction
- C. symbolic microprogram
- D. binary microprogram

Answer: D. binary microprogram

19) Interrupts which are initiated by an instruction are

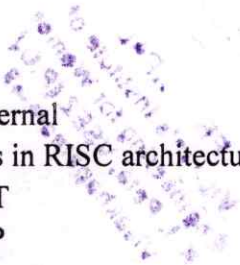
- A. internal
- B. external
- C. hardware
- D. Software

Answer: B. external

20) Memory access in RISC architecture is limited to instructions

- A. CALL and RET
- B. PUSH and POP
- C. STA and LDA
- D. MOV and JMP

Answer: C. STA and LDA



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21) From where interrupts are generated?

- A) Central processing unit
- B) Memory chips
- C) Registers
- D) I/O devices

Answer: D) I/O devices

22) The output of a gate is low when at least one of its input is low . It is true for

- A) AND gate
- B) OR gate
- C) NAND gate
- D) NOR gate

Answer: A)AND gate

23) Which one of the following is most suitable to make a parity checker

- A) AND gate
- B) OR gate
- C) Exclusive- OR gate
- D) None of the above

Answer: C) Exclusive- OR gate

24) What is the minimum number of flip-flops required in a counter to count 100 pulses?

- A) Five
- B) seven
- C) Ten
- D) hundred

Answer: B) seven

25. For a RS flip-flop constructed with NAND gates and input  $R=1$  and  $s=1$  the state is

- A) Memory state
- B) Set state
- C) Reset state
- D) Unused state

Answer: D) Unused state

26. The advantage of RISC processor over CISC processor is that

- A) The hardware architecture is simpler
- B) An instruction can be executed in one cycle
- C) Less number of registers accommodate in chip
- D) Parallel execution capabilities

Answer: B) An instruction can be executed in one cycle

27. Which of the following is true about interrupts?

- A) They are generated when memory cycles are stolen
- B) They are used in place of data channels
- C) They can be generated by arithmetic operation
- D) They can indicate completion of an I/O operation

Answer: A) They are generated when memory cycles are stolen

28. Te devices connected to a microprocessor can use the data bus:

- A) all the time



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- B) at regular interval of time
- C) only when it's sending or receiving data
- D) when the microprocessor is reset

Answer: C) only when it's sending or receiving data

29. Intel 8080 microprocessor has an instruction set of 91 instruction. The opcode to implement this instruction set should be at least

- A) 3 bit long
- B) 5 bit long
- C) 7 bit long
- D) 9 bit long

Answer: C) 7 bit long

30. Dynamic RAMs are best suited to

- A) slow system
- B) large system
- C) one bit system
- D) none of the above

Answer: A) slow system

31. Intel Pentium CPU is a

- A. RISC based
- B. CISC based
- C. Both of the above
- D. None of the above

Answer: A. RISC based

32. A modem is used to link up two computers via

- A. telephone line
- B. dedicated line
- C. Both of the above
- D. None of the above

Answer: C. Both of the above

33. The maximum integer which can be stored on a 8 bit accumulator is

- A. 112
- B. 200
- C. 255
- D. 224

Answer: C. 255

34. In a system with a 16 bit address bus, what is the maximum number of 1K byte memory devices it could contain

- A. 16
- B. 64
- C. 256
- D. 65536

Answer: C. 256

35. Which of the following memories in a computer is volatile?

- A. RAM
- B. ROM
- C. EPROM

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D. ALL

Answer: A. RAM

36. A peripheral is

- A. any drives installed in the computer
- B. tapedrive connected to a computer
- C. any physical device connected to the computer
- D. None of above

Answer: C. any physical device connected to the computer

37. How many bits do you think will be adequate to encode individual character in Devnagari script

- A. 12
- B. 16
- C. 64
- D. 10

Answer: D. 10

38. Which of the following bus is used to transfer data from main memory to peripheral device?

- A. DMA bus
- B. Output bus
- C. Data bus
- D. All of the above

Answer: C. Data bus

39. To provide increased memory capacity for operating system, the

- A. virtual memory is created
- B. cache memory is increased
- C. memory for OS is reserved
- D. Additional memory is installed

Answer: A. virtual memory is created

40. CD -RAW is

- A. Input device only
- B. output device only
- C. Both of the above
- D. None of the above

Answer: B. output device only

41. Which of the following require large computer memory?

- A. Imaging
- B. Graphics
- C. Voice
- D. All of the above

Answer: D. All of the above

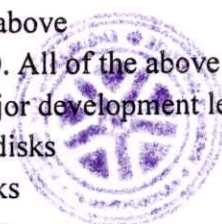
42. Which major development led to the production of microcomputers?

- A. Magnetic disks
- B. floppy disks
- C. Logic gates
- D. Integrated Circuits

Answer: D. Integrated Circuits

43. In immediate addressing the operand is placed

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- A. in the CPU register
- B. after opcode in the instruction
- C. in the memory
- D. in the stack

Answer: B. after opcode in the instruction

44. Micro instructions are stored in

- A. computer memory
- B. primary storage
- C. secondary storage
- D. control memory
- E. cache memory

Answer: D. control memory

45. Pipeline processing implement

- A. fetch instruction
- B. decode instruction
- C. fetch operand
- D. calculate operand
- E. execute instruction
- F. all of the above

Answer: F. all of the above

46. The 16- bit registers in 8085 is

- A. general purpose register
- B. accumulator
- C. stack pointer and program counter
- D. all of the above

Answer: C. stack pointer and program counter

47. Instruction pipelining has minimum stages

- A. 4
- B. 2
- C. 3
- D. 6

Answer: B. 2

48. Systems that do not have parallel processing capabilities are

- A. SISD
- B. SIMD
- C. MIMD
- D. All of the above

Answer: A. SISD

49. The word size of the microprocessor refers to

- A. the amount of a information that can be stored in a byte
- B. the amount of a information that can be stored in a cycle
- C. The number of machine operations performed in a second
- D. the maximum length of an English word that can be input to a computer

Answer: B. the amount of a information that can be stored in a cycle



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50. How many address lines are needed to address each memory location in a 2048X 4 memory chip?
- A. 10
  - B. 11
  - C. 8
  - D. 12

Answer: B. 11

51. Who is regarded as the founder of Computer Architecture?
- A. Alan Turing
  - B. Konrad Zuse
  - C. John von Neumann
  - D. John William Mauchly
  - E. None of the answers above is correct

Answer: C. John von Neumann

52. What is characteristic for the organization of a computer architecture?
- A. Size
  - B. Dynamic behaviour
  - C. Static behaviour
  - D. Speed
  - E. None of the answers above is correct

Answer: B. Dynamic behaviour

53. What is usually regarded as the von Neumann Bottleneck?
- A. Processor/memory interface
  - B. Control unit
  - C. Arithmetic logical unit
  - D. Instruction set
  - E. None of the answers above is correct

Answer: A. Processor/memory interface

54. How does the number of transistors per chip increase according to Moore 's law?
- A. Quadratically
  - B. Linearly
  - C. Cubicly
  - D. Exponentially
  - E. None of the answers above is correct

Answer: D. Exponentially

55. Who is regarded as the founder of Computer Science?
- A. Alan Turing
  - B. Konrad Zuse
  - C. J. Presper Eckert
  - D. John William Mauchly
  - E. None of the answers above is correct

Answer: A. Alan Turing

56. Which is the fastest storage unit in a usual memory hierarchy?
- A. Cache
  - B. Main memory



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- C. Hard disk
- D. Register
- E. None of the answers above is correct

Answer: D. Register

57. Which cache miss does not occur in case of a fully associative cache ?

- A. Conflict miss
- B. Capacity miss
- C. Compulsory miss
- D. Cold start miss
- E. None of the answers above is correct

Answer: A. Conflict miss

58. Which miss even occurs in infinite caches?

- A. Coherence miss
- B. Capacity miss
- C. Conflict miss
- D. Cold start miss
- E. None of the answers above is correct

Answer: D. Cold start miss

59. What is stored in a Translation Lookaside Buffer?

- A. System dumps
- B. Physical addresses
- C. program data
- D. Operating system log files
- E. None of the answers above is correct

Answer: B. Physical addresses

60. Which value has the speedup of a parallel program that achieves an efficiency of 75% on 32 processors?

- A. 18
- B. 24
- C. 16
- D. 20
- E. None of the answers above is correct

Answer: B. 24

61. Pipelining strategy is called implement

- A. instruction execution
- B. instruction prefetch
- C. instruction decoding
- D. instruction manipulation

Answer: B. instruction prefetch

62. The concept of pipelining is most effective in improving performance if the tasks being performed in different stages :

- A. require different amount of time
- B. require about the same amount of time
- C. require different amount of time with time difference between any two tasks being same
- D. require different amount with time difference between any two tasks being different



Answer: B. require about the same amount of time

63) Which Algorithm is better choice for pipelining?

- A. Small Algorithm
- B. Hash Algorithm
- C. Merge-Sort Algorithm
- D. Quick-Sort Algorithm

Answer: C. Merge-Sort Algorithm

64. The expression 'delayed load' is used in context of

- A. processor-printer communication
- B. memory-monitor communication
- C. pipelining
- D. none of the above

Answer: C. pipelining

65. Parallel processing may occur

- A. in the instruction stream
- B. in the data stream
- C. both[A] and [B]
- D. none of the above

Answer: C. both[A] and [B]

66. The cost of a parallel processing is primarily determined by :

- A. Time Complexity
- B. Switching Complexity
- C. Circuit Complexity
- D. None of the above

Answer: C. Circuit Complexity

67. An instruction to provide small delay in program

- A. LDA
- B. NOP
- C. BEA
- D. None of the above

Answer: B. NOP

68. Characteristic of RISC (Reduced Instruction Set Computer) instruction set is

- A. three instructions per cycle
- B. two instructions per cycle
- C. one instruction per cycle
- D. none of the

Answer: C. one instruction per cycle

69. In daisy-chaining priority method, all the devices that can request an interrupt are connected in

- A. parallel
- B. serial
- C. random
- D. none of the above

Answer: B. serial



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70. Which one of the following is a characteristic of CISC (Complex Instruction Set Computer)

- A. Fixed format instructions
- B. Variable format instructions
- C. Instructions are executed by hardware
- D. None of the above

Answer: B. Variable format instructions

71. During the execution of the instructions, a copy of the instructions is placed in the\_\_\_\_\_.

- A. Register
- B. RAM
- C. System heap
- D. Cache

Answer: D. Cache

72. Two processors A and B have clock frequencies of 700 Mhz and 900 Mhz respectively. Suppose A can execute an instruction with an average of 3 steps and B can execute with an average of 5 steps. For the execution of the same instruction which processor is faster ?

- A. A
- B. B
- C. Both take the same time
- D. Insufficient information

Answer: A. A

73. A processor performing fetch or decoding of different instruction during the execution of another instruction is called\_\_\_\_\_.

- A. Super-scaling
- B. Pipe-lining
- C. Parallel Computation
- D. None of these

Answer: B. Pipe-lining

74. For a given FINITE number of instructions to be executed, which architecture of the processor provides for a faster execution ?

- A. ISA
- B. ANSA
- C. Super-scalar
- D. All of the above

Answer: C. Super-scalar

75. The clock rate of the processor can be improved by,

- A. Improving the IC technology of the logic circuits
- B. Reducing the amount of processing done in one step
- C. By using overclocking method
- D. All of the above

Answer: D. All of the above

76. An optimizing Compiler does,

- A. Better compilation of the given piece of code.
- B. Takes advantage of the type of processor and reduces its process time.
- C. Does better memory management.



319  
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D. Both a and c

Answer: B. Takes advantage of the type of processor and reduces its process time.

77. The ultimate goal of a compiler is to,

- A. Reduce the clock cycles for a programming task.
- B. Reduce the size of the object code.
- C. Be versatile.
- D. Be able to detect even the smallest of errors.

Answer: A. Reduce the clock cycles for a programming task.

78. SPEC stands for,

- A. Standard Performance Evaluation Code.
- B. System Processing Enhancing Code.
- C. System Performance Evaluation Corporation.
- D. Standard Processing Enhancement Corporation.

Answer: C. System Performance Evaluation Corporation.

79. As of 2000, the reference system to find the performance of a system is \_\_\_\_\_.

- A. Ultra SPARC 10
- B. SUN SPARC
- C. SUN II
- D. None of these

Answer: A. Ultra SPARC 10

80. When Performing a looping operation, the instruction gets stored in the \_\_\_\_\_.

- A. Registers
- B. Cache
- C. System Heap
- D. System stack

Answer: B. Cache

81. The average number of steps taken to execute the set of instructions can be made to be less than one by following \_\_\_\_\_.

- A. ISA
- B. Pipe-lining
- C. Super-scaling
- D. Sequential

Answer: C. Super-scaling

82. If a processor clock is rated as 1250 million cycles per second, then its clock period is \_\_\_\_\_.

- A.  $1.9 * 10^{-10}$  sec
- B.  $1.6 * 10^{-9}$  sec
- C.  $1.25 * 10^{-10}$  sec
- D.  $8 * 10^{-10}$  sec

Answer: D.  $8 * 10^{-10}$  sec

83. If the instruction, Add R1,R2,R3 is executed in a system which is pipe-lined, then the value of S is (Where S is term of the Basic performance equation)

- A. 3
- B. ~2
- C. ~1
- D. 6



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Answer: C. ~1

84. CISC stands for,

- A. Complete Instruction Sequential Compilation
- B. Computer Integrated Sequential Compiler
- C. Complex Instruction Set Computer
- D. Complex Instruction Sequential Compilation

Answer: C. Complex Instruction Set Computer

85. As of 2000, the reference system to find the SPEC rating are built with \_\_\_\_\_ Processor.

- A. Intel Atom SPARC 300Mhz
- B. Ultra SPARC -Iii 300MHZ
- C. Amd Neutrino series
- D. ASUS A series 450 Mhz

Answer: B. Ultra SPARC -Iii 300MHZ

86. The CISC stands for

- A. Computer Instruction Set Compliment
- B. Complete Instruction Set Compliment
- C. Computer Indexed Set Components
- D. Complex Instruction set computer

Answer: D. Complex Instruction set computer

87. The computer architecture aimed at reducing the time of execution of instructions is \_\_\_\_\_.

- A. CISC
- B. RISC
- C. ISA
- D. ANNA

Answer: B. RISC

88. The Sun micro systems processors usually follow \_\_\_\_\_ architecture.

- A. CISC
- B. ISA
- C. ULTRA SPARC
- D. RISC

Answer: D. RISC

89. The RISC processor has a more complicated design than CISC.

- A. True
- B. False

Answer: B. False

90. The iconic feature of the RISC machine among the following are

- a) Reduced number of addressing modes
- b) Increased memory size
- c) Having a branch delay slot
- d) All of the above

Answer: c) Having a branch delay slot

91. Both the CISC and RISC architectures have been developed to reduce the \_\_\_\_\_.

- A. Cost
- B. Time delay
- C. Semantic gap



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D. All of the above

Answer: C. Semantic gap

92. Out of the following which is not a CISC machine.

A. IBM 370/168

B. VAX 11/780

C. Intel 80486

D. Motorola A567

Answer: D. Motorola A567

93. Pipe-lining is a unique feature of\_\_\_\_\_.

A. RISC

B. CISC

C. ISA

D. IANA

Answer: A. RISC

94. In CISC architecture most of the complex instructions are stored in\_\_\_\_\_.

A. Register

B. Diodes

C. CMOS

D. Transistors

Answer: D. Transistors

95. Which of the architecture is power efficient?

A. CISC

B. RISC

C. ISA

D. IANA

Answer: B. RISC

96. To which class of systems does the von Neumann computer belong?

A. SIMD (Single Instruction Multiple Data)

B. MIMD (Multiple Instruction Multiple Data)

C. MISD (Multiple Instruction Single Data)

D. SISD (Single Instruction Single Data)

E. None of the answers above is correct.

Answer: D. SISD (Single Instruction Single Data)

97. Parallel programs: Which speedup could be achieved according to Amdahl's law for infinite number of processors if 5% of a program is sequential and the remaining part is ideally parallel?

A. Infinite speedup

B. 5

C. 20

D. 50

E. None of the answers above is correct.

Answer: C. 20

98. Itanium processor: Which hazard can be circumvented by register rotation?

A. Control hazards

B. Data hazards

C. Structural hazards

D. None



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E. None of the answers above is correct.

Answer: B. Data hazards

99. Which MIMD systems are best scalable with respect to the number of processors?

A. Distributed memory computers

B. ccNUMA systems

C. nccNUMA systems

D. Symmetric multiprocessors

E. None of the answers above is correct

Answer: A. Distributed memory computers

100. Cache coherence: For which shared (virtual) memory systems is the snooping protocol suited?

A. Crossbar connected systems

B. Systems with hypercube network

C. Systems with butterfly network

D. Bus based systems

E. None of the answers above is correct.

Answer: D. Bus based systems

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**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**Tutorial Topics**

Course Name: <b>Concurrent and Parallel Programming</b>	Course Code: <b>C412</b>
Year/ Sem : <b>IV B TECH II SEM</b>	Regulation: <b>R16</b>

**Concurrency vs Parallelism**

Both concurrency and parallelism are used in relation to multithreaded programs but there is a lot of confusion about the similarity and difference between them. The big question in this regard: is concurrency parallelism or not? Although both the terms appear quite similar but the answer to the above question is NO, concurrency and parallelism are not same. Now, if they are not same then what is the basic difference between them?

In simple terms, concurrency deals with managing the access to shared state from different threads and on the other side, parallelism deals with utilizing multiple CPUs or its cores to improve the performance of hardware.

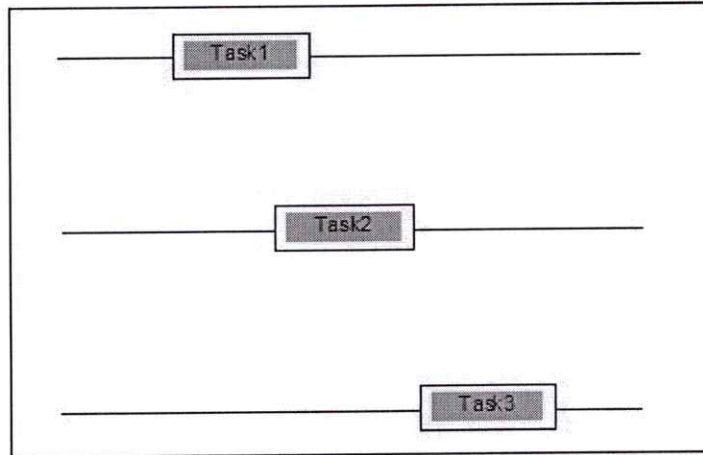
**Concurrency in Detail**

Concurrency is when two tasks overlap in execution. It could be a situation where an application is progressing on more than one task at the same time. We can understand it diagrammatically; multiple tasks are making progress at the same time, as follows –



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**Figure 1: Concurrency**

### Levels of Concurrency

There are three important levels of concurrency in terms of programming:

#### Low-Level Concurrency

In this level of concurrency, there is explicit use of atomic operations. We cannot use such kind of concurrency for application building, as it is very error-prone and difficult to debug. Even Python does not support such kind of concurrency.

#### Mid-Level Concurrency

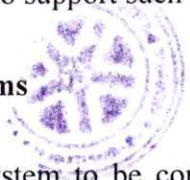
In this concurrency, there is no use of explicit atomic operations. It uses the explicit locks. Python and other programming languages support such kind of concurrency. Mostly application programmers use this concurrency.

#### High-Level Concurrency

In this concurrency, neither explicit atomic operations nor explicit locks are used. Python has **concurrent.futures** module to support such kind of concurrency.

### Properties of Concurrent Systems

For a program or concurrent system to be correct, some properties must be satisfied by it. Properties related to the termination of system are as follows –



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### **Correctness property**

The correctness property means that the program or the system must provide the desired correct answer. To keep it simple, we can say that the system must map the starting program state to final state correctly.

### **Safety property**

The safety property means that the program or the system must remain in a “good” or “safe” state and never does anything “bad”.

### **Liveness property**

This property means that a program or system must “make progress” and it would reach at some desirable state.

### **Actors of concurrent systems**

This is one common property of concurrent system in which there can be multiple processes and threads, which run at the same time to make progress on their own tasks. These processes and threads are called actors of the concurrent system.

### **Resources of Concurrent Systems**

The actors must utilize the resources such as memory, disk, printer etc. in order to perform their tasks.

### **Certain set of rules**

Every concurrent system must possess a set of rules to define the kind of tasks to be performed by the actors and the timing for each. The tasks could be acquiring of locks, memory sharing, modifying the state, etc.

### **Barriers of Concurrent Systems**

While implementing concurrent systems, the programmer must take into consideration the following two important issues, which can be the barriers of concurrent systems –

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## Sharing of data

An important issue while implementing the concurrent systems is the sharing of data among multiple threads or processes. Actually, the programmer must ensure that locks protect the shared data so that all the accesses to it are serialized and only one thread or process can access the shared data at a time. In case, when multiple threads or processes are all trying to access the same shared data then not all but at least one of them would be blocked and would remain idle. In other words, we can say that we would be able to use only one process or thread at a time when lock is in force. There can be some simple solutions to remove the above-mentioned barriers –

### Data Sharing Restriction

The simplest solution is not to share any mutable data. In this case, we need not to use explicit locking and the barrier of concurrency due to mutual data would be solved.

### Data Structure Assistance

Many times the concurrent processes need to access the same data at the same time. Another solution, than using of explicit locks, is to use a data structure that supports concurrent access. For example, we can use the **queue** module, which provides thread-safe queues. We can also use **multiprocessing.JoinableQueue** classes for multiprocessing-based concurrency.

### Immutable Data Transfer

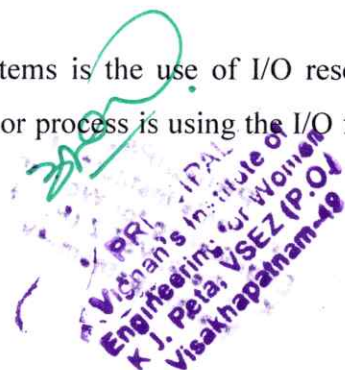
Sometimes, the data structure that we are using, say concurrency queue, is not suitable then we can pass the immutable data without locking it.

### Mutable Data Transfer

In continuation of the above solution, suppose if it is required to pass only mutable data, rather than immutable data, then we can pass mutable data that is read only.

## Sharing of I/O Resources

Another important issue in implementing concurrent systems is the use of I/O resources by threads or processes. The problem arises when one thread or process is using the I/O for such a



long time and other is sitting idle. We can see such kind of barrier while working with an I/O heavy application. It can be understood with the help of an example, the requesting of pages from web browser. It is a heavy application. Here, if the rate at which the data is requested is slower than the rate at which it is consumed then we have I/O barrier in our concurrent system.

The following Python script is for requesting a web page and getting the time our network took to get the requested page –

```
import urllib.request
import time
ts = time.time()
req = urllib.request.urlopen('http://www.tutorialspoint.com')
pageHtml = req.read()
te = time.time()
print("Page Fetching Time : {} Seconds".format (te-ts))
```

After executing the above script, we can get the page fetching time as shown below.

### Output

Page Fetching Time: 1.0991398811340332 Seconds

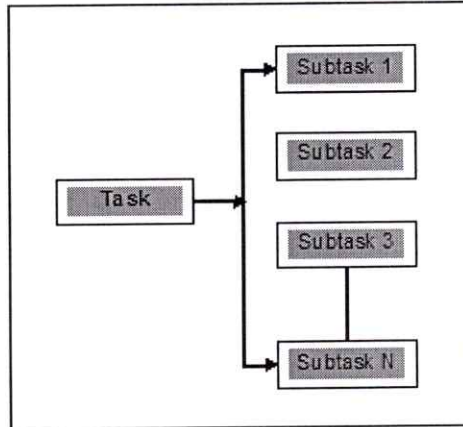
We can see that the time to fetch the page is more than one second. Now what if we want to fetch thousands of different web pages, you can understand how much time our network would take.

### What is Parallelism?

Parallelism may be defined as the art of splitting the tasks into subtasks that can be processed simultaneously. It is opposite to the concurrency, as discussed above, in which two or more events are happening at the same time. We can understand it diagrammatically; a task is broken into a number of subtasks that can be processed in parallel, as follows –

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**Figure 2: Parallelism**

To get more idea about the distinction between concurrency and parallelism, consider the following points –

**Concurrent but not parallel**

An application can be concurrent but not parallel means that it processes more than one task at the same time but the tasks are not broken down into subtasks.

**Parallel but not concurrent**

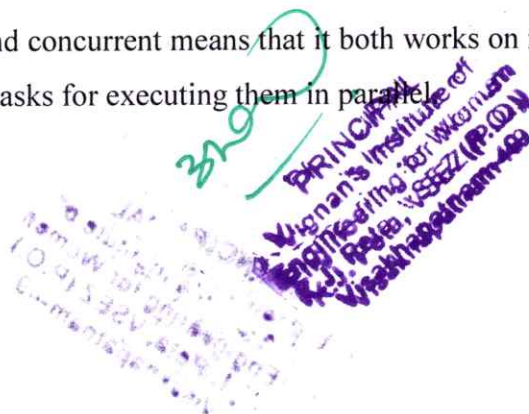
An application can be parallel but not concurrent means that it only works on one task at a time and the tasks broken down into subtasks can be processed in parallel.

**Neither parallel nor concurrent**

An application can be neither parallel nor concurrent. This means that it works on only one task at a time and the task is never broken into subtasks.

**Both parallel and concurrent**

An application can be both parallel and concurrent means that it both works on multiple tasks at a time and the task is broken into subtasks for executing them in parallel.



## **Necessity of Parallelism**

We can achieve parallelism by distributing the subtasks among different cores of single CPU or among multiple computers connected within a network.

Consider the following important points to understand why it is necessary to achieve parallelism

### **Efficient code execution**

With the help of parallelism, we can run our code efficiently. It will save our time because the same code in parts is running in parallel.

### **Faster than sequential computing**

Sequential computing is constrained by physical and practical factors due to which it is not possible to get faster computing results. On the other hand, this issue is solved by parallel computing and gives us faster computing results than sequential computing.

### **Less execution time**

Parallel processing reduces the execution time of program code. If we talk about real life example of parallelism, the graphics card of our computer is the example that highlights the true power of parallel processing because it has hundreds of individual processing cores that work independently and can do the execution at the same time. Due to this reason, we are able to run high-end applications and games as well.

### **Understanding of the processors for implementation**

We know about concurrency, parallelism and the difference between them but what about the system on which it is to be implemented. It is very necessary to have the understanding of the system, on which we are going to implement, because it gives us the benefit to take informed decision while designing the software. We have the following two kinds of processors –

#### **Single-core processors**

Single-core processors are capable of executing one thread at any given time. These processors use **context switching** to store all the necessary information for a thread at a specific time and then restoring the information later. The context switching mechanism helps us make progress on a number of threads within a given second and it looks as if the system is working on multiple things. Single-core processors come with many advantages. These processors require less power and there is no complex communication protocol between multiple cores. On the

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other hand, the speed of single-core processors is limited and it is not suitable for larger applications.

### **Multi-core processors**

Multi-core processors have multiple independent processing units also called **cores**.

Such processors do not need context switching mechanism as each core contains everything it needs to execute a sequence of stored instructions.

### **Fetch-Decode-Execute Cycle**

The cores of multi-core processors follow a cycle for executing. This cycle is called the **Fetch-Decode-Execute** cycle. It involves the following steps –

#### **Fetch**

This is the first step of cycle, which involves the fetching of instructions from the program memory.

#### **Decode**

Recently fetched instructions would be converted to a series of signals that will trigger other parts of the CPU.

#### **Execute**

It is the final step in which the fetched and the decoded instructions would be executed. The result of execution will be stored in a CPU register.

One advantage over here is that the executions in multi-core processors are faster than that of single-core processors. It is suitable for larger applications. On the other hand, complex communication protocol between multiple cores is an issue. Multiple cores require more power than single-core processors.

349

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**TOPICS BEYOND SYLLABUS**

Course Name: <b>Concurrent and Parallel Programming</b>	Course Code: <b>C412</b>
Year/ Sem : <b>IV B TECH II SEM</b>	Regulation: <b>R16</b>
Admitted Batch : <b>2018</b>	Academic Year : <b>2021-22</b>

**UNIT IV**

**GPU versus CPU**

**How CPU and GPU Work Together**

A CPU (central processing unit) works together with a GPU (graphics processing unit) to increase the throughput of data and the number of concurrent calculations within an application. GPUs were originally designed to create images for computer graphics and video game consoles, but since the early 2010's, GPUs can also be used to accelerate calculations involving massive amounts of data.

A CPU can never be fully replaced by a GPU: a GPU complements CPU architecture by allowing repetitive calculations within an application to be run in parallel while the main program continues to run on the CPU. The CPU can be thought of as the taskmaster of the entire system, coordinating a wide range of general-purpose computing tasks, with the GPU performing a narrower range of more specialized tasks (usually mathematical). Using the power of parallelism, a GPU can complete more work in the same amount of time as compared to a CPU.

**Difference between CPU and GPU**

The main difference between CPU and GPU architecture is that a CPU is designed to handle a wide-range of tasks quickly (as measured by CPU clock speed), but are limited in the concurrency of tasks that can be running. A GPU is designed to quickly render high-resolution images and video concurrently.

Because GPUs can perform parallel operations on multiple sets of data, they are also commonly used for non-graphical tasks such as machine learning and scientific computation. Designed with thousands of processor cores running simultaneously, GPUs enable massive parallelism where each core is focused on making efficient calculations.

**CPU vs GPU Processing**

While GPUs can process data several orders of magnitude faster than a CPU due to massive parallelism, GPUs are not as versatile as CPUs. CPUs have large and broad instruction sets,



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managing every input and output of a computer, which a GPU cannot do. In a server environment, there might be 24 to 48 very fast CPU cores. Adding 4 to 8 GPUs to this same server can provide as many as 40,000 additional cores. While individual CPU cores are faster (as measured by CPU clock speed) and smarter than individual GPU cores (as measured by available instruction sets), the sheer number of GPU cores and the massive amount of parallelism that they offer more than make up the single-core clock speed difference and limited instruction sets.

GPUs are best suited for repetitive and highly-parallel computing tasks. Beyond video rendering, GPUs excel in machine learning, financial simulations and risk modeling, and many other types of scientific computations. While in years past, GPUs were used for mining cryptocurrencies such as Bitcoin or Ethereum, GPUs are generally no longer utilized at scale, giving way to specialized hardware such as Field-Programmable Grid Arrays (FPGA) and then Application Specific Integrated Circuits (ASIC).

### Examples of CPU to GPU Computing

**CPU and GPU rendering video** — The graphics card helps transcode video from one graphics format to another faster than relying on a CPU.

**Accelerating data** — A GPU has advanced calculation ability that accelerates the amount of data a CPU can process in a given amount of time. When there are specialized programs that require complex mathematical calculations, such as deep learning or machine learning, those calculations can be offloaded by the GPU. This frees up time and resources for the CPU to complete other tasks more efficiently.

**Cryptocurrency mining** — Obtaining virtual currencies like Bitcoin includes using a computer as a relay for processing transactions. While a CPU can handle this task, a GPU on a graphics card can help the computer generate currency much faster.

## UNIT VI

### OpenCL Kernels

On OpenCL the devices will execute kernels, those kernels are small functions written in OpenCL C which is a C (C99) subset. Kernels are an entry point (like the main function) for a device execution. The kernels are loaded and prepared by the Host.

Here are the main differences between C and OpenCL C:

No recursion

Has vector types

Has image types

Allow structures but kill performance, and communication with host could be complicated.



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There is no mechanism for different kernels to cooperate

The kernel arguments will be pointers to the global memory or some values given.

### Types

The only point to pay attention is that integer types are represented as two's complement and this may differ on the host.

### Type & Size

char

8-bit integer

short

16-bit integer

int

32-bit integer

long

64-bit integer

float

32-bit single precision

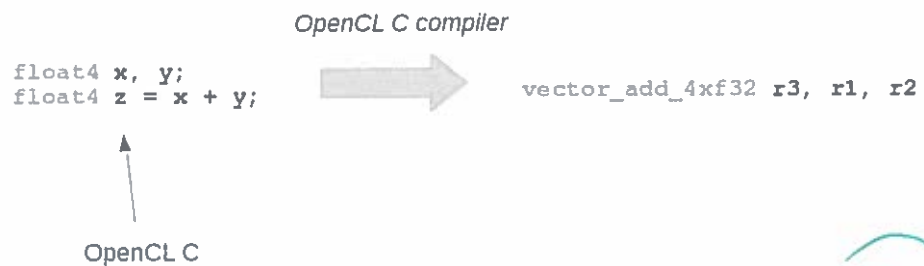
double

64-bit double precision

### Vector Types

OpenCL support vector types with sizes

$N \in \{2, 3, 4, 8, 16\}$ . This will allow OpenCL to use vectorized instructions of the device technology, for instance Neon instructions.

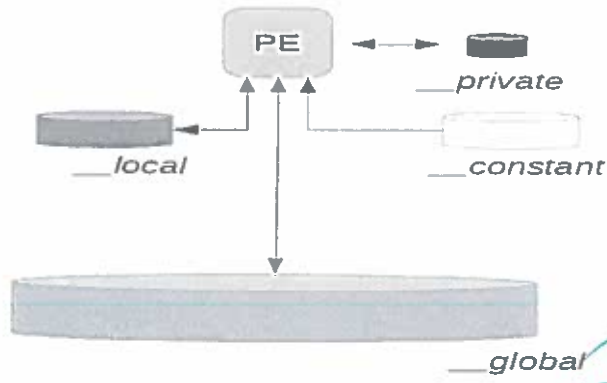


The diagram below show how to define the memory regions (Local, Private, Constant, Global)



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**TOPICS BEYOND SYLLABUS**

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Year/ Sem : <b>IV B TECH II SEM</b>	Regulation: <b>R16</b>
Admitted Batch: <b>2017</b>	Academic Year: <b>2020-21</b>

**UNIT I:**

**Basics need of concurrent Programming**

In a concurrent program, several streams of operations may execute concurrently. Each stream of operations executes as it would in a sequential program except for the fact that streams can communicate and interfere with one another. Each such sequence of instructions is called a thread. For this reason, sequential programs are often called single-threaded programs. When a multi-threaded program executes, the operations in its various threads are interleaved in an unpredictable order subject to the constraints imposed by explicit synchronization operations that may be embedded in the code. The operations for each stream are strictly ordered, but the interleaving of operations from a collection of streams is undetermined and depends on the vagaries of a particular execution of the program. One stream may run very fast while another does not run at all. In the absence of fairness guarantees, a given thread can starve unless it is the only runnable thread.

A thread is runnable unless it executes a special operation requiring synchronization that waits until a particular condition occurs. If more than one thread is runnable, all but one thread may starve (make no progress because none of its operations are being executed) unless the language makes a fairness guarantee. A fairness guarantee states that the next operation in a runnable thread eventually will execute. The Java language specification currently makes no fairness guarantees but most Java Virtual Machines guarantee fairness.

Threads can communicate with each other in a variety of ways. The Java programming language relies primarily on shared variables to support communication between processes, but it also supports an explicit signaling mechanism.

In general, writing concurrent programs is extremely difficult because the multiplicity of possible interleavings of operations among threads means that program execution is non-deterministic. For this reason, program bugs may be difficult to reproduce. Furthermore, the complexity introduced by multiple threads and their potential interactions makes programs



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much more difficult to analyze and reason about. Fortunately, many concurrent programs including most GUI applications follow stylized design patterns that control the underlying complexity.

## UNIT VI:

### Open CL Initialization Steps:

#### Instructions for connecting to Cometa GPU Server:

SSH client to connect to our server. Linux or MacOS: it is installed by default.

Windows: download SSH client (putty or openssh).

Step for connection:

1. `ssh -l gpu 212.189.144.28`

- Enter 'bnd3espue' as password

2. `ssh -l username gpu`

- 'username' is the login name you should have received from Cometa
- Enter the password you received

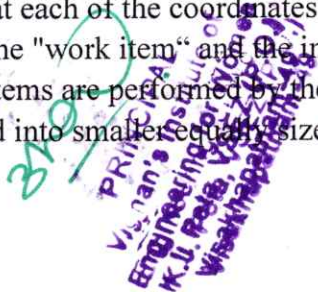
3. step to get the platforms/devices

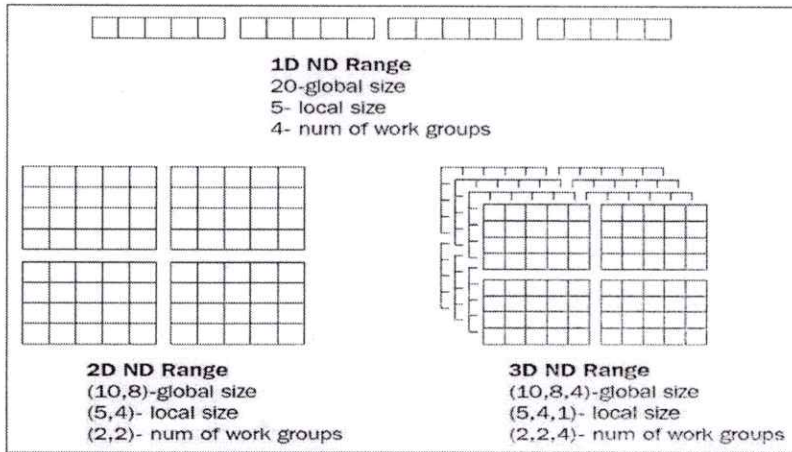
- STEP 1: discovery quantity of platforms/devices
- STEP 2: allocation of enough space
- STEP 3: retrieval of the desired number of platforms/devices
- You can choose what device retrieve with device\_type argument:
  - CL\_DEVICE\_TYPE\_CPU
  - CL\_DEVICE\_TYPE\_GPU
  - CL\_DEVICE\_TYPE\_ALL

### OpenCL – Execution and Programming:

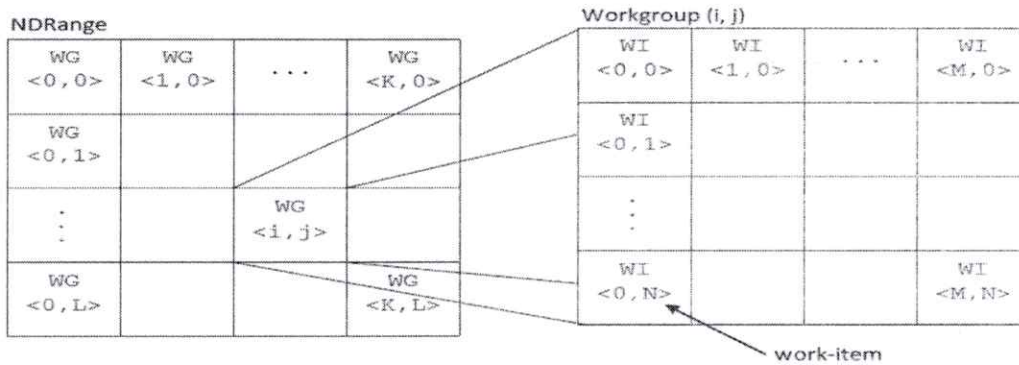
The Execution model defines two main components:

- Host program: written in C or C++, it runs on the OpenCL host.
  - creates and queries the platform and the device attributes
  - defines a context for the kernels
  - builds the kernels and manages their executions.
- Kernels: written in OpenCL C, they are the basic units of executable code that run on the OpenCL device.
  - Each instance of a OpenCL kernel is executed by a Compute Units.
  - On submission of the kernel by the Host to the Device, an N dimensional index space is defined ( $N = 1, 2$  or  $3$ ).
  - The number of kernel instances is equal to the size of the index space and each kernel instance is created at each of the coordinates of this index space.
  - This instance is called as the "work item" and the index space is called as the ND-Range. The work-items are performed by the compute units.
  - Work-items can be divided into smaller equally sized "work-groups"





OpenCL NDRange



- So for each work-item we can define two types of identifier:
    - global-id: A unique global ID given to each work item in the global NDRange
    - local-id: A unique local ID given to each work item within a work group
- The ID is fundamental for the execution of the kernels in OpenCL

Scalar C Function	Data-Parallel Function
<pre>void square(int n, const float *a, float *result) {   int i;   for (i=0; i&lt;n; i++)     result[i] = a[i]*a[i]; }</pre>	<pre>kernel void dp_square (global const float *a, global float *result) {   int id= get_global_id(0);   result[id] = a[id]*a[id]; } // dp_square execute over "n" work-items</pre>

```
kernel void dp_square
(global const float *a, global float *result)
{
  int id= get_global_id(0);
  result[id] = a[id]*a[id];
}
// dp_square execute over "n" work-items
```



get\_global\_id(0) = 7

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
input	6	1	1	0	9	2	4	1	1	9	7	6	8	2	2	5
output	36	1	1	0	81	4	16	1	1	81	49	36	64	4	4	25

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- The API functions used to get information about the ID are the following:

- `get_global_id(int dim);`
- `get_local_id(int dim);`
- `get_num_groups(int dim);`
- `get_group_size(int dim);`
- `get_group_id(int dim);`

- In order for the host to request that a kernel is executed on a device, a **context** must be configured.
- It enables the host to pass commands and data to the device. The API function to create a context is `clCreateContext()`.

```
cl_context clCreateContext( cl_context_properties *properties,
                           cl_uint num_devices,
                           const cl_device_id *devices,
                           void *pfn_notify (
                               const char *errinfo,
                               const void *private_info,
                               size_t cb,
                               void *user_data
                           ),
                           void *user_data,
                           cl_int *errcode_ret)
```

- Execution model specifies that devices perform tasks based on commands which are sent from the host to the device.
- A **command-queue** is the communication mechanism that the host uses to request action by a device.
- One command-queue needs to be created per device.
- The API function `clCreateCommandQueue()` (deprecated in OpenCL 2.0 and substituted by `clCreateCommandQueueWithProperties()` is used to create a command-queue

```
cl_command_queue clCreateCommandQueue( cl_context context,
                                          cl_device_id device,
                                          cl_command_queue_properties properties,
                                          cl_int *errcode_ret)
```

- Any API call that submits a command to a command-queue will begin with `clEnqueue` and require a command-queue as a parameter.

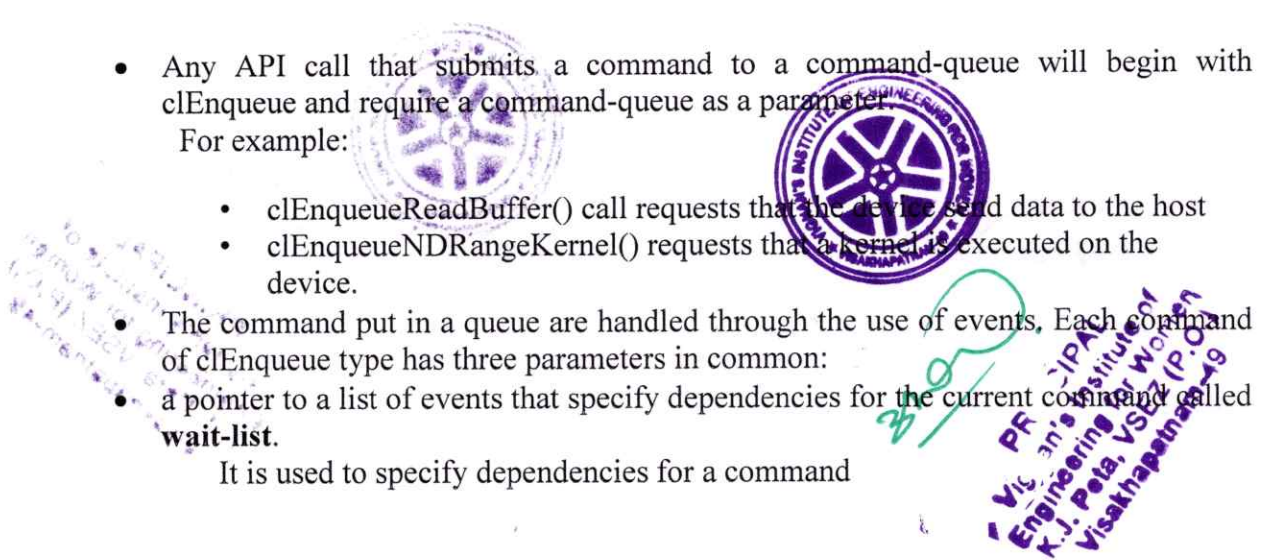
For example:

- `clEnqueueReadBuffer()` call requests that the device send data to the host
- `clEnqueueNDRangeKernel()` requests that a kernel is executed on the device.

- The command put in a queue are handled through the use of events. Each command of `clEnqueue` type has three parameters in common:

- a pointer to a list of events that specify dependencies for the current command called **wait-list**.

It is used to specify dependencies for a command



- the number of events in the wait list
- a pointer to an event that will represent the execution of the current command

```
cl_uint num_events_in_wait_list,
const cl_event *event_wait_list,
cl_event *event)
```

- In addition, OpenCL includes barrier operations that can be used to synchronize execution of command-queues.
  - clFlush() issues all previously queued OpenCL commands in a command-queue to the device associated with the command-queue
  - clFinish() blocks until all previously queued OpenCL commands in a command-queue are issued to the associated device and have completed
- The OpenCL API also includes the function clWaitForEvents(), which causes the host to wait for all events specified in the wait list to complete execution. OpenCL source code **is compiled at runtime** through a series of API calls.

The process of creating a kernel from source code is as follows:

### 1. Store the OpenCL C source code in a character array.

- If the source code is stored in a file, it must be read into memory and stored as a character array.
- Each kernel in a program source string or file is identified by a **kernel** qualifier

### 2. Turn the source code into a program object, cl\_program, by calling clCreateProgramWithSource().

- It's possible to create a program from binary source with clCreateProgramWithBinary()

### 3. Compile the program object, for one or more OpenCL devices, with clBuildProgram().

- In case of compile errors, they will be reported here.

### 4. Create a kernel object of type cl\_kernel calling clCreateKernel and specifying the program object and kernel name.

- The final step of obtaining a cl\_kernel object is similar to obtaining an exported function from a dynamic library.

```
cl_program clCreateProgramWithSource (cl_context context,
cl_uint count,
const char **strings,
const size_t *lengths,
cl_int *errcode_ret)
```

```
cl_int clBuildProgram (cl_program program,
cl_uint num_devices,
const cl_device_id *device_list,
const char *options,
void (*pfn_notify)(cl_program, void *user_data),
void *user_data)
```

```
cl_kernel clCreateKernel (cl_program program,
const char *kernel_name,
cl_int *errcode_ret)
```



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Unlike invoking functions in C programs, we cannot simply call a kernel with a list of arguments.

Before enqueue the kernel, we have to specify each kernel argument individually using `clSetKernelArg()`.

```
cl_int clSetKernelArg ( cl_kernel kernel,
                       cl_uint arg_index,
                       size_t arg_size,
                       const void *arg_value)
```

Enqueuing a command to a device to begin kernel execution is done with a call to `clEnqueueNDRangeKernel()`.

```
cl_int clEnqueueNDRangeKernel ( cl_command_queue command_queue,
                                cl_kernel kernel,
                                cl_uint work_dim,
                                const size_t *global_work_offset,
                                const size_t *global_work_size,
                                const size_t *local_work_size,
                                cl_uint num_events_in_wait_list,
                                const cl_event *event_wait_list,
                                cl_event *event)
```

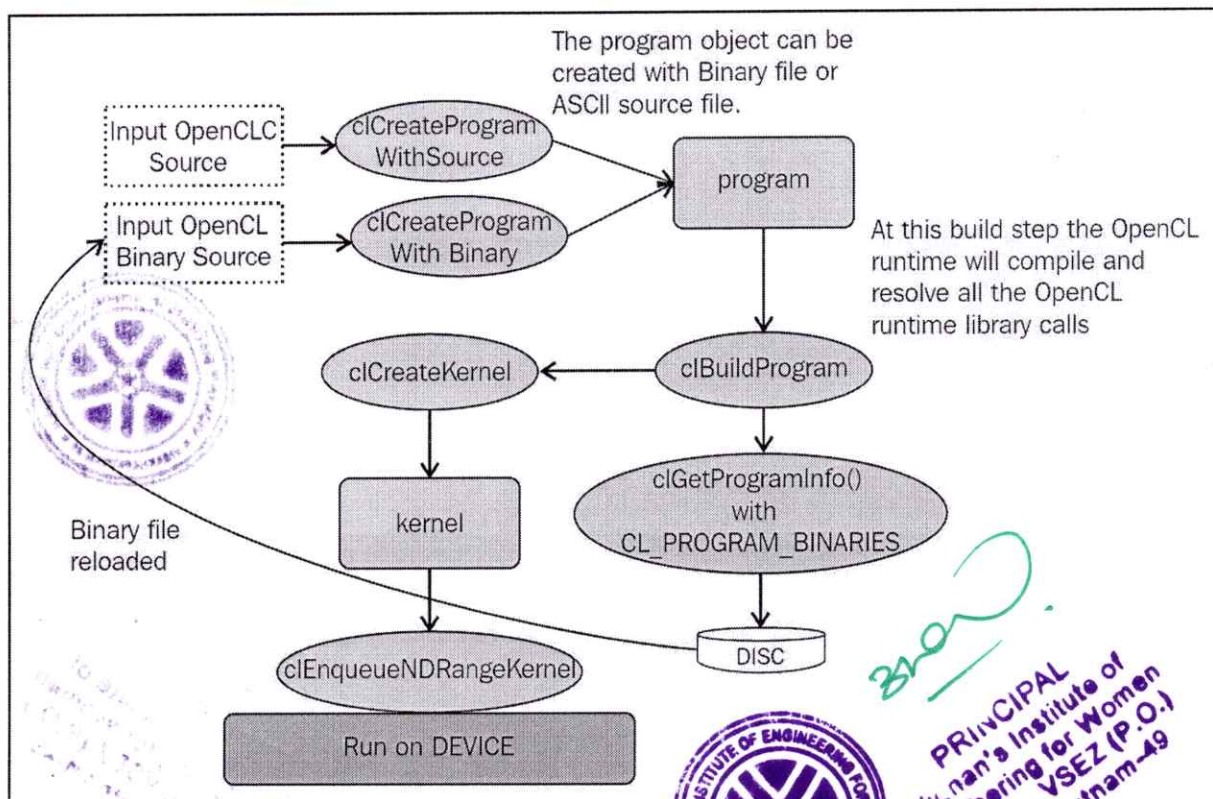


Fig: OpenCL – Execution and Programming Model



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**TOPICS BEYOND SYLLABUS**

Course Name: <b>Concurrent and Parallel Programming</b>	Course Code: <b>C412</b>
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Admitted Batch: <b>2016</b>	Academic Year: <b>2019-20</b>

**UNIT I:**

**Basics need of concurrent Programming**

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**LIST OF PPTs/Videos (VLINK)**

Course Name: <b>Concurrent and Parallel Programming</b>	Course Code: <b>C412</b>
Year/ Sem : <b>IV B TECH II SEM</b>	Regulation: <b>R16</b>

S.No.	Name of the topic	PPTs/ Videos(VLINK)
1.	Introduction to concurrent and parallel programming	<a href="https://youtu.be/MmUER47yJJk">https://youtu.be/MmUER47yJJk</a>
2.	Shared Memory Model	<a href="https://youtu.be/AyN85RtGreE">https://youtu.be/AyN85RtGreE</a>
3.	Parallel Algorithms - Introduction	<a href="https://youtu.be/umku9-eQk9Q">https://youtu.be/umku9-eQk9Q</a>
4.	OpenMP	<a href="https://youtu.be/6tcjojBoJn8">https://youtu.be/6tcjojBoJn8</a>
5.	Cilk++	<a href="https://youtu.be/GMnXrSNfkl">https://youtu.be/GMnXrSNfkl</a>
6.	Intel TBB	<a href="https://youtu.be/Xis_2CR2kjs">https://youtu.be/Xis_2CR2kjs</a>
7.	CUDA	<a href="https://youtu.be/9bB_G9865zU">https://youtu.be/9bB_G9865zU</a>
8.	C++ AMP	<a href="https://youtu.be/_qO7PNda_ss">https://youtu.be/_qO7PNda_ss</a>

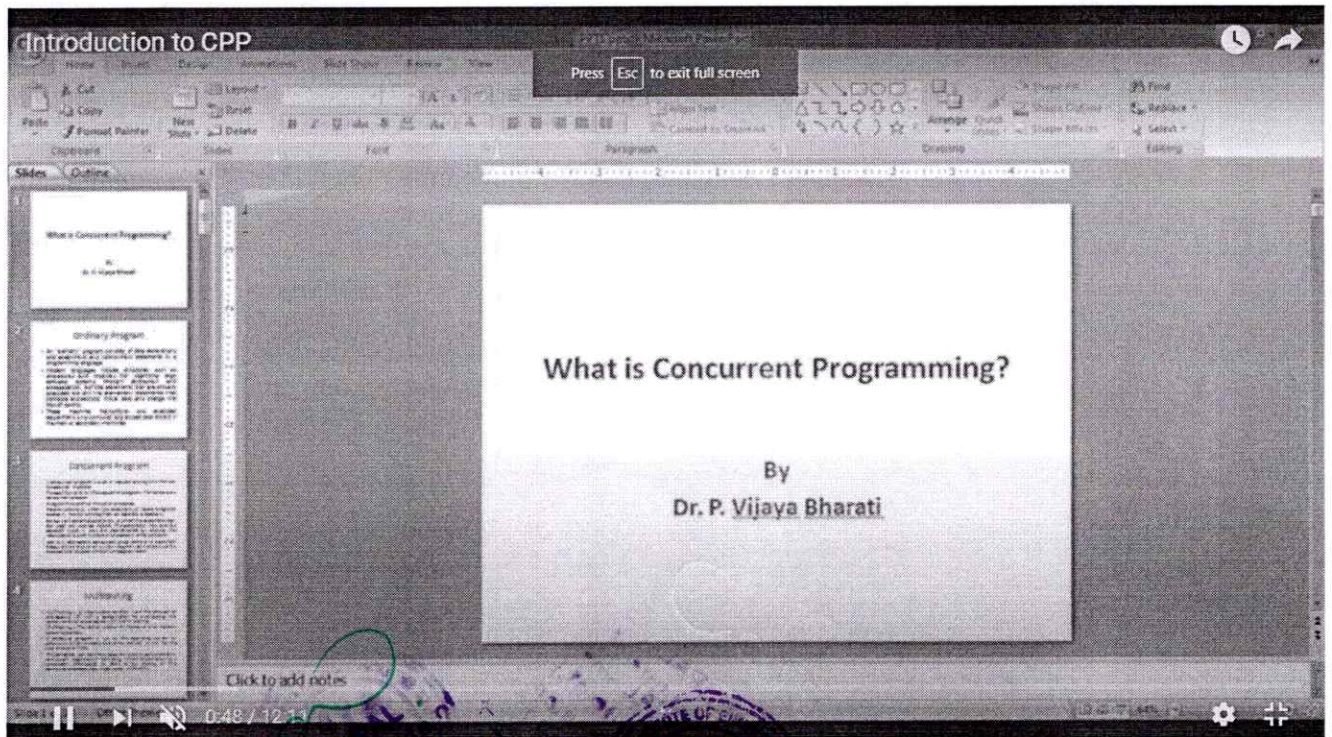


Figure 1: <https://youtu.be/MmUER47yJJk>

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## Classification of Shared Memory Systems

- Shared memory systems are multi-port and categorized as follows:
  - Uniform memory Access (UMA)
  - Non-uniform Memory Access (NUMA)
  - Cache Only Memory Architecture (COMA)

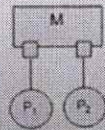


Figure 2: <https://youtu.be/AyN85RtGreE>

## Sorting on a Linear Array

- Each processor has bidirectional links to its neighbors
- All processors share a single clock (asynchronous designs will require minor modifications)
- At each clock, processors receive inputs from neighbors, perform computations, generate output for neighbors, and update local storage

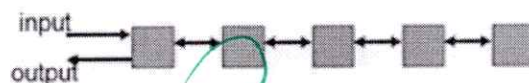


Figure 3: <https://youtu.be/umk09-0119Q>





## Assumptions

We assume you know C.  
OpenMP supports Fortran and C++,  
but we will restrict ourselves to C.

We assume you are new to  
parallel programming.

Figure 4: <https://youtu.be/6tcjojBoJn8>

Cilk++

## Three keywords

- `cilk_spawn`
- `cilk_sync`
- `cilk_for`

- Faithful linguistic extension of C++
- Serial elision: Removal of the cilk keywords

3:05 / 25:32

Figure 5: <https://youtu.be/GMnXrSNfkl>



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```

#include "tbb/parallel_for.h"
#include "tbb/blocked_range.h"
#include "tbb/task_scheduler_init.h"

using namespace tbb;

class Average {
public:
    float* input;
    float* output;
    void operator()( const blocked_range<int>& range ) const {
        for( int i=range.begin(); i!=range.end(); ++i )
            output[i] = (input[i-1]+input[i]+input[i+1])*(1/3.0f);
    }
};

// Note: The input must be padded such that input[-1] and input[n]
// can be used to calculate the first and last output values.
void ParallelAverage( float* output, float* input, size_t n ) {
    Average avg;
    avg.input = input;
    avg.output = output;
    parallel_for( blocked_range<int>( 0, n, 1000 ), avg );
}

```

Figure 6: [https://youtu.be/Xis\\_2CR2kjs](https://youtu.be/Xis_2CR2kjs)

## What is CUDA ??????

### ■ CUDA – Compute Unified Device Architecture

- Hardware and software architecture
- For computing on the GPU
- Developed by Nvidia in 2007
- GPU
  - Do massive amount of task simultaneously and quickly by using several ALUs
  - ALUs are programmable by Graphics API

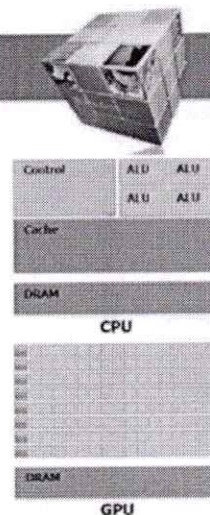


Figure 7: [https://youtu.be/9bB\\_G98657](https://youtu.be/9bB_G98657)

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## What is C++ AMP?

- Accelerated Massive Parallelism
  - Run your calculations on one or more accelerators
    - Today, GPU is the accelerator you use
    - Eventually: other kinds of accelerators
- Write your whole application in C++
  - Not a “C-like” language or a separate resource you link in
  - Use Visual Studio and familiar tools
  - Speed up 20x, 50x, or more
- Basically a library
  - Comes with Visual Studio 2012, included in vc\_redist
  - Spec is open – other platforms/compilers can implement it too



*329*

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*B. A.*  
Course Coordinator

# VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN

(Kapujaggarajupeta, VSEZ(Post), Visakhapatnam-530 049)



## Mid Term Examination-I

(IV- B.Tech II Sem, Regulations: R16)

SET-1

Course Name: Concurrent and Parallel Programming

Branch: CSE A/B/C

Faculty: Mrs. SK. Rahimunnisa/ Mrs. N. Sowjanya Kumari

CO: Course Outcome no. (1-6), LEVEL: Revised Bloom's Taxonomy level no. (1-6)

Max Time: 1 ½ Hrs.

Max Marks: 15

Date: 16-4-2022

Answer ALL Questions

3x5=15 M

CO	LEVEL	Q.No	QUESTION																								
CO1 (K3)	1a: K3 1a: K2	01	a) Differentiate between Concurrent and sequence programming. (3M) b) Explain the Notation for Sequential Programs? (2M)																								
CO2 (K3)	2: K3	02	Discover whether there is a deadlock or not using Bankers algorithm. (5M) <table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th>Processes</th> <th>Allocation A B C</th> <th>Max A B C</th> <th>Available A B C</th> </tr> </thead> <tbody> <tr> <td>P0</td> <td>1 1 2</td> <td>4 3 3</td> <td>2 1 0</td> </tr> <tr> <td>P1</td> <td>2 1 2</td> <td>3 2 2</td> <td></td> </tr> <tr> <td>P2</td> <td>4 0 1</td> <td>9 0 2</td> <td></td> </tr> <tr> <td>P3</td> <td>0 2 0</td> <td>7 5 3</td> <td></td> </tr> <tr> <td>P4</td> <td>1 1 2</td> <td>1 1 2</td> <td></td> </tr> </tbody> </table>	Processes	Allocation A B C	Max A B C	Available A B C	P0	1 1 2	4 3 3	2 1 0	P1	2 1 2	3 2 2		P2	4 0 1	9 0 2		P3	0 2 0	7 5 3		P4	1 1 2	1 1 2	
Processes	Allocation A B C	Max A B C	Available A B C																								
P0	1 1 2	4 3 3	2 1 0																								
P1	2 1 2	3 2 2																									
P2	4 0 1	9 0 2																									
P3	0 2 0	7 5 3																									
P4	1 1 2	1 1 2																									
CO3 (K3)	3: K3	03	Apply Odd even Transposition sorting using the below illustration on the array = {3, 2, 3, 8, 5, 6, 4, 1} (5M)																								

\* K1 (R) :Remembering, K2 (U) : Understanding, K3 (P) :Applying,  
\* K4 (A) : Analyzing, K5 (E) : Evaluating, K6 (C) : Creating.

COURSE CODE: R164205A

# VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN

(Kapujaggarajupeta, VSEZ(Post), Visakhapatnam-530 049)



## Mid Term Examination-I

(IV- B.Tech II Sem, Regulations: R16)

SET-2

Course Name: Concurrent and Parallel Programming

Branch: CSE A/B/C

Faculty: Mrs. SK. Rahimunnisa/ Mrs. N. Sowjanya Kumari

CO: Course Outcome no. (1-6), LEVEL: Revised Bloom's Taxonomy level no. (1-6)

Max Time: 1 ½ Hrs.

Max Marks: 15

Date: 16-4-2022

CO	LEVEL	Q.No	QUESTION
CO1 (K3)	1a: K3 1a: K2	01	a) Differentiate between Monitors and Semaphore (3M) b) Discuss in brief about synchronization primitives.(2M)
CO2 (K3)	2: K3	02	Differentiate a process and a thread. Write the issues and challenges in concurrent programming (5M)
CO3 (K3)	3: K3	03	Apply Enumeration sort for the following unsorted array. A={2,5,0,9,4,1,10,3,6} (5M)

\* K1 (R) :Remembering, K2 (U) : Understanding, K3 (P) :Applying,  
\* K4 (A) : Analyzing, K5 (E) : Evaluating, K6 (C) : Creating.

COURSE CODE: R164205A



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## Scheme of Evaluation: Mid Term Examination-I

(IV- B.Tech II Sem, Regulations: R16)

SET-1

Course Name: Concurrent and Parallel Programming

Branch/ Section: CSE - A/B/C

Max Marks: 15

Faculty: Mrs, SK. Rahimunnisa/ Mrs. N. Sowjanya Kumari

Date: 16-4-2022

Q. No	Scheme of Evaluation	Marks Allocated
01	a) Differences of Concurrent and sequence programming. b) Notations for Sequential Programs	3M 2M
02	Deadlock Avoidance technique Solving the problem	2M 3M
03	Odd Even Transposition Algorithm and obtaining the sorting array	2M 3M
<b>Total Marks</b>		<b>15 M</b>

COURSE CODE:R164205A



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## Scheme of Evaluation: Mid Term Examination-I

(IV- B.Tech II Sem, Regulations: R16)

SET-2

Course Name: Concurrent and Parallel Programming

Branch/Section: CSE - A/B/C

Max Marks: 15

Faculty: Mrs, SK. Rahimunnisa / Mrs. N. Sowjanya Kumari

Date: 16-4-2022

Q. No	Scheme of Evaluation	Marks Allocated
1a.	Definition of Monitors and Semaphore	1M
	Syntax	1M
	Example	1M
1b	Explanation of synchronization primitives	1M
	Example	1M
02	Definition a process and a thread.	2M
	Example	1M
	Issues and challenges in concurrent programming	2M
03	Enumeration sort Algorithm and obtaining the sorting array	2M
		1M
	Example	1M
Total Marks		15 M

COURSE CODE: R164205A





# VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN

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## Mid Term Examination-II

(IV- B.Tech II Sem, Regulations: R16)

SET-1

Course Name: Concurrent and Parallel Programming

Max Time: 1 ½ Hrs.

Branch: CSE A/B/C

Max Marks: 15

Faculty: Mrs, SK. Rahimunnisa/ Mrs. N. Sowjanya Kumari

Date: 02.06.2022

CO: Course Outcome no. (1-6), LEVEL: Revised Bloom's Taxonomy level no. (1-6)

Answer ALL Questions

3x5=15 M

CO	LEVEL	Q.No	QUESTION
CO4 (K3)	1a: K3	01	Distinguish Multiprocessors and Multi Computers(5M)
CO5 (K3)	2: K3	02	Distinguish cilk++ and cilk java (5M)
CO6 (K3)	3a: K2 3b:K3	03	a) Discuss in brief about C++ AMP and concurrency Visualize (3M) b) Explain how arrays are declared and used in C++AMP(2M)

\* K1 (R) :Remembering, K2 (U) : Understanding, K3 (P) :Applying,  
\* K4 (A) : Analyzing, K5 (E) : Evaluating, K6 (C) : Creating.

COURSE CODE: R164205A



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## Mid Term Examination-II

(IV- B.Tech II Sem, Regulations: R16)

SET-2

Course Name: Concurrent and Parallel Programming

Max Time: 1 ½ Hrs.

Branch: CSE A/B/C

Max Marks: 15

Faculty: Mrs, SK. Rahimunnisa/ Mrs. N. Sowjanya Kumari

Date: 02.06.2022

CO: Course Outcome no. (1-6), LEVEL: Revised Bloom's Taxonomy level no. (1-6)

CO	LEVEL	Q.No	Answer ALL Questions	QUESTION	3x5=15 M
CO4 (K3)	1: K3	01	Construct Butterfly 8 processor model. (5M)		
CO5 (K3)	2: K3	02	Distinguish between Open CL and Open MP applications. (5M)		
CO6 (K3)	3a: K2 3b:K3	03	a) Explain in brief about heterogeneous computing. (3M) b) Write how math libraries are used in C++AMP? (2M)		

\* K1 (R) :Remembering, K2 (U) : Understanding, K3 (P) :Applying,  
\* K4 (A) : Analyzing, K5 (E) : Evaluating, K6 (C) : Creating.

COURSE CODE: R164205A



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## Scheme of Evaluation: Mid Term Examination-II

(IV- B.Tech II Sem, Regulations: R16)

SET-1

Course Name: Concurrent and Parallel Programming

Branch/ Section: CSE - A/B/C

Max Marks: 15

Faculty: Mrs, SK. Rahimunnisa/ Mrs. N. Sowjanya Kumari

Date: 2-6-2022

Q. No	Scheme of Evaluation	Marks Allocated
01	Description about Multiprocessors	2 1/2M
	Description about Multi Computers	2 1/2M
02	Description about cilk++	2 1/2M
	Description about cilk java	2 1/2M
03	a) About C++ AMP and concurrency Visualize obtaining the sorting array	3M
	b) Arrays declaration & usage in C++AMP	2M
<b>Total Marks</b>		<b>15 M</b>

COURSE CODE:R164205A



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## Scheme of Evaluation: Mid Term Examination-I

(IV- B.Tech II Sem, Regulations: R16)

SET-2

Course Name: Concurrent and Parallel Programming

Branch/Section: CSE - A/B/C

Max Marks: 15

Faculty: Mrs, SK. Rahimunnisa / Mrs. N. Sowjanya Kumari

Date: 2-6-2022

Q. No	Scheme of Evaluation	Marks Allocated
01	Procedure to construct Butterfly 8 processor model. Figure Butterfly 8 processor model	3M 2M
02	About Open CL and About Open MP applications. Example	2 1/2M 2 1/2M
03	a) Explanation of heterogeneous computing. (3M) b) math libraries used in C++AMP?	3M 2M
<b>Total Marks</b>		<b>15 M</b>

COURSE CODE:R164205A



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## Mid Term Examination-I

(IV- B.Tech II Semester, Regulations: R16)

SET-1

Course Name: Concurrent and Parallel Programming

Branch/ Section: IV CSE A /B/C

Faculty: Mrs.G. Sandhya/Dr.T.V Madhusudan Rao/Dr.P.Vijaya Bharathi

Max Time: 1 ½ Hrs.

Max Marks: 15

Date: 15-07-2021

CO: Course Outcome no. (1-6), LEVEL: Revised Bloom's Taxonomy level no. (1-6)

Answer ALL Questions

3x5=15 M

CO	LEVEL	Q.No.	QUESTION
CO1 (K4)	K4	01	Classify Concurrency and Parallel Programming Models? (5M)
CO2 (K3)	K3	01	Write the recent trends that are converging to reshape the objects in concurrent programming? (5M)
CO3 (K3)	K3	03	Examine the performance of Ranking in parallel computations? (5M)

\* K1 (R): Remembering, K2 (U): Understanding, K3 (P): Applying,

\* K4 (A): Analyzing, K5 (E): Evaluating, K6 (C): Creating.

COURSE CODE: R164205A



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## Mid Term Examination-I

(IV- B.Tech II Semester, Regulations: R16)

SET-2

Course Name: Concurrent and Parallel Programming

Branch/ Section: IV CSE A /B/C

Faculty: Mrs.G. Sandhya/Dr.T.V Madhusudan Rao/Dr.P.Vijaya Bharathi

Max Time: 1 ½ Hrs.

Max Marks: 15

Date: 15-07-2021

Answer ALL Questions

3x5=15 M

CO	LEVEL	Q.No.	QUESTION
CO1 (K4)	K4	01	Analyse about a concurrency model at run time? (5M)
CO2 (K3)	K3	01	List and explain approaches for Inter-Process Communication? (5M)
CO3 (K3)	K3	03	Illustrate how traversing is performed in parallel computations? (5M)

\* K1 (R): Remembering, K2 (U): Understanding, K3 (P): Applying,

\* K4 (A): Analyzing, K5 (E): Evaluating, K6 (C): Creating.

COURSE CODE: R164205A

349  
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**Scheme of Evaluation: Mid Term Examination-I**

(IV- B.Tech II Semester, Regulations: R16)

SET-1

Course Name: Concurrent and Parallel Programming

Branch/ Section: IV CSE A /B/C

Faculty : Mrs.G. Sandhya/Dr.T.V Madhusudan Rao/Dr.P.Vijaya Bharathi

Max Time: 1 ½ Hrs.

Max Marks: 15

Date: 15-07-2021

Q. No.	Scheme of Evaluation	Marks Allocated
01	Concurrent Programming Model Parallel Programming Model	2 ½ M 2 ½ M
02	Recent trends in concurrent programming explanation	5M
03	Parallel ranking algorithm Example	3M 2M
Total Marks		15M

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## Scheme of Evaluation: Mid Term Examination-I

SET-2

(IV- B.Tech II Semester, Reg: R16)

Course Name: Concurrent and Parallel Programming

Max Time: 1 ½ Hrs.

Branch/ Section: IV CSE A /B/C

Max Marks: 15

Faculty : Mrs.G. Sandhya/Dr.T.V Madhusudan Rao/Dr.P.Vijaya Bharathi

Date: 15-07-2021

Q. No.	Scheme of Evaluation	Marks Allocated
01	Concurrency model at run time	1*5=5M
02	Four types of Inter Process communication - Shared Memory - RPC - Message Passing - Streams	2M 1M 1M 1M
03	Traversal explanation - Depth-first Traversal - Breath-first Traversal	1M 2M 2M
Total Marks		15M

COURSE CODE: R164205A



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## Mid Term Examination-II

(IV- B.Tech II Semester, Regulations: R16)

SET-1

Course Name: Concurrent and Parallel Programming

Max Time: 1 ½ Hrs.

Branch/ Section: IV CSE A /B/C

Max Marks: 15

Faculty : Mrs.G. Sandhya/Dr.T.V Madhusudan Rao/Dr.P.Vijaya Bharathi

Date: 15-07-2021

CO: Course Outcome no. (1-6), LEVEL: Revised Bloom's Taxonomy level no. (1-6)

Answer ALL Questions

3x5=15 M

CO	LEVEL	Q.No.	QUESTION
CO4 (K3)	K3	01	a. Differentiate between Data Parallelism and Task Parallelism? (2M) b. Explain in brief about Super scalar Processing Architectures? (3M)
CO5 (K4)	K4	02	Illustrate the four-level memory hierarchy for the compute device by OpenCL with matrix vector multiplication program? (5M)
CO6 (K3)	K3	03	Discuss in brief about C++ AMP and concurrency Visualiser (5M)

\* K1 (R): Remembering, K2 (U): Understanding, K3 (P): Applying,

COURSE CODE: R164205A

\* K4 (A): Analyzing, K5 (E): Evaluating, K6 (C): Creating.



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## Mid Term Examination-II

(IV- B.Tech II Semester, Regulations: R16)

SET-2

Course Name: Concurrent and Parallel Programming

Max Time: 1 ½ Hrs.

Branch/ Section: IV CSE A /B/C

Max Marks: 15

Faculty : Mrs.G. Sandhya/Dr.T.V Madhusudan Rao/Dr.P.Vijaya Bharathi

Date: 15-07-2021

Answer ALL Questions

3x5=15 M

CO	LEVEL	Q.No.	QUESTION
CO4 (K3)	K3	01	a. Discuss the disadvantages of Processor Array? (2M) b. Explain in brief about Vector Processing Architectures? (3M)
CO5 (K4)	K4	02	List the steps to initialize an OpenMP and OpenCL Application? (5M)
CO6 (K3)	K3	03	Write in brief about acceleration of web applications using OpenCL? (5M)

\* K1 (R): Remembering, K2 (U): Understanding, K3 (P): Applying,

COURSE CODE: R164205A

\* K4 (A): Analyzing, K5 (E): Evaluating, K6 (C): Creating.

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# VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN

(Kapujaggarajupeta , VSEZ (Post), Visakhapatnam-530 049)

## Scheme of Evaluation: Mid Term Examination-II

(IV- B.Tech II Semester, Regulations: R16)

SET-1

Course Name: Concurrent and Parallel Programming

Branch/ Section: IV CSE A /B/C

Faculty : Mrs.G. Sandhya/Dr.T.V Madhusudan Rao/Dr.P.Vijaya Bharathi

Max Time: 1 ½ Hrs.

Max Marks: 15

Date: 15-07-2021

Q. No.	Scheme of Evaluation	Marks Allocated
01	a.Differences	2M
	b.architecture with explanation	3M
02	Memory hierarchy explanation	5M
03	C++ AMP definition	2M
	Concurrency visualizer explanation	3M
Total Marks		15M

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COURSE CODE: R164205A







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**Scheme of Evaluation: Mid Term Examination-II**

(IV- B.Tech II Semester, Reg: R16)

SET-2

Course Name: Concurrent and Parallel Programming

Max Time: 1 ½ Hrs.

Branch/ Section: IV CSE A /B/C

Max Marks: 15

Faculty : Mrs.G. Sandhya/Dr.T.V Madhusudan Rao/Dr.P.Vijaya Bharathi

Date: 15-07-2021

Q. No.	Scheme of Evaluation	Marks Allocated
01	a.Disadvantages b.architectures explanation	2M 3M
02	Steps	5M
03	Acceleration of web application explanation	5M
Total Marks		15M

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**Scheme of Evaluation: Mid Term Examination-I**

(IV- B.Tech II Semester, Reg: R16)

SET-2

Course Name: Concurrent and Parallel Programming

Branch: IV CSE A /B/C

Faculty: Mrs.P.Vijaya Bharati / Mrs.B. Madhavi

Max Time: 1 ½ Hrs.

Max Marks: 15

Date: 24-01-2020

Q. No	Scheme of Evaluation	Marks Allocated
01	Synchronization primitives	
	- Semaphores	2M
	- Locks	2M
	- Condition Variables	1M
02	Recent trends in concurrent programming explanation	5M
03	a) Enumeration sort	1M
	Example	1M
	b) Prefix sum computation explanation	1M
	- Prefix sum computation using Linear Array	½ M
	- Prefix sum computation using Binary Tree	½ M
- Prefix sum computation using 2-D Mesh	½ M	
- Prefix sum computation using Shared Variable	½ M	
Total Marks		15M



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## Scheme of Evaluation: Mid Term Examination-I

SET-1

(IV- B.Tech II Semester, Regulations: R16)

Course Name: Concurrent and Parallel Programming

Branch/ Section: IV CSE A /B/C

Faculty: Mrs.P.Vijaya Bharati / Mrs.B. Madhavi

Max Time: 1 ½ Hrs.

Max Marks: 15

Date: 24-01-2020

Q. No	Scheme of Evaluation	Marks Allocated
01	Concurrent programming constructs any five - Interleaving - Mutual Exclusion - Liveness and safety property - Semaphores - Monitors - Channels - Message Passing	1*5=5M
02	Four types of Interprocess communication - Shared Memory - RPC - Message Passing - Streams	2M 1M 1M 1M
03	a) Parallel ranking algorithm Example	1M 1M
	b) Odd-even transposition algorithm Example	1M 2M
Total Marks		15M

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## Mid Term Examination-I

(IV- B.Tech II Semester, Regulations: R16)

SET-1

Course Name: Concurrent and Parallel Programming

Branch: IV CSE A /B/C

Faculty: Mrs.P.Vijaya Bharati / Mrs.B. Madhavi

Max Time: 1 ½ Hrs.

Max Marks: 15

Date: 24-01-2020

CO: Course Outcome no. (1-6), LEVEL: Revised Bloom's Taxonomy level no. (1-6)

Answer ALL Questions

3x5=15 M

CO	LEVEL	Q.No	QUESTION
CO1 (K4)	K4	01	Examine the applicability of different concurrent programming constructs for parallel MPI applications? (5M)
CO2 (K3)	K3	02	Explain the types of Interprocess communication of concurrent processes to exchange data and synchronize execution? (5M)
CO3 (K3)	3a: K3 3b: K3	03	a) Illustrate parallel ranking algorithm for $n$ processors.(2M) b) Explain odd-even transposition algorithm with an example for use on parallel processors. (3M)

\* K1 (R): Remembering, K2 (U): Understanding, K3 (P): Applying,  
\* K4 (A): Analyzing, K5 (E): Evaluating, K6 (C): Creating.

COURSE CODE: R164205A



# VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN

(Kapujaggarajupeta, VSEZ (Post), Visakhapatnam-530 049)

## Mid Term Examination-I

(IV- B.Tech II Semester, Regulations: R16)

SET-2

Course Name: Concurrent and Parallel Programming

Branch: IV CSE A /B/C

Faculty: Mrs.P.Vijaya Bharati / Mrs.B. Madhavi

Max Time: 1 ½ Hrs.

Max Marks: 15

Date: 24-01-2020

Answer ALL Questions

3x5=15 M

CO	LEVEL	Q.No	QUESTION
CO1 (K4)	K4	01	Explain the synchronization primitives that support the thread or process synchronization in parallel processing? (5M)
CO2 (K3)	K3	02	Discuss the recent trends that are converging to reshape the objects in concurrent programming? (5M)
CO3 (K3)	3a: K3 3b: K3	03	a) Illustrate enumeration sort algorithm for $n$ processors.(2M) b) Explain prefix sum computation applying for different data structures. (3M)

\* K1 (R): Remembering, K2 (U): Understanding, K3 (P): Applying,  
\* K4 (A): Analyzing, K5 (E): Evaluating, K6 (C): Creating.

COURSE CODE: R164205A



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**Scheme of Evaluation: Mid Term Examination-II**

SET-1

(IV- B.Tech II Semester, Regulations: R16)

Course Name: Concurrent and Parallel Programming  
Branch/ Section: IV CSE A /B/C  
Faculty: Dr.P.Vijaya Bharati / Mrs.B. Madhavi

Max Time: 1 ½ Hrs.  
Max Marks: 15  
Date: 25-09-2020

Q. No	Scheme of Evaluation	Marks Allocated
01	Data Parallelism definition	1M
	- Task Parallelism definition	1M
	- Data Parallel model explanation	1M
	- Diagram	½ M
	- Task Parallel model explanation	1M
	- Diagram	½ M
02	CUDA introduction	1M
	CUDA Programming abilities	1M
	CUDA Processing Flow	2M
	CUDA Processing Flow Architecture	1M
03	OpenCL introduction	1M
	OpenCL Execution Model	3M
	OpenCL Execution Model Architecture	1M
<b>Total Marks</b>		<b>15M</b>

COURSE CODE: R164205A

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**Scheme of Evaluation: Mid Term Examination-II**

SET-2

(IV- B.Tech II Semester, Reg: R16)

Course Name: Concurrent and Parallel Programming

Max Time: 1 ½ Hrs.

Branch/ Section: IV CSE A /B/C

Max Marks: 15

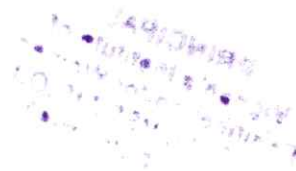
Faculty: Dr.P.Vijaya Bharati / Mrs.B. Madhavi

Date: 25-09-2020

Q. No	Scheme of Evaluation	Marks Allocated
01	Pipeline Processing Vector Processing Array Processing Super Scalar Processing Multithreaded Processing	1M 1M 1M 1M 1M
02	OpenMP introduction OpenMP core elements - Thread Creation - Work-sharing Constructs - Variant Directives - Clauses - User-level runtime routines - Environment Variables	1M Any Four 1 * 4= 4M
03	C++ AMP introduction Example Shaping and Indexing Data Executing Code over Data Accelerating Code	1M 1M 1M 1M 1M
Total Marks		15M

COURSE CODE: R164205A

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## Mid Term Examination-II

(IV- B.Tech II Semester, Regulations: R16)

SET-1

Course Name: Concurrent and Parallel Programming

Branch/ Section : IV CSE A /B/C

Faculty: Dr.P.Vijaya Bharati / Mrs.B. Madhavi

CO: Course Outcome no. (1-6), LEVEL: Revised Bloom's Taxonomy level no. (1-6)

Max Time: 1 ½ Hrs.

Max Marks: 15

Date: 25-09-2020

Answer ALL Questions

3x5=15 M

CO	LEVEL	Q.No	QUESTION
CO4 (K3)	K3	01	Explain in brief about Data and Task Parallel Models on multiple cores? (5M)
CO5 (K4)	K4	02	Analyze about CUDA and its processing flow on allocating memory on host and device separately? (5M)
CO6 (K3)	K3	03	Discuss about OpenCL Execution model and how the Kernels run on compute devices (5M)

\* K1 (R): Remembering, K2 (U): Understanding, K3 (P): Applying,

\* K4 (A): Analyzing, K5 (E): Evaluating, K6 (C): Creating.

COURSE CODE: R164205A



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## Mid Term Examination-II

(IV- B.Tech II Semester, Regulations: R16)

SET-2

Course Name: Concurrent and Parallel Programming

Branch/ Section: IV CSE A /B/C

Faculty: Dr.P.Vijaya Bharati / Mrs.B. Madhavi

Max Time: 1 ½ Hrs.

Max Marks: 15

Date: 25-09-2020

Answer ALL Questions

3x5=15 M

CO	LEVEL	Q.No	QUESTION
CO4 (K3)	K3	01	Discuss in brief about parallel computing architectures to execute a workload quickly. (5M)
CO5 (K4)	K4	01	Illustrate about OpenMP and its core elements for thread execution?(5M)
CO6 (K3)	K3	03	Explain the syntax and semantics of C++ AMP with its new features extended from C++? (5M)

\* K1 (R): Remembering, K2 (U): Understanding, K3 (P): Applying,

\* K4 (A): Analyzing, K5 (E): Evaluating, K6 (C): Creating.

COURSE CODE: R164205A

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ASSIGNMENT QUESTIONS: MID-I

Course Name: Concurrent Parallel Programming	Course Code: C412
Year /Sem: IV CSE A,B&C Sem-II	Regulation:R16
Admitted Batch: 2018	Academic Year:2021-22
Course Coordinator:Mrs.SK.Rahimunnisa	FacultyName:Mrs.SK.Rahimunnisa/ Mrs.N.Sowjanya Kumari / Mrs.SK.Rahimunnisa

Ass. No.	CO Level	Question Level	Q. No.	Questions	Issue Date	Submission Date
Assignment 1	CO1 K3	K3	1.	Explain the differences between Monitors and Semaphore.	7/03/22	14/03/22
		K2	2.	Discuss in brief about synchronization primitives.		
Assignment 2	CO2 K3	K3	1.	Discuss the difference between a process and a thread.	23/03/22	29/03/22
		K2	2.	Explain Deadlock and its Characteristics.		
Assignment 3	CO3 K3	K3	1.	Apply Odd even Transposition sorting using the below illustration on the array = {3, 2, 3, 8, 5, 6, 4, 1}	4/04/22	8/04/22
		K2	2.	Discuss the steps in Best -First Search?		

CO	ACTION VERB	REVISED BLOOMS TAXONOMY LEVEL	ASSIGNMENT VERBS	REVISED BLOOMS TAXONOMY LEVEL
C412.1	Illustrate	(Apply)K3	Explain Discuss	(Applying)K3 (Understanding)K2
C412.2	Solve	(Apply)K3	Discuss Define	(Apply)K3 (Understanding)K2
C412.3	Apply	(Apply)K3	Apply Discuss	(Understanding)K2 (Apply)K3

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ASSIGNMENT QUESTIONS: MID-II

Course Name: Concurrent Parallel Programming	Course Code: C412
Year /Sem: IV CSE A,B&C Sem-II	Regulation:R16
Admitted Batch: 2018	Academic Year:2021-22
Course Coordinator:Mrs.SK.Rahimunnisa	FacultyName:Mrs.SK.Rahimunnisa /Mrs.N.Sowjanya Kumari / Mrs.SK.Rahimunnisa

Ass. No.	CO Level	Question Level	Q. No.	Questions	Issue Date	Submission Date
Assignment 4	CO4 K3	K3	1.	Distinguish Task parallelism and data Parallelism.	22/04/22	28/04/22
		K2	2.	Explain in brief about the architecture of Graphics Processing Unit.		
Assignment 5	CO4 K3	K3	1.	Write the steps to initialize an OpenCL application?	04/05/22	09/05/22
		K2	2.	Discuss in brief about Reducers and hyper objects in cilk ++.		
Assignment 6	CO5 K3	K3	1.	Distinguish homogeneous system and heterogeneous system?	19/05/22	25/05/22
		K2	2.	Discuss about math libraries in C++AMP?		

CO	ACTION VERB	REVISED BLOOMS TAXONOMY LEVEL	ASSIGNMENT VERBS	REVISED BLOOMS TAXONOMY LEVEL
C412.4	Demonstrate	(Apply)K3	Distinguish Explain	(Apply)K3 (Understanding)K2
C412.5	Distinguish	(Apply)K3	Write Discuss	(Apply)K3 (Apply)K2
C412.6	Use	(Apply)K3	Distinguish Discuss	(Apply)K3 (Understanding)K2

  
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ASSIGNMENT QUESTIONS: MID-I

Course Name: <b>Concurrent and Parallel Programming</b>	Course Code: <b>C412</b>
Year /Sem: <b>IV A, B, &amp; CSem-II</b>	Regulation: <b>R16</b>
Admitted Batch: <b>2017</b>	Academic Year: <b>2020-21</b>
Course Coordinator: <b>Dr. P. VijayaBharati</b>	Faculty Name: <b>Mrs.G.Sandhya/ Dr.T.V.Madhusudhan Rao/ Dr. P. VijayaBharati</b>

Ass. No.	CO Level	Question Level	Q. No.	Questions	Issue Date	Submission Date
Assignment 1	CO1-K4	K4	1.	Illustrate Concurrency and Parallel Programming Models.	10/04/21	18/04/21
		K2	2.	Explain basic need of Concurrent Programming		
		K3	3.	Write the Notation of a Sequential Program?		
		K4	4.	Explain in brief about a concurrency model at run time?		
Assignment 2	CO2-K3	K3	1.	Explain the conditions for prevention of Dead lock?	20/04/21	30/04/21
		K3	2.	Explain in brief about the approaches for Inter-Process Communication?		
		K3	3.	Discuss the recent trends that are converging to reshape the objects in concurrent programming?		
Assignment 3	CO3-K3	K3	1.	Explain the performance of Ranking in parallel computations?	01/05/21	15/05/21
		K3	2.	Explain how traversing is performed in parallel computations?		
		K3	3.	a. Discuss the need of searching in parallel computations? b. Explain the steps involved in Best -First Search?		

CO	ACTION VERB	REVISED BLOOMS TAXONOMY LEVEL	Assignment Verbs	REVISED BLOOMS TAXONOMY LEVEL
1	Analyze	(Analyze)K4	Illustrate Explain Write Explain	(Analyze)K4 (Understand)K2 (Apply)K3 (Analyze)K4
2	Solve	(Apply)K3	Explain Discuss	(Apply)K3 (Apply)K3
3	Design	(Apply)K3	Explain Discuss	(Apply)K3 (Apply)K3

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**ASSIGNMENT QUESTIONS: MID-II**

Course Name: <b>Concurrent and Parallel Programming</b>	Course Code: <b>C412</b>
Year /Sem: <b>IV A, B,&amp; CSem II</b>	Regulation: <b>R16</b>
Admitted Batch: <b>2017</b>	Academic Year: <b>2020-21</b>
Course Coordinator: <b>Dr. P. VijayaBharati</b>	Faculty Name: <b>Mrs. G. Sandhya/ Dr.T.V.Madhusudhan/ Dr. P. VijayaBharati</b>

Ass. No.	CO Level	Question Level	Q. No.	Questions	Issue Date	Submission Date
Assignment 4	CO4-K3	K3	1.	Differentiate between Data Parallelism and Task Parallelism	31/05/21	11/06/21
		K3	2.	Explain in brief about Parallel Computing Architectures?		
		K3	3.	a. Write in brief about Switched Network Topologies? b. Discuss the disadvantages of Processor Array?		
Assignment 5	CO5-K4	K4	1.	Illustrate the four-level memory hierarchy for the compute device by OpenCL?	21/06/21	30/06/21
		K4	2.	Explain are the steps to initialize an OpenMP and OpenCL Application?		
		K3	3.	Discuss in brief about Reducers and hyper objects in cilk ++?		
		K3	4.	Discuss about the profilers and debuggers supported by OpenMP?		
Assignment 6	CO6-K3	K3	1.	Discuss in brief about C++ AMP and concurrency Visualizer	21/06/21	30/06/21
		K3	2.	Explain the steps to initialize an Open CL application		
		K3	3.	Explain the math libraries in C++AMP		

CO	ACTION VERB	REVISED BLOOMS TAXONOMY LEVEL	Assignment Verbs	REVISED BLOOMS TAXONOMY LEVEL
4	Demonstrate	(Apply)K3	Differentiate Explain Write Discuss	(Apply)K3 (Apply)K3 (Apply)K3 (Apply)K3
5	Analyze	(Analyze)K4	Illustrate Explain Discuss	(Analyze)K4 (Analyze)K4 (Apply)K3
6	Use	(Apply)K3	Discuss Explain	(Apply)K3 (Apply)K3

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ASSIGNMENT QUESTIONS: MID-I

Course Name: <b>Concurrent and Parallel Programming</b>	Course Code : <b>C412</b>
Year /Sem: <b>IV A, B, &amp; C Sem-2</b>	Regulation : <b>R16</b>
Admitted Batch: <b>2016</b>	Academic Year : <b>2019-20</b>
Course Coordinator : <b>Mrs. B. Madhavi</b>	Faculty Name : <b>Dr. P. VijayaBharati/ Mrs. B. Madhavi/Mrs. B. Madhavi</b>

Ass. No.	CO Level	Question Level	Q. No.	Questions	Issue Date	Submission Date
Assignment 1	CO1-K4	K3	1.	Distinguish sequential and parallel programming?	03/12/19	14/12/19
		K2	2.	Explain basic need of Concurrent Programming		
		K4	3.	Explain the synchronization primitives that support the thread or process synchronization in parallel processing?		
Assignment 2	CO2-K3	K2	1.	Explain the concept of Inter process communication?	21/12/19	04/01/2020
		K3	2.	Discuss the recent trends that are converging to reshape the objects in concurrent programming?		
Assignment 3	CO3-K3	K3	1.	Applyin parallel algorithms for different data structures?	11/01/2020	21/01/2020
		K3	2.	Discuss prefix sum computation and its implementation with an example?		
		K3	3.	Illustrate parallel ranking algorithmfor n processors with an example		

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31/01/20

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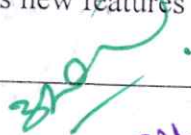
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ASSIGNMENT QUESTIONS: MID-II

Course Name : <b>Concurrent and Parallel Programming</b>	Course Code : <b>C412</b>
Year /Sem : <b>IV A, B, &amp; C Sem-2</b>	Regulation : <b>R16</b>
Admitted Batch : <b>2016</b>	Academic Year : <b>2019-20</b>
Course Coordinator : <b>Mrs. B. Madhavi</b>	Faculty Name : <b>Dr. P. VijayaBharati/ Mrs. B. Madhavi/Mrs. B. Madhavi</b>

Ass. No.	CO Level	Question Level	Q. No.	Questions	Issue Date	Submission Date
Assignment 4	CO4-K3	K3	1.	Discuss parallel architecture in detail?	10/02/2020	22/02/2020
		K2	2.	Differentiate GPU and CPU?		
		K3	3.	Illustrate the concepts of STM?		
Assignment 5	CO5-K4	K3	1.	Explain the working of Intel TBB?	24/02/2020	04/03/2020
		K3	2.	Write a Cilk++ program for Quicksort?		
		K4	3.	Analyze about CUDA and its processing flow on allocating memory on host and device separately?		
Assignment 6	CO6-K3	K3	1.	Explain the usage of OpenCL in heterogeneous computing?	07/03/2020	14/03/2020
		K3	2.	Explain the syntax and semantics of C++ AMP with its new features extended from C++?		

  
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## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### GAP ANALYSIS

Course Name: Concurrent and Parallel Programming  
Course Code: C412  
Academic Year: 2021-22

### CO-PO-PSO MAPPING: (2018 admitted)

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C412.1	3	3	-	-	-	-	-	-	-	-	-	-	3	2
C412.2	3	3	-	3	-	-	-	-	-	-	-	-	3	2
C412.3	3	3	3	3	-	-	-	-	-	-	-	-	3	2
C412.4	3	2	-	-	-	-	-	-	-	-	-	-	3	2
C412.5	3	3	3	3	3	-	-	-	-	-	-	-	3	2
C412.6	3	2	2	-	2	-	-	-	-	-	-	-	3	2
AVG	3.0	2.67	2.67	3.00	2.5	-	-	-	-	-	-	-	3.0	2.00
%	100.00	89.00	89.00	100.00	83.33	-	-	-	-	-	-	-	100.00	66.67



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The following observations are made from the mapping of Concurrent and Parallel Programming (C412) course in the program to

POs and PSOs from the above mapping Table:

- PO1, PO4 and PSO satisfy 90% - 100%.
- PO2, PO3, and PO5 satisfy 80% - 89%.
- PO4, PO11 and PO12 satisfy 70% - 79%
- PO6, PO7, PO8, PO10, PO11 and PO12 are not satisfied.

The gaps in the Concurrent and Parallel Programming course are identified by considering the POs and PSOs that are mapped with less than 60%. The gaps identified are:

Sl. No.	Identified PO	Gap Identification	Relevance to PSOs
1	PO6	G1 - Motivation of CPP course to design of parallel algorithms that are helpful to engineering and society.	PSO1, PSO2
2	PO7	G2 - Motivation of CPP course on need for sustainable development.	PSO2
3	PO8	G3 - Motivation of CPP course towards ethical principles.	PSO2
4	PO10	G4 - Motivation of CPP course to communicate effectively on complex engineering problems.	PSO1, PSO2
5	PO11	G5- Motivation of CPP course to work as a individual or a team to manage the projects	PSO1, PSO2
6	PO12	G6- Motivation of CPP course to have the lifelong learning skills in the context of technological change	PSO1, PSO2



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To fill the gaps made from the above observations to the Concurrent and Parallel Programming (C412)course, the following are the actions planned

Sl. No.	Gap	Action Plan	Relevance to POs, PSOs
1	G1 - Motivation of CPP course to design of parallel algorithms that are helpful to engineering and society	Proposal to conduct seminar activity on Host API	PO6 PO7 PO8 PO10 PSO1 PSO2
	G2 - Motivation of CPP course on need for sustainable development.		
	G3 - Motivation of CPP course towards ethical principles.		
	G4 - Motivation of CPP course to communicate effectively on complex engineering problems.		

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## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### ACTION TAKEN FOR GAP ANALYSIS

Course Name: Concurrent and Parallel Programming

Course Code: C412

Academic Year: 2021-22

To fill the gaps made from the above observations in the Concurrent and Parallel Programming (C412) course, the following are the actions taken.

Sl. No.	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	% of Students	Relevance to POs, PSOs
1	<p>G1 - Motivation of CPP course to design of parallel algorithms that are helpful to engineering and society</p> <p>G2 - Motivation of CPP course on need for sustainable development.</p> <p>G3 - Motivation of CPP course towards ethical principles.</p> <p>G4 - Motivation of CPP course to communicate effectively on complex engineering problems.</p>	Conducted seminar activity on "Host API"	24-03-2022	Mrs.N.Sowjanya, Assistant Professor	94%	PO6 PO7 PO8 PO10 PSO1 PSO2

Module Coordinator



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**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**GAP ANALYSIS**

Course Name: Concurrent and Parallel Programming

Course Code: C412

Academic Year: 2020-21

CO-PO-PSO MAPPING: (2017 admitted)

Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C412.1	3	3	-	-	-	-	-	-	-	-	-	2	3	2
C412.2	3	3	-	3	-	-	-	-	-	-	-	2	3	2
C412.3	3	3	3	3	-	-	-	-	-	-	-	-	3	2
C412.4	3	2	-	-	-	-	-	-	-	-	-	-	3	2
C412.5	3	3	3	3	3	-	-	-	-	-	-	3	3	2
C412.6	3	2	2	-	2	-	-	-	-	-	-	-	3	2
AVG	3.00	2.67	2.67	3.00	2.50	-	-	-	-	-	-	2.33	3.00	2.00
%	100	89	89	100	83.33	-	-	-	-	-	-	77.67	100	66.67

The following observations are made from the mapping of Concurrent and Parallel Programming (C412) course to the program to POs and PSOs from the above mapping Table:

- PO1, PO4 and PSO satisfy 90% - 100%.
- PO2, PO3 and PO5 satisfy 80% - 89%.
- PO17 satisfy 70% - 79%



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- PSO2 satisfy 60% - 69%
- PO6, PO7, PO8, PO9, PO10 and PO11 are not satisfied.

The gaps in the Concurrent and Parallel Programming course are identified by considering the POs and PSOs that are mapped with less than 70%. The gaps identified are:

Sl. No.	Identified PO	Gap Identification	Relevance to PSOs
1	PO6	G1 - Motivation of CPP course to design of parallel algorithms that are helpful to engineering and society.	PSO1, PSO2
2	PO7	G2 - Motivation of CPP course on need for sustainable development.	PSO2
3	PO8	G3 - Motivation of CPP course towards ethical principles.	PSO2
4	PO9	G4 - Motivation of CPP course towards individual & team work	PSO1, PSO2
5	PO10	G5 - Motivation of CPP course to communicate effectively on complex engineering problems.	PSO1, PSO2
6	PO11	G6 - Motivation of CPP course towards project management and finance	PSO2
7	PSO2	G7 - Motivation of CPP course towards design and development of full stack applications	PSO2

To fill the gaps made from the above observations to the **Concurrent and Parallel Programming (C412)** course, the following are the actions planned

Sl. No.	Gap	Action Plan	Relevance to POs, PSOs
1	G1 - Motivation of CPP course towards individual & team work G2 - Motivation of CPP course to communicate effectively on complex engineering problems.	Proposal to conduct Reciprocal Questioning Activity for "Deadlock and Race Conditions, Deadlock Prevention".	PO9, PO10 PSO1, PSO2

J. J. J.  
Module Coordinator



LEADER OF THE DEPARTMENT  
Department of Science & Engineering  
VIGNANA'S INSTITUTE OF  
ENGINEERING FOR WOMEN  
VignanaVisakhapatnam-49



# VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN

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## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### ACTION TAKEN FOR GAP ANALYSIS

**Course Name:** Concurrent and Parallel Programming

**Course Code:** C412

**Academic Year:** 2020-21

To fill the gaps made from the above observations to the Concurrent and Parallel Programming (C412) course, the following are the actions taken.

Sl. No.	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	% of Students	Relevance to POs, PSOs
1	G1 - Motivation of CPP course towards individual & team work G2 - Motivation of CPP course to communicate effectively on complex engineering problems.	Proposal to conduct Reciprocal Questioning Activity for "Deadlock and Livelock, Deadlock Prevention".	13-12-2019	Mrs. P. Vijaya Bharati, Associate Professor	95.3%	PO9, PO10 PSO1,PSO2



**Module Coordinator**



*Prin. S. P. K.*  
Vignana's Institute of  
Engineering for Women  
K. J. Reddy VSEZ (Post)  
Visakhapatnam-49

**Head of the Department**

HEAD OF THE DEPARTMENT  
Computer Science & Engineering  
VIGNAN'S INSTITUTE OF  
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Kapu Jaggarajupeta, Visakhapatnam-49



# VIGNANA'S INSTITUTE OF ENGINEERING FOR WOMEN

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KapujaggarajuPeta, VSEZ(Post), Visakhapatnam-530049,AP

## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### GAP ANALYSIS



Course Name: Concurrent and Parallel Programming  
Course Code: C412  
Academic Year: 2019-20

### CO-PO-PSO MAPPING: (2016 admitted)

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C412.1	3	3	-	-	-	-	-	-	-	-	-	-	3	2
C412.2	3	3	-	3	-	-	-	-	-	-	-	-	3	2
C412.3	3	3	3	3	-	-	-	-	-	-	-	-	3	2
C412.4	3	2	-	-	-	-	-	-	-	-	-	-	3	2
C412.5	3	3	3	3	3	-	-	-	-	-	-	-	3	2
C412.6	3	2	2	-	2	-	-	-	-	-	-	-	3	2
AVG	3.0	2.67	2.67	3.00	2.5	-	-	-	-	-	-	-	3.0	2.00
%	100.00	89.00	89.00	100.00	83.33	-	-	-	-	-	-	-	100.00	66.67

The following observations are made from the mapping of Concurrent and Parallel Programming (C412) course in the program to POs and PSOs from the above mapping Table:

- PO1, PO4 and PSO satisfy 90% - 100%.
- PO2, PO3, and PO5 satisfy 80% - 89%.
- PO4, PO11 and PO12 satisfy 70% - 79%
- PO6, PO7, PO8, PO10, PO11 and PO12 are not satisfied.

The gaps in the Concurrent and Parallel Programming course are identified by considering the POs and PSOs that are mapped with less than 60%.

The gaps identified are:



Sl. No.	Identified PO	Gap Identification	Relevance to PSOs
1	PO6	G1 - Motivation of CPP course to design of parallel algorithms that are helpful to engineering and society.	PSO1, PSO2
2	PO7	G2 - Motivation of CPP course on need for sustainable development.	PSO2
3	PO8	G3 - Motivation of CPP course towards ethical principles.	PSO2
4	PO10	G4 - Motivation of CPP course to communicate effectively on complex engineering problems.	PSO1, PSO2
5	PO11	G5- Motivation of CPP course to work as a individual or a team to manage the projects	PSO1, PSO2
6	PO12	G6- Motivation of CPP course to have the lifelong learning skills in the context of technological change	PSO1, PSO2

To fill the gaps made from the above observations to the **Concurrent and Parallel Programming (C412)** course, the following are the actions planned

Sl. No.	Gap	Action Plan	Relevance to POs, PSOs
1	G1 - Motivation of CPP course to design of parallel algorithms that are helpful to engineering and society	Proposal to conduct an activity Jigsaw on C++ AMP	PO6
	G2 - Motivation of CPP course on need for sustainable development.		PO7
	G3 - Motivation of CPP course towards ethical principles.		PO8
	G4 - Motivation of CPP course to communicate effectively on complex engineering problems.		PO10 PSO1 PSO2



**MODULE COORDINATOR**

*(Handwritten signature)*  
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## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### ACTION TAKEN FOR GAP ANALYSIS

Course Name: Concurrent and Parallel Programming

Course Code: C412

Academic Year: 2019-20

To fill the gaps made from the above observations to the Concurrent and Parallel Programming (C412) course, the following are the actions taken.

Sl. No.	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	% of Students	Relevance to POs, PSOs
1	<p>G1 - Motivation of CPP course to design of parallel algorithms that are helpful to engineering and society</p> <p>G2 - Motivation of CPP course on need for sustainable development.</p> <p>G3 - Motivation of CPP course towards ethical principles.</p> <p>G4 - Motivation of CPP course to communicate effectively on complex engineering problems.</p>	Conducted an activity Jigsaw on C++ AMP	13-12-2019	Dr. P. Vijaya Bharati, Associate Professor	95%	PO6 PO7 PO8 PO10 PSO1 PSO2

*TP*  
MODULE COORDINATOR

*SAI*  
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## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### RESULT ANALYSIS TO IDENTIFY WEAK STUDENTS & IMPROVEMENT

Course Name: Concurrent and Parallel Programming	Course Code: C412
Year/ Sem : IV B TECH II SEM	Regulation: R16
Admitted Batch: 2018-22	Academic Year: 2021-22
Course Coordinator : Mrs.SK.Rahimunnisa	
Course handled: Section A- Mrs.SK.Rahimunnisa	
Course handled: Section B – Mrs. N.Sowjanya Kumari	
Course handled: Section C - Mrs. M. Mamatha Laxmi	

S.No	Reg. No.	INTERNAL EXAMINATION										Number of Backlogs upto IV-I
		MID 1					MID 2					
		DDS 15M	ML 15M	CPP 15M	MS 15M	MS 15M	DDS 15M	ML 15M	CPP 15M	MS 15M	MS 15M	
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2	18NMI A0502	11	9	14	14	14	7	12	13	14	14	0
3	18NMI A0503	12	7	15	13	13	6	13	14	15	15	0
4	18NMI A0504	12	12	15	15	15	8	11	12	15	15	0
5	18NMI A0505	13	15	15	15	15	9	13	14	14	14	0
6	18NMI A0506	10	8	15	10	10	3	7	10	12	12	0
7	18NMI A0507	12	15	15	15	15	6	10	13	15	15	0

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Peta, VSEZ  
K.J. Visakhapatnam-19



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22	18NMIA0522	11	10	13	10	6	15	13	15	13	15	0
23	18NMIA0523	12	15	15	12	11	15	14	15	14	15	0
24	18NMIA0524	10	10	15	10	7	13	12	14	12	14	0



Eng. Pavel V. V. (Signature)  
 Virgaliyev V. V. (Signature)  
 Virgaliyev V. V. (Signature)  
 Virgaliyev V. V. (Signature)

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40	18NMIA0540	11	13	15	13	7	10	10	15	0
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 7/12/2015  
 15/12/2015

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 Bangalore  
 10/11/2023  
 10/11/2023

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62	18NMI/A0561	13	15	15	15	12	14	15	14	0	0
63	18NMI/A0562	13	14	15	14	9	14	12	14	0	0
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Engr. [Name]  
 Principal of [Department]

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Management  
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108	18NM1A05A7	11	14	14	15	7	13	11	14.5	0
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124	19NM5A0505	8	12	14	15	6	14	12	14	0



Handwritten text in Tamil: 'மாண்புமிகு பொதுத் துறை அமைச்சர்' (Hon. Minister of Public Administration).  
 Handwritten text in English: '12/12/15'.

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142	18NM1A05D4	15	14	13	13	0	0	0	0	0	0	0
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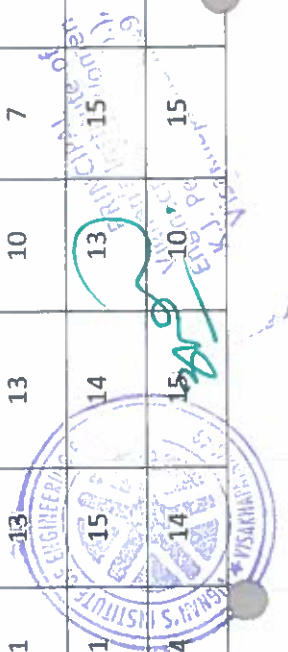


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 DEPARTMENT OF ENGINEERING  
 Anna University, Chennai  
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 Management  
 K.J. Somaiya Institute of  
 Management

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**Analysis of students based on MID marks**

S. No.	Regd. No	MID 1	MID 2	Performance in MID2>6	End exam Result
1.	18NM1A0584	5	13	Improved	Passed
2.	18NM1A0586	5	9	Improved	Passed

**Analysis of students based on Active backlogs**

S.No.	Regd. No.	Number of Backlogs	Result in CPP
1.	18NM1A0584	0	Passed
2.	18NM1A0586	12	Passed



**COURSE COORDINATOR**



**HEAD OF THE DEPARTMENT**



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Engineering for Women  
K. J. PETA, VEEZ (P.O.)  
VISHAKHAPATNAM-49





**VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN**  
*Approved by AICTE, New Delhi, Affiliated to JNTU Kakinada*  
 Kapujaggarrajupeta, VSEZ(Post), Visakhapatnam-530049,AP



**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**RESULT ANALYSIS TO IDENTIFY WEAK STUDENTS & IMPROVEMENT**

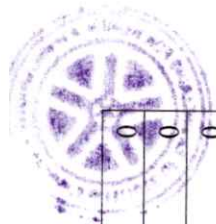
Considering MID 1, MID 2 Marks and Number of Backlogs

Course Name: <b>Concurrent and Parallel Programm</b>	Course Code: <b>C412</b>
Year/ Sem: <b>IV BTECH II SEM</b>	Regulation: <b>R16</b>
Admitted Batch: <b>2017</b>	Academic Year: <b>2020-21</b>
Course Coordinator : <b>Dr.P.Vijaya Bharati</b>	
Course handled: <b>Section A- Mrs.G.Sandhya</b>	
Course handled: <b>Section B - Dr.T.V.Madhusudhan Rao</b>	
Course handled: <b>Section C - Dr.P.Vijaya Bharati</b>	

S.No	Reg. No.	MID 1					MID 2					No.of Backlogs Upto IV-1
		DDS	MS	ML	CPP	DDS	MS	ML	CPP			
		MID 1	MID 1	MID 1	MID 1	MID 2	MID 2	MID 2	MID 2			
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 Kapujaggarrajupeta, VSEZ (Post), Visakhapatnam-530049, AP





13	17NM1A0511	12	15	15	13	13	15	0	9	0
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Visiting Officer  
K. J. P. B. V. S. E. Z. (P.O.)  
14  
10  
13  
9

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 K.J. Somaiya Institute of Engineering & Information Technology  
 Vasai, U-1, Vasai Road, Vasai (E), Dist. Palghar, Maharashtra - 401 202  
 K.J. Somaiya Institute of Engineering & Information Technology  
 Vasai, U-1, Vasai Road, Vasai (E), Dist. Palghar, Maharashtra - 401 202

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PRINCIPAL  
 Visma's Institute of  
 Engineering for Women  
 K.J. Peta, VSEZ (P.O.)  
 Visakhapatnam-49

*Handwritten signature in green ink.*

Analysis of students based on MID marks

S. No	Regd. No	MID 1	MID 2	Performance in MID2 >7	End exam Result
1.	17NM1A0570	6	7	Improved	Passed
2.	17NM1A0572	4	7	Improved	Passed
3.	17NM1A0573	5	11	Improved	Passed
4.	17NM1A0574	5	7	Improved	Passed
5.	17NM1A0576	3	4		Passed
6.	17NM1A0577	5	5		Failed
7.	17NM1A0585	5	5		Failed
8.	17NM1A0586	5	5		Passed
9.	17NM1A0587	0	6		Passed
10.	17NM1A0589	6	6		Passed
11.	17NM1A0590	5	8	Improved	Passed
12.	17NM1A0593	3	5		Passed
13.	17NM1A0597	5	2		Passed
14.	17NM1A0598	6	9	Improved	Failed
15.	17NM1A05A5	6	7	Improved	Failed
16.	17NM1A05A6	5	9	Improved	Passed
17.	17NM1A05A7	5	7	Improved	Passed
18.	17NM1A05A9	5	12	Improved	Passed
19.	17NM1A05B1	6	7	Improved	Passed
20.	17NM1A05B5	6	7	Improved	Passed
21.	17NM1A05F2	5	7	Improved	Failed
22.	17NM1A05F7	6	12	Improved	Passed
23.	17NM1A05F9	6	11	Improved	Failed
24.	17NM1A05H5	6	11	Improved	Failed
25.	18NM5A0505	6	7	Improved	Passed
26.	18NM5A0519	5	15	Improved	Passed



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Analysis of students based on active backlogs

S.No	Regd No	Number of Backlogs	Result
1.	17NM1A0506	4	Passed
2.	17NM1A0536	6	Passed
3.	17NM1A0560	5	Failed
4.	17NM1A0566	9	Failed
5.	17NM1A0570	6	Passed
6.	17NM1A0574	11	Passed
7.	17NM1A0577	16	Failed
8.	17NM1A0583	16	Failed
9.	17NM1A0585	9	Failed
10.	17NM1A05A5	12	Failed
11.	17NM1A05A6	4	Passed
12.	17NM1A05B0	7	Passed
13.	17NM1A05B1	9	Passed
14.	17NM1A05B5	10	Passed
15.	17NM1A05D2	3	Passed
16.	17NM1A05F0	13	Failed
17.	17NM1A05F4	12	Passed
18.	17NM1A05H5	4	Failed
19.	17NM1A05H7	12	Passed



COURSE COORDINATOR




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Computer Science & Engineering  
VIGNAN'S INSTITUTE OF  
ENGINEERING FOR WOMEN  
Kapujarigareupeta, Visakhapatnam-49



# VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN

Approved by AICTE, New Delhi, Affiliated to JNTU Kakinada  
Kapujaggarajupeta, VSEZ (Post), Visakhapatnam-530049, AP

## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### RESULT ANALYSIS TO IDENTIFY WEAK STUDENTS & IMPROVEMENT

Course Name: <b>CONCURRENT AND PARALLEL PROGRAMMING</b>	Course Code: <b>C412</b>
Year/ Sem : <b>IV B TECH II SEM</b>	Regulation: <b>R16</b>
Admitted Batch: <b>2016-20</b>	Academic Year: <b>2019-20</b>
Course Coordinator : <b>Mrs. B. Madhavi</b>	
Course handled: <b>Section A - Dr.P. Vijaya Bharati</b>	
Course handled: <b>Section B - Mrs. B. Madhavi</b>	
Course handled: <b>Section C - Mrs. B. Madhavi</b>	

S.No	Reg. No.	INTERNAL EXAMINATION												Number of Backlogs upto IV-I
		MID 1						MID 2						
		DDS 15M	ML 15M	CPP 15M	MS 15M	DDS 15M	ML 15M	CPP 15M	MS 15M					
1	16NM1A0501	10	10	12	14	13	8	8	15	13	8	15	0	
2	16NM1A0502	15	12	15	14	14	0	0	14	14	0	14	0	
3	16NM1A0503	15	12	15	15	12	11	7	13	12	11	13	0	
4	16NM1A0504	15	11	15	15	0	9	11	14	13	9	12	0	
5	16NM1A0505	11	9	11	13	13	13	9	12	13	13	12	0	
6	16NM1A0506	10	8	8	13	8	0	0	13	8	0	0	5	
7	16NM1A0507	10	10	10	13	14	12	0	13	14	0	14	0	
8	16NM1A0508	14	10	11	15	9	8	4	15	9	4	15	0	
9	16NM1A0509	14	12	13	14	12	12	10	12	12	10	12	0	
10	16NM1A0510	12	13	10	14	12	12	7	14	12	10	12	0	
11	16NM1A0511	11	7	12	13	13	12	9	13	13	9	13	0	
12	16NM1A0512	14	10	13	14	14	14	0	14	14	0	14	0	



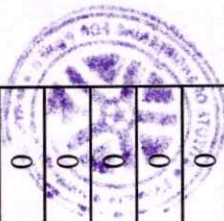
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13	16NM1A0513	11	11	13	14	13	11	10	13	13	0
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15	16NM1A0515	12	8	10	14	11	8	0	14	14	0
16	16NM1A0516	13	0	9	13	12	3	0	14	14	5
17	16NM1A0517	11	9	13	13	10	8	0	9	9	0
18	16NM1A0518	14	9	12	13	8	5	0	8	8	0
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21	16NM1A0521	8	0	11	15	11	4	0	9	9	4
22	16NM1A0522	14	11	14	15	11	7	0	12	12	0
23	16NM1A0523	12	9	12	13	13	5	0	13	13	0
24	16NM1A0524	15	12	15	15	14	0	0	0	0	0
25	16NM1A0525	14	13	13	14	9	0	0	12	12	0
26	16NM1A0526	15	14	15	14	13	12	0	14	14	0
27	16NM1A0527	14	11	14	14	11	10	10	14	14	0
28	16NM1A0528	10	8	13	13	0	0	0	12	12	0
29	16NM1A0529	15	8	13	13	11	9	6	11	11	0
30	16NM1A0530	14	11	12	15	11	10	11	13	13	0
31	16NM1A0531	12	11	14	13	14	10	4	13	13	0
32	16NM1A0533	14	9	12	14	13	0	0	14	14	0
33	16NM1A0534	15	13	15	15	15	0	0	15	15	0
34	16NM1A0535	15	13	15	14	15	0	0	13	13	0
35	16NM1A0536	12	11	9	13	0	0	0	13	13	14
36	16NM1A0537	15	11	14	14	15	9	6	14	14	0
37	16NM1A0538	12	11	14	14	15	12	11	14	14	0
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39	16NM1A0541	12	10	13	15	0	10	10	13	13	0
40	16NM1A0542	13	8	12	13	13	8	8	13	13	0
41	16NM1A0543	11	8	12	13	13	10	7	13	13	0
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 BANGALORE

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48	16NM1A0550	13	10	11	14	14	9	0	0	12	0
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58	16NM1A0560	15	13	15	15	14	10	0	0	15	0
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66	16NM1A0568	12	11	13	15	14	6	12	12	15	0
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71	16NM1A0573	7	2	14	14	14	9	0	0	9	16
72	16NM1A0574	15	12	3	14	14	0	0	0	0	0



K. J. Peltis, A.B.T., M.Eng., Ph.D.  
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 Visi: Kita Berkarya



73	16NM1A0575	12	7	15	14	11	0	0	15	0
74	16NM1A0576	14	10	11	14	9	7	0	15	0
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83	16NM1A0586	15	13	14	14	15	5	9	15	0
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101	16NM1A05A4	15	9	12	13	13	5	0	14	0
102	16NM1A05A5	14	10	10	10	8	4	0	15	0



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103	16NM1A05A7	15	13	12	12	14	7	0	14	0
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116	16NM1A05C0	13	14	13	14	15	10	0	12	0
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123	15NM1A05A7	15	13	12	15	12	9	10	13	0
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125	16NM1A05C8	7	11	9	15	9	5	3	15	1
126	16NM1A05C9	14	11	14	15	0	0	0	15	0
127	16NM1A05D0	15	11	13	13	12	7	7	10	0
128	16NM1A05D1	10	11	13	14	12	9	5	14	1
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133	16NM1A05D6	12	7	7	15	10	7	4	9	3
134	16NM1A05D7	11	10	12	15	0	0	0	15	0
135	16NM1A05D8	11	9	13	13	13	8	8	15	0
136	16NM1A05D9	9	8	12	9	10	10	6	0	0
137	16NM1A05E0	0	8	9	15	13	6	5	11	1
138	16NM1A05E1	15	10	8	12	13	8	11	15	0
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162	16NM1A05G5	13	6	6	12	12	5	5	12	0

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163	16NM1A05G6	10	8	9	15	11	10	8	13	0
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170	16NM1A05H3	12	8	8	15	13	12	8	11	0
171	16NM1A05H4	9	7	7	10	0	0	0	9	2
172	16NM1A05H6	6	8	4	12	12	7	12	9	4
173	16NM1A05H7	11	8	8	14	13	7	6	15	3
174	16NM1A05H8	15	12	12	11	13	9	10	14	0
175	16NM1A05H9	13	5	8	11	11	6	2	9	0
176	17NM5A0501	11	10	14	15	0	0	0	13	0
177	17NM5A0502	14	14	14	9	15	12	13	15	0
178	17NM5A0503	13	7	9	9	14	8	7	9	0
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181	17NM5A0506	9	12	10	12	15	9	9	12	0
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186	17NM5A0512	14	9	9	13	0	0	0	14	0
187	17NM5A0513	13	11	13	12	15	12	13	0	0
188	17NM5A0514	14	10	12	4	15	12	12	5	0
189	14NM1A05D8	7	10	11		0	0	0		0



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Mumbai

### Analysis of students based on MID marks

S.No.	Regd. No	MID 1	MID 2	Performance in MID2>6	End exam Result
1.	16NM1A0574	3	0		Passed
2.	16NM1A05E5	6	4		Passed
3.	16NM1A05G5	6	5		Passed
4.	16NM1A05H6	4	12	Improved	Passed

### Analysis of students based on Active backlogs

S.No.	Regd. No.	Number of Backlogs	Result in CPP
1.	16NM1A0506	5	Passed
2.	16NM1A0516	5	Passed
3.	16NM1A0521	4	Passed
4.	16NM1A0536	14	Failed
5.	16NM1A0573	16	Failed
6.	16NM1A0599	16	Failed
7.	16NM1A05B6	10	Failed
8.	16NM1A05D6	3	Passed
9.	16NM1A05E5	4	Passed
10.	16NM1A05E8	19	Passed
11.	16NM1A05H6	4	Passed

  
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12.	16NM1A05H7	3	Passed
13.	14NM1A05D8	7	Passed

*B.M.*

COURSE COORDINATOR

*B.M.*

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Computer Science & Engineering  
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ENGINEERING FOR WOMEN  
K. I. Peta, VSEZ (P.O.),  
Visakhapatnam-49



# VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN

Approved by AICTE, New Delhi & Affiliated to JNTUK, Kakinada

## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### RESULT ANALYSIS TO IDENTIFY WEAK STUDENTS

Considering MID 1 and MID 2 Marks, Number of Backlogs

Course Name: CONCURRENT AND PARALLEL PROGRAMMING	Course Code: C412
Year/ Sem : IV B TECH II SEM	Regulation: R16
Admitted Batch: 2018-22	Academic Year: 2021-22
Course Coordinator : Mrs.Sk.Rahimunnisa	
Course handled: Section A- Mrs.SK.Rahimunnisa	
Course handled: Section B – Mrs. N.Sowjanya Kumari	
Course handled: Section C - Mrs. M. Mamatha Laxmi	

Students identified for Remedial classes based on the number of Active Backlogs greater than 2 subjects

S.No.	Regd. No.	28.02.2022	07.03.2022	14.03.2022	21.03.2022	28.03.2022	04.04.2022
1	18NM1A0525	leela Tothna	leela Tothna	leela Tothna	leela Tothna	leela Tothna	leela Tothna
2	18NM1A0534	Preethi	Preethi	Preethi	Preethi	Preethi	Preethi
3	18NM1A0553	Jyothika	Jyothika	Jyothika	Jyothika	Jyothika	Jyothika
4	18NM1A0564	K.P	K.P	K.P	K.P	K.P	K.P
5	18NM1A0565	Usha	Usha	Usha	Usha	Usha	Usha
6	18NM1A0586						
7	18NM1A05A1	A	Blagya	Blagya	Blagya	Blagya	Blagya
8	18NM1A05B2	plb	plb	plb	plb	plb	plb
No. of Students Present		7	7	8	7	8	7
No. of Students Absent		01	01	NIL	01	NIL	1
Signature of Faculty							



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**Class Time:**

Students identified for Remedial classes based on the number of Active Backlogs greater than 2 subjects and MID-1 marks less than 7.

S.No.	Regd. No.	25-04-2022	02-05-2022	09-05-2022	16-05-2022	23-05-2022
1.	18NM1A0525	leela Jothuwa Preethi	leela Jothuwa Preethi	leela Jothuwa Preethi	leela Jothuwa Preethi	leela Jothuwa Preethi
2.	18NM1A0534	Jyothika C.P	Jyothika A	Jyothika C.P	Jyothika C.P	Jyothika C.P
3.	18NM1A0553	C.P	C.P	C.P	C.P	C.P
4.	18NM1A0564	C.P	C.P	C.P	C.P	C.P
5.	18NM1A0565	C.P	C.P	C.P	C.P	C.P
6.	18NM1A0584	C.P	C.P	C.P	C.P	C.P
7.	18NM1A0586	C.P	C.P	C.P	C.P	C.P
8.	18NM1A05A1	Bhagya P.P	Bhagya P.P	Bhagya P.P	Bhagya P.P	Bhagya P.P
9.	18NM1A05B2	P.P	P.P	P.P	P.P	P.P
No. of Students Present		09	08	08	08	09
No. of Students Absent		NIL	01	01	01	NIL
Signature of Faculty		Y	Y	Y	Y	Y

*[Handwritten Signature]*

COURSE COORDINATOR

*[Handwritten Signature]*

HEAD OF THE DEPARTMENT



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Engineering for Women  
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Visakhapatnam-49





**GNAN'S INSTITUTE OF ENGINEERING FOR WOMEN**  
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**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**REMEDIAL CLASS FOR WEAK STUDENTS**

Considering MID 1, MID 2 Marks and Number of Backlogs

Course Name: Concurrent and Parallel Programming	Course Code: C412
Year/ Sem: IV BTECH II SEM	Regulation: R16
Admitted Batch: 2017	Academic Year: 2020-21
Course Coordinator : Dr.P.Vijaya Bharati	
Course handled: Section A- Ms.G.Sandhya	
Course handled: Section B - Dr.T.V.Madhusudhan Rao	
Course handled: Section C - Dr.P.Vijaya Bharati	

Students identified for Remedial classes based on the number of Active Backlogs greater than 2 subjects

S.No.	Regd. No.	3/4/21	10/4/21	20/4/21	19/6/21	29/6/21	7/7/21
1.	17NMI A0506	A	Bhavana F	Bhavana F	A	Bhavana F	A
2.	17NMI A0536	Ankitha	Ankitha	Ankitha	Ankitha	Ankitha	Ankitha
3.	17NMI A0560	Sowmya	A	Sowmya	Sowmya	Sowmya	Sowmya
4.	17NMI A0566	Lavanya.K	Lavanya.K	Lavanya.K	Lavanya.K	Lavanya.K	Lavanya.K
5.	17NMI A0570	supriya k	supriya k	supriya k	supriya k	supriya k	supriya k
6.	17NMI A0574	K.Thanuja	K.Thanuja	K.Thanuja	K.Thanuja	K.Thanuja	K.Thanuja
7.	17NMI A0577	Bhagyavathi	Bhagyavathi	Bhagyavathi	Bhagyavathi	Bhagyavathi	Bhagyavathi
8.	17NMI A0583	K.Sowjanya	K.Sowjanya	K.Sowjanya	K.Sowjanya	K.Sowjanya	K.Sowjanya
9.	17NMI A0585	K.Chaitshana	K.Chaitshana	K.Chaitshana	K.Chaitshana	K.Chaitshana	K.Chaitshana
10.	17NMI A05A5	M.naveethi	M.naveethi	M.naveethi	M.naveethi	M.naveethi	M.naveethi
11.	17NMI A05A6	A	M.Lakshmi	M.Lakshmi	M.Lakshmi	M.Lakshmi	M.Lakshmi
12.	17NMI A05B0	N.Ramadevi	N.Ramadevi	N.Ramadevi	N.Ramadevi	N.Ramadevi	N.Ramadevi
13.	17NMI A05B1	N.Sowmya	N.Sowmya	N.Sowmya	N.Sowmya	N.Sowmya	N.Sowmya

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14.	17NM1A05B5	A. Sreethi	A. Sreethi	A	A	A	A
15.	17NM1A05D2	P. Pritya	P. Pritya	P. Pritya	P. Pritya	P. Pritya	P. Pritya
16.	17NM1A05F0	A	S. Namratha	S. Namratha	S. Namratha	S. Namratha	S. Namratha
17.	17NM1A05F4	S. Yamini	A	S. Yamini	S. Yamini	S. Yamini	S. Yamini
18.	17NM1A05H5	M. Yamini	M. Yamini	M. Yamini	M. Yamini	M. Yamini	M. Yamini
19.	17NM1A05H7	B. Yashaswini	A	B. Yashaswini	B. Yashaswini	B. Yashaswini	B. Yashaswini
No. of Students Present		15	16	17	16	17	16
No. of Students Absent		4	3	2	3	2	3
Signature of Faculty							

*[Signature]*

COURSE COORDINATOR

*[Signature]*

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Computer Science & Engineering  
VIGNAN'S INSTITUTE OF  
ENGINEERING FOR WOMEN  
Vijaya Vittala Road, Visakhapatnam-49



*[Signature]*  
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**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**REMEDIAL CLASSWORK FOR SLOW LEARNERS**

Considering MID 1 Marks and number of active backlogs

Course Name: <b>CONCURRENT AND PARALLEL PROGRAMMING</b>	Course Code: <b>C412</b>
Year/ Sem : <b>IV B TECH II SEM</b>	Regulation: <b>R16</b>
Admitted Batch: <b>2016-20</b>	Academic Year: <b>2019-20</b>
Course Coordinator : <b>Mrs. B. Madhavi</b>	
Course handled: <b>Section A - Dr.P.Vijaya Bharati</b>	
Course handled: <b>Section B - Mrs. B. Madhavi</b>	
Course handled: <b>Section C - Mrs. B. Madhavi</b>	

Students identified for Remedial classes based on the number of Active Backlogs greater than 2 subjects

S.No.	Regd. No.	22-11-19	29-11-19	13-12-19	20-12-19	8-1-20
1	16NM1A0506	A	P. Anjali	D. Anjali	P. Anjali	P. Anjali
2	16NM1A0516	Begum	Begum	Begum	Begum	Begum
3	16NM1A0521	sushmitha	sushmitha	A	sushmitha	A
4	16NM1A0536	A	G.rounika	G.rounika	G.rounika	G.rounika
5	16NM1A0573	M.Roshni	A	M.Roshni	A	M.Roshni
6	16NM1A0599	Anuradha	Anuradha	A	Anuradha	Anuradha
7	16NM1A05B6	UGVL	A	UGVL	UGVL	A
8	16NM1A05D6	S.maduli	S.maduli	S.maduli	A	S.maduli
9	16NM1A05E5	G.Nithisha	G.Nithisha	A	G.Nithisha	G.Nithisha
10	16NM1A05E8	A	G.prashista	G.prashista	A	G.prashista
11	16NM1A05H6	A	A	A	A	A
12	16NM1A05H7	A	Akan	Akan	Akan	Akan
13	14NM1A05D8	K.srilakshmi	K.srilakshmi	K.srilakshmi	K.srilakshmi	K.srilakshmi

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**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**RESULT ANALYSIS AT THE END OF SEMESTER**

Year/Sem: IV B.Tech II Sem	Regulation: R16
Academic Year: 2021-22	Admitted batch:2018

S.No.	Roll No.	Name of the Student	DS	MS	ML	CPP	SEM	PRO
1	18NM1A0501	ABBINA YAMINI SIRIVENNELA	7	7	6	8	10	10
2	18NM1A0502	ABBIREDDY SUSHMA SRILAYA	6	6	7	7	9	10
3	18NM1A0503	ADAKA VANI	7	7	7	8	9	10
4	18NM1A0504	ADDAGARLA BABY VYSHNAVI	6	8	6	9	10	10
5	18NM1A0505	AKKIREDDI DEVA DIVYA	9	8	8	8	10	10
6	18NM1A0506	ALAJANGI DHARANI	6	6	6	7	9	9
7	18NM1A0507	ALLU KAVYA	7	8	6	8	9	10
8	18NM1A0508	ANGADA VANDANA SATYA	5	6	5	8	9	10
9	18NM1A0509	BADDA SHEERISHA	7	6	7	7	10	10
10	18NM1A0510	BAGADI DHARANI	7	8	8	8	10	10
11	18NM1A0511	BAGADI JYOSHNA	6	7	6	7	9	9
12	18NM1A0512	BALIREDDY LATHA AMRUTHA	8	8	8	8	10	10
13	18NM1A0513	BANDARU DURGA RUKMINI	8	6	7	8	10	10
14	18NM1A0514	BANDARU SRAVYA	7	7	7	6	9	9
15	18NM1A0515	BATCHU SATYA SRI	7	8	7	8	10	10
16	18NM1A0516	BODDU SREEJA	6	8	5	7	9	9
17	18NM1A0517	BOMMIREDDY DIVYA	8	5	6	6	9	9
18	18NM1A0518	BORIGI SRI LAKSHMI PRASANNA	7	7	7	8	10	10
19	18NM1A0519	BUDDHA KUSUMA SANDHYA RANI	7	7	7	8	10	10
20	18NM1A0520	CHAITANYA LAKSHMI CH	8	8	7	10	10	10
21	18NM1A0521	CHAVI AGARWAL	7	7	6	8	10	10
22	18NM1A0522	CHINTAKAYALA ANVITHA	8	7	8	7	9	9
23	18NM1A0523	CHINTAKAYALA NANDINI	7	8	7	8	9	10
24	18NM1A0524	DANTULURI REETU VARMA	7	8	6	9	10	10
25	18NM1A0525	DASARI LEELA JYOSHNA	5	5	0	5	9	9
26	18NM1A0526	DEBARIKI SOBHA ANANTHA LAKSHMI	7	7	8	8	9	9
27	18NM1A0527	DEEPTHI SAHU	7	7	7	7	9	9
28	18NM1A0528	DEVARA SAI PRATHYUSHA	7	7	6	9	10	10
29	18NM1A0529	DEVARAKONDA LAKSHMI VIMALA	8	7	7	8	10	10
30	18NM1A0530	DHARMALA PRASANNA PRIYA	9	6	8	7	10	10
31	18NM1A0531	DODDI PRATHYUSHA	6	7	7	8	10	10
32	18NM1A0532	DODDI TEJASWINI	7	7	7	8	9	10
33	18NM1A0533	ELLA INDU	7	7	7	7	9	9
34	18NM1A0534	ETTULA PREETHI	6	6	5	6	9	9
35	18NM1A0535	GAJAVELLI VENKATA PRAVEENA	7	7	6	8	10	10
36	18NM1A0536	GANAGALLA PRAVALLIKA	5	7	7	8	9	10
37	18NM1A0537	GANAPATHIRAJU SRUJITHA	7	6	6	7	10	10
38	18NM1A0538	GANDEPALLI BHAVYA	7	6	7	7	9	9
39	18NM1A0539	GANDHAM ROJA DEVI	6	7	7	9	10	10

300



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42	18NMIA0542	GANTA SAMEERA	7	7	7	7	9	9
43	18NMIA0543	GODRIHALA SUDESHA	7	7	6	8	9	9
44	18NMIA0544	GOKADA GAYATRI	5	7	6	8	9	10
45	18NMIA0545	GOLLAVILLI PRIYANKA	7	7	6	7	9	10
46	18NMIA0546	GOLLU ANTHONY RISHIKA	8	7	6	8	9	9
47	18NMIA0547	GONDESI LAKSHMI GOWTAMI	6	6	5	7	9	9
48	18NMIA0548	GORLE NANDINI	7	7	8	10	10	10
49	18NMIA0549	GORLE SIRI	7	7	5	6	10	10
50	18NMIA0550	GUDAPARTHI DHARANI	8	7	6	8	9	10
51	18NMIA0551	HARSHITA	6	7	7	7	10	10
52	18NMIA0552	JAGANA VASANTHA	5	8	6	8	9	9
53	18NMIA0553	JAGU JYOTHIKA	5	6	5	6	10	9
54	18NMIA0554	JAMI BHAVANA	8	6	7	8	9	10
55	18NMIA0555	JUTTUKA NAGA GAYATHRI	7	8	6	8	9	10
56	18NMIA0556	KAKI DAKSHAYANI	8	6	6	9	9	9
57	18NMIA0557	KALLEPALLI LAVANYA	8	8	8	7	10	10
58	18NMIA0558	KAMMA RESHMACHOWDARY	7	7	7	8	9	10
59	18NMIA0559	KANCHUBOINA YAMINI	7	8	7	8	10	10
60	18NMIA0560	KANDALAM HEMASREE	6	7	7	9	9	10
61	18NMIA0561	KANDREGULA KUSUMANJALI	8	7	8	7	10	10
62	18NMIA0562	KANDREGULA PARIMALA	8	7	8	8	9	10
63	18NMIA0563	KARAKA MOUNIKA	7	8	6	8	9	10
64	18NMIA0564	KARANAM VAHINI PRIYA	5	7	5	6	9	9
65	18NMIA0565	KARRI DIVYA SAI	0	0	0	0	10	9
66	18NMIA0566	KARRI USHA	8	7	7	8	9	9
67	18NMIA0567	KAVALI SRIVARSHINI	7	7	6	8	9	9
68	18NMIA0568	KODI MOUNIKA	7	8	8	8	9	10
69	18NMIA0569	KOLACHINA VAGDEVI	7	7	7	8	10	10
70	18NMIA0570	KOLLI AMRUTHA	8	7	9	8	9	10
71	18NMIA0571	KOLLI MERCY	6	7	7	8	10	9
72	18NMIA0572	KOMMANAPALLI JYOTHSNA	5	7	5	6	9	10
73	18NMIA0573	KONATHALA LAHARIKA	6	6	6	8	10	10
74	18NMIA0574	KOORAPATI SIREESHA	8	7	8	7	9	9
75	18NMIA0575	KORIBILLI MOULIKA SANDHYA SRI	6	8	7	8	9	10
76	18NMIA0576	KOSETTI HEMA LATHA	6	8	6	7	9	9
77	18NMIA0577	KOTANA MOUNIKA	7	7	6	7	9	9
78	18NMIA0578	KOTTANA VARSHINI	9	8	9	9	10	10
79	18NMIA0579	KSHATRIYA DIMPUL SINGH	6	7	7	6	9	10
80	18NMIA0580	KUNDRAPU DHARANI SAI KEERTHI	7	7	6	8	9	10
81	18NMIA0581	KUPPA VENKATA ALEKHYA	8	6	6	8	9	9
82	18NMIA0582	K MANASA	5	7	6	7	10	9
83	18NMIA0583	KUTCHU MOUNIKA SAI SADHVI	7	7	7	6	9	10
84	18NMIA0584	MAJJI KUSUMA	6	7	5	7	9	9
85	18NMIA0585	MALLA GNANA PRASUNA	8	7	8	7	9	10
86	18NMIA0586	MANDAPATI SHREAYA	5	6	5	6	10	9
87	18NMIA0587	MANDHAPATI RUPADEVI	6	8	7	8	10	10
88	18NMIA0588	MANEPALLI PRAVALLIKA	6	7	6	6	9	9
89	18NMIA0589	M SENTHILKUMAR JANANI	7	6	8	7	10	10
90	18NMIA0590	MARRAPU HEMA SAI PUSHPA	8	7	8	8	10	10
91	18NMIA0591	MASAVARAPU KAVYA	7	7	7	7	9	10
92	18NMIA0592	MATHA BHARATHI	6	7	6	8	9	9
93	18NMIA0593	MAVURI THANUJA	7	6	7	8	9	9
94	18NMIA0594	M MONIKA	7	6	7	7	9	9



3202  
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95	18NM1A0595	MEDI BHARGAVI	6	7	6	8	9	9
96	18NM1A0596	MEDICHERLA JYOTSNA YALLA SRI	7	8	6	7	9	9
97	18NM1A0597	MOLLI HEMA LATHA	8	7	8	9	9	10
98	18NM1A0598	MONICA MAXENA XAVIER	6	5	6	7	9	9
99	18NM1A0599	MOOLA NAGA SRI PRAVALLIKA	7	8	8	6	9	10
100	18NM1A05A0	MOSALI SRUJI	5	7	5	7	9	9
101	18NM1A05A1	MUDUNURI BHAGYA SRI	5	0	5	7	9	9
102	18NM1A05A2	MURUGESAN SIVA SANTHINI	7	7	7	7	9	10
103	18NM1A05A3	NAGIREDDY HARIKA	7	7	7	9	9	A
104	18NM1A05A4	NALABOTHU BHAVANA	7	8	6	8	9	10
105	18NM1A05A5	NANDA DEEPIKA	7	7	7	5	9	10
106	18NM1A05A6	NEELAPU YESASRI	8	7	8	8	10	10
107	18NM1A05A7	NELAPARTHI MONICA	7	8	6	6	9	10
108	18NM1A05A8	NIKHITA INDU KOVVURI	7	8	8	10	10	10
109	18NM1A05A9	PABBINEEDI SIRISHA	7	6	6	5	9	9
110	18NM1A05B0	PANDRANKI SOWJANYA	8	7	8	8	9	10
111	18NM1A05B1	PANUGANTI ANAUSHCA SRINIVAS	7	7	8	8	9	9
112	18NM1A05B2	PARAMATA LAKSHMI BHAVANA	5	8	5	0	9	9
113	18NM1A05B3	PEESAPATI VENKATA SAI KEERTHANA	7	6	6	6	10	10
114	18NM1A05B4	PENUGONDA SATYA SOWJANYA	7	6	7	7	9	10
115	18NM1A05B5	PENUKONDA SANDHYA RANI	7	8	7	7	9	10
116	18NM1A05B6	PILLA SAIGAYATHRI	6	7	6	8	9	10
117	18NM1A05B7	PUPPALA NEEHARIKA	6	6	5	6	9	9
118	18NM1A05B8	PUSAPATI SAHITHI	6	6	7	8	9	9
119	18NM1A05B9	PENUMATSA SIVANI	6	7	7	8	9	9
120	18NM1A05C0	POLIMERA SAILAJA	8	8	8	8	9	10
121	18NM1A05C1	PRIYANKA KUMARI	8	7	8	7	9	9
122	18NM1A05C2	PUDI HEMA LATHA	8	7	9	8	10	10
123	18NM1A05C3	PUSHPA KANDA	8	8	7	6	10	9
124	18NM1A05C4	PYDADA MALATHI	8	6	6	7	10	10
125	18NM1A05C5	PYDI HARITHA	7	6	7	7	9	9
126	18NM1A05C6	RAYANA JAYA SRI	9	7	9	8	9	9
127	18NM1A05C7	RELANGI RAMYA	8	7	7	8	9	9
128	18NM1A05C8	REYYI LIKHITA	7	7	6	6	9	9
129	18NM1A05C9	RUTHALA SRI SATYA VIJAYA UMASRI	6	7	6	5	9	8
130	18NM1A05D0	SABBAVARAPU CHANDU	9	8	9	8	9	8
131	18NM1A05D1	SABBAVARAPU VENKATA SOWJANYA	7	7	7	5	9	10
132	18NM1A05D2	SADAMALLA SHEKINAH	7	6	6	7	9	8
133	18NM1A05D3	SAI KAVYA SRI MATCHA	6	6	6	6	9	9
134	18NM1A05D4	SAI SERANYA NALLA	8	7	7	7	10	9
135	18NM1A05D5	S SAI SREE LAKSHMI MONIKA	7	7	7	6	9	9
136	18NM1A05D6	SANAPATHI SIREESHA	8	9	7	7	9	9
137	18NM1A05D7	SARAYU GINNI	8	7	8	8	10	9
138	18NM1A05D8	SARVAKOTA POOJA VINAYA MANASA	8	7	7	8	10	9
139	18NM1A05D9	SARVASUDDI KANAKA RATNAM	7	7	7	6	10	9
140	18NM1A05E1	SATHIVILLI PRAVEENA	8	7	6	7	10	9
141	18NM1A05E2	SAVARA SWETHA	7	6	6	6	9	8
142	18NM1A05E3	SEERAMSETTI JAYASRI	9	7	8	7	9	9
143	18NM1A05E4	SENAGANA HARIKA DAMAYANTHI	7	8	7	8	9	8
144	18NM1A05E5	SENAPATHI LAVANYA	8	7	7	8	9	10
145	18NM1A05E6	SIMHADRI RAMYA RANI	9	6	7	8	9	9
146	18NM1A05E7	SINGURU KAVYA	9	7	7	7	10	10
147	18NM1A05E8	SISTU BINDU	7	7	6	7	9	9



PRINCIPAL  
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Engineering for Women  
K.J. Peta, VSEZ (P.O.),  
Visakhapatnam-49

148	18NM1A05E9	SUNKARI DHANA LAKSHMI	8	8	7	9	10	10
149	18NM1A05F0	SUREDDI SAIKUMARI	7	6	5	6	9	9
150	18NM1A05F1	TALARI SANDHYA	9	7	7	7	10	10
151	18NM1A05F2	TAMANARA SWATHI	6	8	6	7	9	9
152	18NM1A05F3	TAMMINENI PRIYANKA	6	7	5	7	9	9
153	18NM1A05F4	TANGUDU HARSHITA	5	5	5	5	9	8
154	18NM1A05F5	TANGUDU SOWMYA	8	8	7	6	9	9
155	18NM1A05F6	TEPPALA PUSHPA HARIKA	7	8	6	8	10	9
156	18NM1A05F7	THIRUMAREDDI TANUJA	7	7	6	8	9	10
157	18NM1A05F8	THOKADA LAVANYA	7	6	7	6	9	9
158	18NM1A05F9	TIRUPATHI LALITHA	8	7	7	6	9	10
159	18NM1A05G0	U DURGA SANTHOSHI KUMARI	7	9	7	8	9	9
160	18NM1A05G1	VANKAYALAPATI JAHNAVI	6	7	6	8	9	9
161	18NM1A05G2	VEJARLA ASWITHA	7	6	6	6	9	10
162	18NM1A05G3	VELAGA NEERAJA	7	6	7	6	9	9
163	18NM1A05G4	VULLA YAGNA SRI	8	8	7	9	9	10
164	18NM1A05G5	YANAPARTHI POORNIMA	8	7	7	9	10	9
165	18NM1A05G6	YELLAPU TEJASWANI	7	6	7	7	9	9
166	18NM1A05G7	Y SREELAKSHMI SAHITHI	7	6	7	6	9	9
167	18NM1A05G8	MALAVIKA PYLA	6	7	5	7	10	9
168	18NM1A05G9	SIRIKI NANDINI	7	7	6	7	9	9
169	18NM1A05H0	DEVOJU VARA NOOKA KUMARI	7	7	6	6	9	8
170	18NM1A05H1	M PADMAVATI	6	6	6	7	9	8
171	19NM5A0501	ADIGARLA SRAVANI	7	7	7	8	9	10
172	19NM5A0502	CHINTAPALLI KAVYA SAI DURGA	7	7	7	8	9	9
173	19NM5A0503	GULLIPALLI LOCHANA	7	6	7	7	9	9
174	19NM5A0504	KANCHRLA LIKITHA	6	8	7	8	9	9
175	19NM5A0505	KOSIREDDY JYOTHI	6	8	7	6	9	9
176	19NM5A0506	KOYILADA TEJASWINI	6	6	6	6	9	10
177	19NM5A0507	MADUTHURU RAMYA	5	6	7	6	9	9
178	19NM5A0508	MOHAMMED VAHAZARUNNISA	8	7	6	7	9	8
179	19NM5A0510	PITHANI MADHURI	7	7	5	9	9	9
180	19NM5A0511	POTNURU KRANTHI	6	6	0	6	9	9
181	19NM5A0512	RAMASWAMY RAMYA	7	7	7	8	9	9
182	19NM5A0513	RAVALAPOODI PAVANI	5	7	8	7	9	9
183	19NM5A0514	SINGAMPALLI ROHINI	5	6	5	7	9	9
184	19NM5A0515	SIYADRI SANDHYA	8	7	7	8	9	9
185	19NM5A0516	TUMPALA PUSHPA LATHA	A	A	A	A	9	A
186	19NM5A0517	VASUPALLI SATYA SUSHMA	7	8	7	7	9	9
187	19NM5A0518	NADIGATLA PARIMALARANI	7	7	6	8	9	10
188	17NM1A0575	PARIMALARANI	8	7	7	8	10	10
189	17NM1A05A4	MOLLETI SAI SRIVALLIKA	7	5	7	8	9	9
190	17NM1A05G8	VASAMSETTI NAVYA SREE	7	8	7	8	9	9
191	18B41A0501	BANDARU PRIYANKA	5	8	6	6	10	10
192	18NM5A0510	ALEKHYA P	7	8	7	9	9	9

  
Course Coordinator

  
Head of the Department



  
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Kapujaggarajupeta, VSEZ(Post), Visakhapatnam-530049,AP

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING****RESULT ANALYSIS AT THE END OF SEMESTER**

Year/ Sem : IVB TECH II SEM	Regulation: R16
Academic year:2020-21	Admitted Batch:2017

S.No.	Roll No.	Name of the Student	DS	MS	ML	CPP	SEMINAR	PROJECT
1	17NM1A0501	A V K PRAVALLIKA	7	7	6	6	10	10
2	17NM1A0502	ADAPA SAI SANTHOSHI	7	8	6	6	10	9
3	17NM1A0503	ADDALA LAKSHMI	7	6	5	0	9	9
4	17NM1A0504	AGATHAMUDI MANASA	8	8	7	7	10	10
5	17NM1A0505	A U SAI NAGA DURGA CHINNI	7	7	6	5	9	9
6	17NM1A0506	ALLURI BHAVANA	6	6	5	5	9	8
7	17NM1A0507	AMBATI SIREESHA	7	8	7	7	10	10
8	17NM1A0508	ANGA DEEPIKA	6	6	5	5	10	9
9	17NM1A0509	ANNE SRI REKHA	8	7	7	6	10	10
10	17NM1A0510	ARIPAKA SUVARNA GEETHA	7	8	7	6	10	10
11	17NM1A0511	ARNIPALLI SHIVANI	7	8	7	5	10	10
12	17NM1A0512	AYITHI DEEPIKA	8	7	7	6	10	10
13	17NM1A0513	BALIBOYENA DIVYA	6	6	6	5	10	9
14	17NM1A0514	B CH NAGA SAI SARADA	7	8	0	6	9	8
15	17NM1A0515	BASANA HARSHINI	7	9	6	6	10	9
16	17NM1A0516	BATCHU SUSHMITA	6	8	6	7	10	10
17	17NM1A0517	BEHARA ANUSHA	7	8	7	6	10	9
18	17NM1A0518	BHIMUNI BHARGAVI	7	7	6	5	10	9
19	17NM1A0519	BIRLANGI SIRISHA	7	6	7	6	10	8
20	17NM1A0520	BODDA AKHILA	7	8	7	6	10	10
21	17NM1A0521	BODDEDA UTTEJA	7	7	6	6	10	9
22	17NM1A0522	BOKKA SRI SAI MANASA	6	7	7	7	10	9
23	17NM1A0523	B L ANANTA KIRANMAI	8	6	6	5	9	8
24	17NM1A0524	BONAM ROSHINI	7	7	5	5	10	9
25	17NM1A0525	BORRA SUNITHA	7	6	5	5	10	9
26	17NM1A0526	BOYIDI SUPRIYA	7	6	6	6	10	9
27	17NM1A0527	CHEVVETI VIRINCHITA	6	6	7	5	9	8
28	17NM1A0528	CHIDAPAREDDI MONISHA	6	7	6	5	10	9
29	17NM1A0529	CHILAKALAPALLI SAI LIKHITA	7	6	5	5	9	8
30	17NM1A0530	CHINTADA ALEKHYA	6	6	6	5	10	9
31	17NM1A0531	CHONGALI MADHULIKA	6	7	7	6	10	9
32	17NM1A0532	CHOPPA NANDINI	7	6	6	5	10	10
33	17NM1A0533	D PRIYA	7	7	7	6	10	9
34	17NM1A0534	DADALA CHARANYA	7	6	6	5	9	8
35	17NM1A0535	DADI SOWMYA	7	6	0	6	10	8
36	17NM1A0536	DANDABATHINI ANKITHA	5	6	6	5	9	8
37	17NM1A0537	DEREDLA VINEETHA SRI	6	6	5	6	10	8
38	17NM1A0538	DULAM LAYASREE	6	6	5	6	9	8
39	17NM1A0539	DUNNA SINDHU	7	7	6	6	10	8



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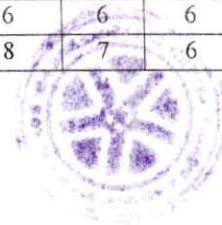
40	17NM1A0540	DWARAPUDI JOSHITHA	7	7	5	5	10	9
41	17NM1A0541	EDHARAPALLI SIRISHA RANI	5	6	5	5	9	8
42	17NM1A0542	ELURI HARSHA VARDHINI	5	6	6	6	10	9
43	17NM1A0543	G NAGAMANI	7	6	5	6	9	8
44	17NM1A0544	G POOJITHA SRI LAKSHMI	5	6	5	5	9	8
45	17NM1A0545	GADIDALA VATHSALYA	6	7	6	6	10	10
46	17NM1A0546	GALI TEJASWINI	6	6	7	6	10	9
47	17NM1A0548	GANTLA JOSHNA	8	7	5	6	10	10
48	17NM1A0549	GAVIREDDY MANASA	6	6	6	5	10	9
49	17NM1A0550	GAVVA RANI	6	7	6	5	10	9
50	17NM1A0551	GEDELA ANANDA BHAVANI	7	7	8	6	10	9
51	17NM1A0552	G SUBBALAKSHMI SIRISHA	6	6	6	5	9	8
52	17NM1A0553	GOMPA NIKHILA	7	7	6	6	10	10
53	17NM1A0554	GORUSU SRAVANI	6	5	8	6	10	9
54	17NM1A0555	GULLIPALLI JAHNAVI	6	5	5	5	9	8
55	17NM1A0556	GUMMADI SAI CHANDANA	7	8	7	6	10	9
56	17NM1A0557	GUNNA MADHUSRI	7	7	7	6	10	10
57	17NM1A0558	ISUKAPATLA RAMYA	6	6	6	6	9	
58	17NM1A0559	JAKKUBA MANASA	6	6	7	5	10	9
59	17NM1A0560	J G K SATYA SREE SOWMYA	5	5	5	0	9	8
60	17NM1A0561	JERRIPOTHULA NADIYA	7	7	7	6	10	10
61	17NM1A0562	JOBA KUMARI	7	7	7	5	10	10
62	17NM1A0563	JOGAVAJHULA POORNIMA	6	6	7	5	10	9
63	17NM1A0564	JONNAKUTI SAI HARSHITHA	6	7	7	6	10	10
64	17NM1A0565	KADAGALA HARI SWETHA	6	6	7	5	10	9
65	17NM1A0566	KAKARA LAVANYA	5	5	6	0	9	8
66	17NM1A0567	KAKKALA JOGA SANDHYA	6	7	6	5	10	10
67	17NM1A0568	KALAGA SAHITYA	7	7	8	6	10	10
68	17NM1A0569	KALEPU SREEJA	5	6	6	5	10	9
69	17NM1A0570	KALIDINDI SUPRIYA	0	5	6	5	9	8
70	17NM1A0571	KALLA DIVYA	6	6	6	5	10	9
71	17NM1A0572	KALLADA YAMUNA	6	7	6	6	10	9
72	17NM1A0573	K VIJAYA VARSHINI	5	6	7	5	10	9
73	17NM1A0574	KAMMILI TANUJA	0	6	5	5	9	8
74	17NM1A0576	KANDRIKA SOUMYA	5	6	6	5	9	
75	17NM1A0577	KANKIPATI BHAGYAVARSHA	0	0	6	0	9	8
76	17NM1A0578	KARADA POOJA	6	5	8	5	9	8
77	17NM1A0579	KARAKA JYOSHNA	7	6	6	6	10	9
78	17NM1A0580	KARANAM POOJA	6	6	7	5	9	8
79	17NM1A0581	KOLA LAVANYA	7	6	8	6	10	10
80	17NM1A0582	KOLLI LALITHA	7	8	9	6	10	10
81	17NM1A0583	KOLLI SOWJANYA	5	6	8	0	9	0
82	17NM1A0584	KOMANAPALLI SATYA PRIYA	6	6	8	5	10	9
83	17NM1A0585	K CHARISHMA CHOWDARY	5	5	6	0	9	8
84	17NM1A0586	KOMMINENI SRIVALLIKA	6	6	7	5	9	9
85	17NM1A0587	KONDA BASHEERA	5	6	5	5	9	8
86	17NM1A0588	KOSURI LAVANYA	6	8	7	5	10	9
87	17NM1A0589	KOVELA HEMA SRI	6	7	8	5	10	10
88	17NM1A0590	KUNCHALA VENNELA	6	7	6	5	10	10
89	17NM1A0591	KUNDRAPATI SRI LAKSHMI	5	6	7	5	10	9
90	17NM1A0592	KYCHARI SRI LAKSHMI	7	6	7	5	9	9
91	17NM1A0593	L TRIPATHI	6	6	7	5	9	8



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Vignans Institute of  
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K. J. Peta, VSEZ (P. O.)  
Visakhapatnam-531 024

92	17NM1A0594	LANKA SRUTHI	7	7	7	6	10	10
93	17NM1A0595	MADAKA SAIMOUNICA	7	6	6	6	10	10
94	17NM1A0596	MADDI ANNA PURNA	5	7	5	5	10	10
95	17NM1A0597	MADE RATNA SHIVANI	5	7	6	5	9	8
96	17NM1A0598	M VENKATA SAI PRAVALLIKA	5	6	6	0	10	10
97	17NM1A0599	MADIMI DEBORAH ZENIFER	5	6	6	5	9	8
98	17NM1A05A0	MANIKONDA RITHWIKAA	6	7	7	7	10	9
99	17NM1A05A1	MARADA SAI BHAVANA	6	6	7	5	10	9
100	17NM1A05A2	MEDISETTI JYOTHSNA	6	6	6	5	10	10
101	17NM1A05A3	MOJJADA UMA MAHESWARI	7	7	7	5	9	9
102	17NM1A05A5	MOLLETI SHAILAJA PREETHI	5	6	5	0	9	8
103	17NM1A05A6	M R LAKSHMI CHARANMAI	5	6	6	5	9	8
104	17NM1A05A7	NAGIREDDY SWARUPA	7	6	6	5	10	10
105	17NM1A05A8	NALLABATI ANUSHA	5	6	5	5	9	9
106	17NM1A05A9	NALLANA POOJITHA	6	7	7	5	10	9
107	17NM1A05B0	NAMBURI RAMADEVI	5	6	7	5	9	8
108	17NM1A05B1	N SAI SRAVANI KRISHNA	5	6	7	5	9	8
109	17NM1A05B2	NANDAVARAPU PADMA	7	7	7	5	9	9
110	17NM1A05B3	NANNAPANENI SAI SANDHYA	7	6	8	6	10	9
111	17NM1A05B4	NATTI POORNIMA	6	7	9	5	10	9
112	17NM1A05B5	NUKALA SRUTHI	5	6	8	5	9	8
113	17NM1A05B6	NUPUR DAS	6	7	8	6	10	10
114	17NM1A05B7	PADILAM GNANESWARI	6	7	9	5	9	9
115	17NM1A05B8	PALEM SUSHMA	7	7	9	6	9	9
116	17NM1A05B9	PALLI VASANTHI	6	7	8	5	10	10
117	17NM1A05C0	PAMULA GAYATHRI	7	7	8	5	9	9
118	17NM1A05C1	PAPPU SRI SAI KEERTHI	6	7	8	5	10	9
119	17NM1A05C2	PARICHARLA LAHARI	6	6	7	5	9	9
120	17NM1A05C3	PASALA ANUSHA	5	7	8	5	9	8
121	17NM1A05C4	PEDDADA JAYA CHANDRIKA	5	6	8	5	9	8
122	17NM1A05C5	PEETHALA RAMA LAKSHMI	7	8	8	6	10	10
123	17NM1A05C6	P VENKATA SATYA LIKHITHA	6	8	8	5	9	9
124	17NM1A05C7	P SRI JYOTHI MEGHANA	7	7	8	6	10	9
125	17NM1A05C8	PILLA MOUNIKA	5	7	6	5	10	9
126	17NM1A05C9	POLISETTI TEJA SAI SREE	6	7	6	5	10	9
127	17NM1A05D0	PONNADA BHAVYA	7	8	6	6	10	9
128	17NM1A05D1	POTHULA JAHNAVI	6	6	6	5	10	8
129	17NM1A05D2	PULIDINDI KRISHNA PRIYA	5	7	6	5	9	9
130	17NM1A05D3	PURETI LIKHITHA	6	8	6	5	10	10
131	17NM1A05D4	PUSAPATI REVATHI	6	7	6	6	10	9
132	17NM1A05D6	RAGOLU SADHANA	6	7	6	5	9	8
133	17NM1A05D7	RAMADALAI KEERTHI	6	9	6	5	10	10
134	17NM1A05D8	RAYAPUREDDY ANUSHA	6	7	6	6	9	8
135	17NM1A05D9	RAYUDU L V SRUJANA	7	8	6	6	10	10
136	17NM1A05E0	RONGALA BHARATHI JYOTHI	6	7	6	5	10	10
137	17NM1A05E1	RONGALI TANUJA	6	7	6	5	10	10
138	17NM1A05E2	RUDRA RAJU YAMINI VARMA	6	8	6	5	9	8
139	17NM1A05E3	SAI RAKSHITHA PULAGALA	6	9	6	6	10	9
140	17NM1A05E4	SANABOYINA SRI VARSHINI	6	7	7	5	10	8
141	17NM1A05E5	SANAM RUPA SRI	6	8	6	6	10	9
142	17NM1A05E6	SANAPATI BHARATHI YASRI	6	6	6	6	10	9
143	17NM1A05E7	SANAPATI BHARATHI YASRI	6	8	7	6	10	9

Principal  
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K.J. Peta, VSEZ (P.O.)  
Visakhapatnam-49



144	17NM1A05E8	SAPPA SANDHYA RANI	6	8	6	6	10	9
145	17NM1A05E9	SEEKARI RAMA DEVI	6	7	6	5	9	8
146	17NM1A05F0	SEERAMREDDI NAMRATHA	6	7	7	0	9	8
147	17NM1A05F1	SILAPARASETTY SUSHMA	6	8	7	6	10	10
148	17NM1A05F2	SINGAMPALLI RAMYA	5	7	6	0	9	8
149	17NM1A05F3	SINGAMPALLI SANDHYA RANI	7	8	8	6	10	9
150	17NM1A05F4	SINGAMPALLI YAMINI	5	6	7	5	9	8
151	17NM1A05F5	SIVALA DEEPIKA	6	8	7	6	10	9
152	17NM1A05F6	SIVARATRI UMA DEVI	6	8	7	5	9	9
153	17NM1A05F7	SONTI JAHANAVI	5	7	6	5	10	9
154	17NM1A05F8	SRISAILAPU SIREESHA	5	5	6	0	9	9
155	17NM1A05F9	SUNKARA VIJAYALAXMI	5	5	6	0	9	8
156	17NM1A05G0	SURADA HARITHA	6	6	7	5	9	10
157	17NM1A05G2	TADISETTI LEELA BHAVANI	5	8	6	5	10	10
158	17NM1A05G3	TALLURI MEGHANA	6	7	7	5	10	9
159	17NM1A05G4	T J N SURYAKUMARI	6	7	7	5	10	9
160	17NM1A05G5	TOKACHICHU POOJITHA	6	6	7	5	10	9
161	17NM1A05G6	VABBALISETTY KALPANA	5	6	5	5	9	
162	17NM1A05G7	VANTAKU KUSUMANJALI	7	6	6	6	9	8
163	17NM1A05G9	VASIREDDY SWAPNIKA	5	5	6	5	9	8
164	17NM1A05H0	VEDULA SHAANKARI	7	7	6	5	10	8
165	17NM1A05H1	V DEVI LAKSHMI RAJESWARI	6	6	6	6	10	9
166	17NM1A05H2	VETURU RAMYALAKSHMI	6	7	6	5	9	8
167	17NM1A05H3	V VIJAYA LAKSHMI	6	6	6	5	10	9
168	17NM1A05H4	VURUKUTI MOUNICA	6	7	6	5	10	10
169	17NM1A05H5	YELLETTI YAMINI	5	6	5	0	9	8
170	17NM1A05H6	Y D NAGA SAI BHANUSRI	6	6	6	5	10	9
171	17NM1A05H8	CHINTA MEGHANA	6	7	7	5	10	10
172	18NM5A0501	ALLAVARAPU HEMALATHA	6	6	7	7	9	8
173	18NM5A0502	BAILAPUDI YAMUNA KUMARI	6	6	7	6	10	9
174	18NM5A0503	KALLA PAVANI	6	6	7	6	10	9
175	18NM5A0504	KAMBALA HEMA	6	5	7	5	9	8
176	18NM5A0505	KARANAM POORNA	6	5	6	5	9	8
177	18NM5A0506	K UMA SAI SIRISHA	7	6	5	6	10	9
178	18NM5A0507	KUNDHI KIRANMAI	6	7	5	6	9	
179	18NM5A0508	KUNDRAPU PAVANI	6	7	7	5	9	8
180	18NM5A0509	MADAKA PADMAJA	6	7	5	5	10	9
181	18NM5A0511	NAGALA CHANDINI	7	7	0	6	10	10
182	18NM5A0512	N KOTI SIVA SAI PRIYANKA	6	7	7	5	9	8
183	18NM5A0513	NIDRABINGI KRISHNA VENI	7	7	6	5	9	8
184	18NM5A0514	PENAGANTI DEVI	6	5	6	5	10	9
185	18NM5A0515	POLAKI SWATHI	5	7	6	5	9	9
186	18NM5A0516	RAMIREDDI CHANDINI	6	7	7	6	10	10
187	18NM5A0517	SAMMINGI NIRMALA	7	7	5	5	9	8
188	18NM5A0518	SIYADRI NAGA LAXMI YAMINI	6	7	7	6	9	9
189	18NM5A0519	TEKKALI ROOPA SRAVANI	5	6	7	5	9	8
190	18NM5A0520	VASUPILLI HARINI	5	6	6	5	9	9
191	18NM5A0521	MAGAPU PRIYA MOUNIKA	6	7	5	5	10	9
192	16NM1A0580	NARIPALLI BALAMAHESWARI	7	8	5	5	9	9
193	17A61A0507	CHANDLA RENUKA DEVI	7	7	6	6	9	9
194	17NM1A0525	VUPPALA MANI	6	6	6	5	9	0



GRADE	%	POINTS	DS	MS	ML	CPP	SE MI NA R	PR OJ EC T
O	>=90	Outstanding (10 POINTS)	0	0	0	0	115	44
S	>=80 to <90	Excellent (9 POINTS)	0	3	4	0	79	86
A	>=70 to <80	Very Good (8 POINTS)	5	27	20	0	0	62
B	>=60 to <70	Good (7 POINTS)	57	75	57	6	0	0
C	>=50 to <60	Fair (6 POINTS)	90	75	82	65	0	0
D	>=40 to <50	Satisfactory (5 POINTS)	39	13	28	110	0	0
F	<40	FAIL	3	1	3	13	0	2
		ABSENTEES	0	0	0	0	0	0
TOTAL APPEARED			194	194	194	194	194	194
PASS			191	193	191	181	194	192
PASS %			98	99	98	93	100	99

3200  
**PRINCIPAL**  
 Vignan's Institute of  
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 K.J. Peta, VSEZ (P.O.)  
 Visakhapatnam-49



**VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN***Approved by AICTE, New Delhi, Affiliated to JNTU Kakinada*

Kapujaggarajupeta, VSEZ(Post), Visakhapatnam-530049, AP

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING****RESULT ANALYSIS AT THE END OF SEMESTER**

Course Name: <b>Concurrent and Parallel Programming</b>	Course Code: <b>C412</b>
Year/ Sem : <b>IV B TECH II SEM</b>	Regulation: <b>R16</b>
Academic year: <b>2019-20</b>	Admitted Batch: <b>2016</b>

S.No.	Roll No.	Name of the Student	DS	MS	ML	CPP	SEM	PROJ
1	16NM1A0501	Ahamed Unnisa	7	7	6	6	9	9
2	16NM1A0502	Aishwarya Gantayath	8	9	7	7	9	9
3	16NM1A0503	Ampolu Soundarya	9	8	7	7	9	9
4	16NM1A0504	Anantapalli Sai Vaishnavi	6	8	7	7	10	10
5	16NM1A0505	Ande Sowmya Sri	7	8	7	7	10	9
6	16NM1A0506	Anjali Sowgandhi Piridi	7	7	5	5	8	8
7	16NM1A0507	Appikonda Leelaveni	5	7	7	5	8	8
8	16NM1A0508	Appikonda Surya Sai Supriya	6	8	7	7	9	9
9	16NM1A0509	Asuri Sukanya	8	8	8	7	9	10
10	16NM1A0510	Atta Lavanya	7	7	7	6	8	8
11	16NM1A0511	Balaka Harika	0	6	6	6	10	9
12	16NM1A0512	Baliboyna Niharika	0	8	7	6	10	9
13	16NM1A0513	Balireddy Soniya Shyne	7	7	8	7	9	9
14	16NM1A0514	Bammidi Saritha	8	7	8	6	9	9
15	16NM1A0515	Bandaru Roshinidevi	6	7	6	6	8	9
16	16NM1A0516	Basheerunnisa Begum	5	8	5	5	8	8
17	16NM1A0517	Beela Yajnashireesha	6	7	6	6	9	8
18	16NM1A0518	Bera Mamala Sridevi	7	7	6	5	9	8
19	16NM1A0519	Bhairi Surya Teja	6	6	6	7	9	8
20	16NM1A0520	Bondhi Anjali	6	8	6	7	9	9
21	16NM1A0521	Bonugu Sushmitha	6	6	5	5	8	8
22	16NM1A0522	Borigi Bhanusree	9	9	7	6	9	9
23	16NM1A0523	Chakka Swapna	0	6	5	5	8	8
24	16NM1A0524	Chinta Sri Lalitha Navya Bharathi	8	8	7	8	9	9
25	16NM1A0525	Chintalapudi Deekshitha	7	8	8	7	9	9
26	16NM1A0526	Chittuluri Alekya	9	9	9	7	9	10
27	16NM1A0527	Chukka Ramya	9	6	7	6	10	10
28	16NM1A0528	Dadi Jyothsna	5	8	7	6	9	9
29	16NM1A0529	Damuluri Anusha	7	8	7	7	8	9
30	16NM1A0530	Dasari Vandana Sri	8	9	8	7	9	8
31	16NM1A0531	Devupalli Sirisha	7	7	7	7	9	8
32	16NM1A0533	Dunna Yamuna	8	7	6	6	9	8
33	16NM1A0534	Duvvada Vandana	8	8	7	8	9	9
34	16NM1A0535	Ejji Deepika	8	8	9	7	9	9
35	16NM1A0536	Gandi Nandana	5	0	0	7	0	0
36	16NM1A0537	G Krishna Kumar Sowmya	6	8	7	7	9	9
37	16NM1A0538	Gannu Rupa Santhi Sree	7	8	8	7	9	8

38	16NM1A0539	Ghattamaneni Praharsha	8	9	8	7	10	10
39	16NM1A0541	Gowripattapu Anusha	8	7	7	6	8	9
40	16NM1A0542	Gujjari Priyanka	6	8	7	8	9	9
41	16NM1A0543	Gunda Mounika	6	7	7	7	9	9
42	16NM1A0544	Gunisetty Naga Sai Lalitya	8	9	8	6	8	9
43	16NM1A0545	Guntrothu Devi	8	7	7	7	10	9
44	16NM1A0546	Gunturu Lakshmi Tulasi	6	8	7	8	9	9
45	16NM1A0547	Indala Bhagya Lakshmi	6	7	7	7	8	9
46	16NM1A0548	Jaggapu Swetha	7	8	8	6	9	9
47	16NM1A0549	Jaggina Divya	8	6	6	7	8	9
48	16NM1A0550	Jajula Poornima	6	8	6	7	10	10
49	16NM1A0551	Kakara Padmavathi	6	5	6	5	8	8
50	16NM1A0552	Kandregula Bhagya Sri	7	8	6	6	8	8
51	16NM1A0553	Kandula Sai Praneetha	6	6	5	6	9	9
52	16NM1A0554	Karanam Mary Prathyusha	0	8	6	8	9	9
53	16NM1A0555	Kaza Prathyusha	6	6	7	6	7	8
54	16NM1A0556	Kesanakurthi Chinni	7	9	7	6	8	8
55	16NM1A0557	Kodukula Amrutha Sarvani	8	7	7	7	9	9
56	16NM1A0558	Koduru Santoshi	7	8	7	7	10	9
57	16NM1A0559	Kolluru Sai Sadhana	7	7	7	5	8	8
58	16NM1A0560	Konathala Chaturya	8	7	6	6	9	9
59	16NM1A0561	Konathala Yogitha	8	7	7	8	8	9
60	16NM1A0562	Korubilli Sri Lakshmi Prasanna	6	8	8	8	10	9
61	16NM1A0563	Koyya Bhavana	8	7	8	5	9	9
62	16NM1A0564	Kulla Sai Siri Sowjanya	8	9	6	6	9	9
63	16NM1A0565	Kurella Navya Sree	6	7	6	6	9	10
64	16NM1A0566	Lagudu Anusha	7	8	7	7	10	10
65	16NM1A0567	Lankada Vineetha	7	7	7	7	9	10
66	16NM1A0568	Madala Amulya	7	8	6	6	9	10
67	16NM1A0569	Mallidi Sindhu	9	8	7	8	10	10
68	16NM1A0570	Manasa Sagori	0	7	7	7	6	8
69	16NM1A0571	Manga Venkata Satya Bhavani	6	6	5	5	8	9
70	16NM1A0572	Manne Geethasri	8	8	8	5	10	10
71	16NM1A0573	Matta Roshini	5	6	5	0	9	9
72	16NM1A0574	Mattaparathi Samyuktha	8	8	7	8	10	10
73	16NM1A0575	Medisetty Joshna	7	5	6	6	7	8
74	16NM1A0576	Mummina Pravalika	7	7	7	6	8	9
75	16NM1A0577	Munagapaka Sailaja	7	7	7	7	8	8
76	16NM1A0578	Musudi Poorna Jyothsna	6	8	6	6	9	9
77	16NM1A0579	Narava Bhagya Lakshmi	6	7	7	7	8	8
78	16NM1A0581	Neelapu Sriranjini	7	8	7	6	9	10
79	16NM1A0582	Nisha Mary Vincent	7	6	7	6	8	9
80	16NM1A0583	Palakurthi Anusha	6	6	6	5	9	9
81	16NM1A0584	Palavayi Jyothi Priya	6	6	5	6	8	9
82	16NM1A0585	Parapati Neela Veni	8	9	7	5	10	10
83	16NM1A0586	Pasem Harshitha	8	7	7	6	9	10
84	16NM1A0587	Patro Anjali	7	8	7	7	9	9
85	16NM1A0588	Peddela Vasudha	8	8	8	7	8	9
86	16NM1A0589	Pendala Veena Valli	7	9	8	7	10	10
87	16NM1A0590	Penmetsa Lavanya	6	7	7	5	9	9

3292

**PRINCIPAL**  
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Visakhapatnam-89

Principal's Institute of  
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88	16NM1A0591	Perumalla Manasa	7	8	7	7	9	10
89	16NM1A0592	Pilla Pooja	7	6	6	5	7	8
90	16NM1A0593	Pilla Praveena	7	9	9	6	9	9
91	16NM1A0594	Pola Manju	7	7	7	7	9	10
92	16NM1A0595	Polimera Guna Varshini	7	8	7	7	9	9
93	16NM1A0596	Polumahanti Sowmya	9	9	8	7	10	10
94	16NM1A0597	Potnuru Ankitha	6	8	8	6	9	9
95	16NM1A0598	Potnuru Anusha	5	7	6	6	9	9
96	16NM1A0599	Rajagiri Anu Radha	0	6	0	0	7	8
97	16NM1A05A0	Ravupalli Sai Priya	7	6	8	6	9	9
98	16NM1A05A1	Repaka Sravani Sandhya	6	7	5	6	9	10
99	16NM1A05A2	Sabbavarapu Suguna	5	5	0	6	8	9
100	16NM1A05A3	Sahukaru Snigtha	6	7	6	6	7	8
101	16NM1A05A4	Sakalabathula Jyothsna	7	7	7	6	9	9
102	16NM1A05A5	Sanapathi Kavitha	7	8	7	6	10	10
103	16NM1A05A7	Shabnam	6	7	7	6	9	9
104	16NM1A05A8	Shimi John	6	7	6	6	9	9
105	16NM1A05A9	Sravya S	7	7	8	7	9	10
106	16NM1A05B0	Surampudi Likhitha	7	8	8	5	8	9
107	16NM1A05B1	Thamira Pooja	6	6	6	6	7	8
108	16NM1A05B2	Totharamudi Sahithi	6	8	9	6	8	9
109	16NM1A05B3	Triveni Possarla	8	6	7	7	8	8
110	16NM1A05B4	Tummapala Jaya	8	9	9	8	10	10
111	16NM1A05B5	Tumpala Kusuma Sarika	9	7	6	8	10	10
112	16NM1A05B6	Uppati Gowrivenkatasaideepika	5	6	5	0	7	8
113	16NM1A05B7	Vanamoju Prathyusha	8	8	7	6	9	10
114	16NM1A05B8	Vegi Kavya Kanaka Mahalakshmi	8	9	7	6	10	10
115	16NM1A05B9	Velaga Joshna Kalyani	6	6	7	6	8	9
116	16NM1A05C0	Velaga Pratyusha	7	8	8	9	10	10
117	16NM1A05C1	Vurukuti Keerthi	7	6	7	6	9	10
118	16NM1A05C2	Yanamadala Prasanna Lakshmi	9	9	8	7	10	10
119	16NM1A05C3	Yegi Sriya	6	6	6	7	8	9
120	16NM1A05C4	Yellapu Manmita Sravya	6	7	7	7	10	10
121	16NM1A05C5	Yelleti Haritha	7	5	7	6	8	9
122	16NM1A05C6	Yerramsetty Vasantha	7	9	7	6	8	8
123	16NM1A05C7	A Deepika Ratnanjali Devi	7	7	6	8	9	9
124	16NM1A05C8	Adapa Anusha	6	7	6	5	9	9
125	16NM1A05C9	Adari Vindya Sree	7	7	6	6	9	9
126	16NM1A05D0	B Hyndavi	7	7	8	6	9	9
127	16NM1A05D1	B Shivani	6	7	6	6	9	9
128	16NM1A05D2	Bagi Sai Keerthi	5	6	6	6	7	8
129	16NM1A05D3	Bhavya Sri Vankadara	0	5	5	0	10	9
130	16NM1A05D4	Bitra Sai Sowmya	8	7	8	7	9	10
131	16NM1A05D5	Bodda Jhansi Lakshmi	6	8	7	7	10	10
132	16NM1A05D6	Borra V S S Madhuri	0	7	5	5	9	9
133	16NM1A05D7	Buddha NihariKa	6	5	6	6	9	9
134	16NM1A05D8	Chekuri Divya Sri	6	7	6	6	9	9
135	16NM1A05D9	Chekuri Venkata	6	7	7	7	8	9
136	16NM1A05E0	Chintalapati Sai	6	5	7	6	7	8



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P-12, VSEZ (P.O.)  
Madhavaram-49

137	16NM1A05E1	Damarasing Santhosh Haritha	7	6	8	7	8	9
138	16NM1A05E2	Devara Vandana	7	8	6	6	9	8
139	16NM1A05E3	Dharmala Jhansi Reddy	7	7	8	7	8	9
140	16NM1A05E4	Doki Meghana	0	6	0	6	9	9
141	16NM1A05E5	Gajjela Nithisha	6	6	7	5	9	8
142	16NM1A05E6	Galla Hyndavi	6	7	7	6	9	9
143	16NM1A05E7	Galla Mounika	7	7	8	6	7	8
144	16NM1A05E8	Gangupam Prashipta	0	6	5	5	9	9
145	16NM1A05E9	Guntureddy Kusuma	6	8	6	5	9	9
146	16NM1A05F0	Gunuru Devaharshini	8	9	8	5	9	9
147	16NM1A05F1	Guruvu Yasaswani	5	6	6	5	9	8
148	16NM1A05F2	Jangareddy Deekshita	6	7	6	6	8	9
149	16NM1A05F3	K Lahari	7	7	7	5	9	9
150	16NM1A05F4	K Monika	0	5	5	5	8	8
151	16NM1A05F5	Kalla Raga Deepika	5	6	6	5	8	8
152	16NM1A05F6	Kasamsetty Kavya Sree	6	7	8	7	10	9
153	16NM1A05F7	Kasu Anjali	7	7	7	5	9	9
154	16NM1A05F8	Keerthi Hima Bindu	7	7	7	5	8	9
155	16NM1A05F9	Kirthi Chowdhary Chekuri	5	5	5	0	9	8
156	16NM1A05G0	Kodali Sri Harsha	6	8	7	7	9	9
157	16NM1A05G1	Kommoju Katyayani	5	6	5	5	8	8
158	16NM1A05G2	Kukra Usha	8	9	8	0	9	10
159	16NM1A05G3	Kunisetty Divya Sri	6	6	8	6	9	9
160	16NM1A05G4	Kusumanchi Vijayalakshmi	5	6	6	7	10	9
161	16NM1A05G5	Mandava Nikitha	7	6	6	5	9	9
162	16NM1A05G6	M Naga Santosha Roopa Sri	7	8	7	6	8	9
163	16NM1A05G7	Muntha Keerthi	6	7	6	5	8	9
164	16NM1A05G8	P Tanmay	5	9	8	7	7	8
165	16NM1A05G9	Pilla Harshika	7	7	6	6	8	9
166	16NM1A05H0	Pothina Bhargavi	6	7	6	5	10	9
167	16NM1A05H1	R Lochana Sai Mamba	6	6	7	6	10	10
168	16NM1A05H2	Salapu Divya	6	8	7	6	8	8
169	16NM1A05H3	Sathvika Ranguri	7	7	7	6	9	9
170	16NM1A05H4	Shaik Jasmine	0	0	5	0	8	9
171	16NM1A05H6	Tamarana Nishitha	0	6	6	6	9	8
172	16NM1A05H7	Tirumala Akanksha Manne	6	8	6	6	8	9
173	16NM1A05H8	Valleti Harshini Chowdary	7	7	7	7	8	8
174	16NM1A05H9	Vennala Satya Priyanka	6	8	5	6	9	9
175	17NM5A0501	A Rajeswari Laxmi	5	6	5	5	10	9
176	17NM5A0502	Bellala Siva Sai Naga Lalitha	6	8	8	7	8	8
177	17NM5A0503	Dharmala Vasantha	6	8	6	7	8	8
178	17NM5A0504	Galla Sailaja	8	9	8	7	8	8
179	17NM5A0505	Ganagalla Anusha	7	7	8	6	9	8
180	17NM5A0506	Geddam Durga Bhavani	8	7	6	6	8	8
181	17NM5A0507	Majji Kasturi	8	8	6	7	7	8
182	17NM5A0508	Pedapati Bala Rama Jyothi	8	9	8	6	8	9
183	17NM5A0510	Savalapu Girija	0	7	7	7	10	8
184	17NM5A0511	Surada Rajeswari	0	8	7	7	9	8
185	17NM5A0512	Ummidi Indhira	7	6	7	6	8	8
186	17NM5A0513	Vindula Manichandana	8	8	8	7	9	9





187	17NM5A0514	Vobbina Vani Venkata Saieswari	6	7	7	7	8	9
188	15NM1A05A7	Sri Pooja Tummala	6	6	6	6	10	10
189	14NM1A05D8	Kesuboyina Srilekhya	0	6	6	6	10	10

Grade	%	POINTS	DS	MS	ML	CPP	SEMINAR	PROJECT
O	>=90	Outstanding (10 POINTS)	0	0	0	0	34	37
S	>=80 to <90	Excellent(9 POINTS)	8	21	5	1	86	99
A	>=70 to <80	Very Good(8 POINTS)	34	55	37	11	55	52
B	>=60 to <70	Good(7 POINTS)	56	63	74	61	13	0
C	>=50 to <60	Fair(6 POINTS)	58	40	50	74	1	0
D	>=40 to <50	Satisfactory (5 POINTS)	16	9	19	34	0	0
F	<40	FAIL	17	1	4	8	0	1
ABSENTEES (####)			0	0	0	0	0	0
TOTAL APPEARED			189	189	189	189	189	189
PASS			172	188	185	181	189	188
PASS %			91	99	98	96	100	99

320

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Visakhapatnam-49





**VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN**

Approved by AICTE, New Delhi. Affiliated to JNTU Kakinada

Kapujiagaraju Peta, VSEZ(Post), Gajuwaka, Visakhapatnam-530049,AP

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

Course Name: CPP	Course Code: C412	Admitted Batch: 2018-22
Year/ Sem : IV B TECH II SEM	Regulation: R16	Academic Year: 2021-22
Course Coordinator : Mrs.Sk.Rahimunnisa		

S.No	Reg. No.	INTERNAL												UNIVERSITY									
		MID 1						MID 2															
		Descriptive			Assignment			Quiz 1			Descriptive				Assignment			Quiz 2					
Q1 (CO1)	Q2 (CO2)	Q3 (CO3)	A1 (CO1)	A2 (CO2)	A3 (CO3)	Q1 (CO1)	Q2 (CO2)	Q3 (CO3)	Q1 (CO4)	Q2 (CO5)	Q3 (CO6)	A4 (CO4)	A5 (CO5)	A6 (CO6)	Q1 (CO4)	Q2 (CO5)	Q3 (CO6)	A4 (CO4)	A5 (CO5)	A6 (CO6)	Total (CO4: CO6)	University end exam (CO1:CO6)	
1	18NM1A0501	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	30 M	70M
2	18NM1A0502	5	4	5	5	5	5	5	4	4	4	5	5	5	5	4	4	5	5	5	5	23	55
3	18NM1A0503	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	23	55
4	18NM1A0504	5	5	5	5	5	5	5	2	4	4	5	5	5	5	2	4	5	5	5	5	19	68
5	18NM1A0505	5	5	5	5	5	5	5	4	4	4	5	5	5	5	4	5	5	5	5	5	24	56
6	18NM1A0506	5	5	5	5	5	5	5	4	4	3	5	5	5	5	4	3	3	5	5	5	18	47
7	18NM1A0507	5	5	5	5	5	5	5	3	4	4	5	5	5	5	2	4	4	5	5	5	20	57
8	18NM1A0508	5	4	5	5	5	5	5	4	5	4	5	5	5	5	4	4	5	5	5	5	23	57
9	18NM1A0509	5	4	5	5	5	5	5	4	5	3	5	5	5	5	2	5	5	5	5	5	20	47
10	18NM1A0510	5	5	5	5	5	5	5	5	5	4	5	5	5	5	4	5	5	5	5	5	25	55
11	18NM1A0511	5	4	5	5	5	5	5	4	5	3	5	5	5	5	2	4	5	5	5	5	19	47
12	18NM1A0512	5	5	5	5	5	5	5	5	5	5	5	5	5	5	6	4	5	5	5	5	23	55
13	18NM1A0513	5	5	5	5	5	5	5	5	5	3	5	5	5	5	4	5	5	5	5	5	22	55
14	18NM1A0514	4	5	5	5	5	5	5	1	3	4	5	5	5	5	3	4	5	5	5	5	19	40
15	18NM1A0515	5	5	5	5	5	5	5	6	3	4	5	5	5	5	6	4	5	5	5	5	23	54
16	18NM1A0516	5	3	3	5	5	5	5	3	5	4	5	5	5	5	2	3	5	5	5	5	19	51
17	18NM1A0517	4	4	3	5	5	5	5	4	5	5	5	5	5	5	5	5	5	5	5	5	5	43
18	18NM1A0518	5	4	5	5	5	5	5	5	5	3	5	5	5	5	5	5	5	5	5	5	23	56
19	18NM1A0519	5	5	5	5	5	5	5	5	5	3	5	5	5	5	7	5	5	5	5	5	25	55
20	18NM1A0520	5	5	5	5	5	5	5	5	5	4	5	5	5	5	2	5	5	5	5	5	21	75
21	18NM1A0521	5	5	5	5	5	5	5	6	5	4	5	5	5	5	4	5	5	5	5	5	22	55
22	18NM1A0522	5	3	5	5	5	5	5	5	5	4	4	5	5	5	4	4	5	5	5	5	23	55
23	18NM1A0523	5	5	5	5	5	5	5	3	5	4	5	5	5	5	5	4	5	5	5	5	23	55
24	18NM1A0524	5	5	5	5	5	5	5	5	5	3	4	5	5	5	4	4	5	5	5	5	25	65
25	18NM1A0525	5	5	5	5	5	5	5	5	5	4	2	5	5	5	3	4	2	5	5	5	5	37

*(Handwritten Signature)*  
**PRINCIPAL**  
 Vignan's Institute for Women  
 Engineering for Women  
 Peta, VSEZ (P.O.),  
 Visakhapatnam-49



26	18NMI A0526	5	2	3	5	5	5	5	5	1	16	5	3	3	5	5	5	3	19	61
27	18NMI A0527	5	3	5	5	5	5	5	5	3	21	5	4	3	5	5	5	4	21	49
28	18NMI A0528	5	4	5	5	5	5	5	5	6	25	5		5	5	5	5	3	18	66
29	18NMI A0529	5	5	5	5	5	5	5	5	3	23	5	4	5	5	5	5	4	23	57
30	18NMI A0530	5	4	3	5	5	5	5	5	6	23	5	4	5	5	5	5	4	23	47
31	18NMI A0531	5	5	5	5	5	5	5	5	4	24	5	4	4	5	5	5	4	22	56
32	18NMI A0532	5	5	5	5	5	5	5	5	5	25	5	4	5	5	5	5	4	23	55
33	18NMI A0533	5	5	5	5	5	5	5	5	5	25	5	4	5	5	5	5	4	23	45
34	18NMI A0534	5	3	3	5	5	5	5	5	2	18	5	3	3	5	5	5	2	18	42
35	18NMI A0535	5	3	5	5	5	5	5	5	3	21	5	5	5	5	5	5	5	25	55
36	18NMI A0536	4	4	4	5	5	5	5	5	5	22	5	4	5	5	5	5	6	25	55
37	18NMI A0537	5	5	5	5	5	5	5	5	4	24	5	3	5	5	5	5	5	23	46
38	18NMI A0538	5	5	3	5	5	5	5	5	2	20	5	3	4	5	5	5	3	20	50
39	18NMI A0539	5	5	5	5	5	5	5	5	7	27	4	5	5	5	5	5	5	24	63
40	18NMI A0540	5	5	5	5	5	5	5	5	4	24	5		5	5	5	5	3	18	47
41	18NMI A0541	5	5	5	5	5	5	5	5	6	26	5		5	5	5	5	4	19	35
42	18NMI A0542	5	4	5	5	5	5	5	5	3	22	5	4	4	5	5	5	5	23	47
43	18NMI A0543	4	4	5	5	5	5	5	5	3	21	5	3	3	5	5	5	2	18	59
44	18NMI A0544	5	5	5	5	5	5	5	5	4	24	5	4	5	5	5	5	3	22	56
45	18NMI A0545	5	5	5	5	5	5	5	5	4	24	5	3	3	5	5	5	3	19	47
46	18NMI A0546	5	5	5	5	5	5	5	5	4	24	5	4	5	5	5	5	4	23	56
47	18NMI A0547	3	5	5	5	5	5	5	5	5	23	5	2	2	5	5	5	2	16	48
48	18NMI A0548	5	4	5	5	5	5	5	5	5	24	5	4	5	5	5	5	6	25	75
49	18NMI A0549	5	4	5	5	5	5	5	5	4	23	5		5	5	5	5	4	19	37
50	18NMI A0550	5	5	3	5	5	5	5	5	3	21	5	4	5	5	5	5	4	23	57
51	18NMI A0551				5	5	5	5	5		5	5	4	5	5	5	5	6	25	49
52	18NMI A0552	5	5	5	5	5	5	5	5	4	24	5	4	4	5	5	5	3	21	56
53	18NMI A0553	5	5	5	5	5	5	5	5	6	26	5	4		5	5	5	4	18	35
54	18NMI A0554	4	5	5	5	5	5	5	5	3	22				5	5	5		5	61
55	18NMI A0555	5	4	5	5	5	5	5	5	2	21	5	5	4	5	5	5	3	22	58
56	18NMI A0556	4	5	5	5	5	5	5	5	2	21		5	4	5	5	5	3	17	69
57	18NMI A0557	5	5	5	5	5	5	5	5	5	25	5	4	4	5	5	5	5	23	45
58	18NMI A0558	5	5	3	5	5	5	5	5	4	22	5	3	5	5	5	5	3	21	58
59	18NMI A0559	5	5	5	5	5	5	5	5	5	25	5	5	5	5	5	5	5	25	55
60	18NMI A0560	5	2	5	5	5	5	5	5	5	22				5	5	5	5	25	71
61	18B41A0501	5	5	5	5	5	5	5	5	5	25	5	3	5	5	5	5	5	20	46
62	18NMI A0561	5	5	5	5	5	5	5	5	6	26	5	5	5	5	5	5	5	25	54
63	18NMI A0562	5	5	5	5	5	5	5	5	5	25	5	4	3	5	5	5	5	27	55
64	18NMI A0563	5	5	5	5	5	5	5	5	5	25	5	4	5	5	5	5	5	24	35
65	18NMI A0564	1	1	2	5	5	5	5	5	4	13	4	1	2	5	5	5	5	16	14

PRINCIPAL  
Vignans Institute of  
Engineering for Women  
K.J. Peta, VSEZ (P.O.),  
Visakhapatnam-49



66	18NMI/A0565	0	4	2.5	5	5	5	5	5	4	16	5				5	5	5	3	13	65
67	18NMI/A0566				5	5	5	5	5	3	5	5	3	5	5	5	5	5	5	23	60
68	18NMI/A0567	3.5	3	2	5	5	5	5	5	4	18	5	5	4	5	5	5	2	21	59	
69	18NMI/A0568	5	5	5	5	5	5	5	5	5	25					5	5	5	5	59	
70	18NMI/A0569	5	5	5	5	5	5	5	5	6	26	5	5	3	5	5	5	6	24	54	
71	18NMI/A0570	1	5	5	5	5	5	5	5	6	22	5	5	1	5	5	5	5	21	58	
72	18NMI/A0571	4	5	5	5	5	5	5	5	3	22	5	5	5	5	5	4	24	36	61	
73	18NMI/A0572	3	3	5	5	5	5	5	5	3	19	4	2	2	5	5	3	16	19	49	
74	18NMI/A0573	5	1	5	5	5	5	5	5	5	21	5	3	3	5	5	3	19	18	64	
75	18NMI/A0574				5	5	5	5	5	5	5	5	2	3	5	5	3	18	45	54	
76	18NMI/A0575	5	5	5	5	5	5	5	5	5	25	5	4	3	5	5	6	23	45	65	
77	18NMI/A0576	3	2	3	5	5	5	5	5	3	16	5		1	5	5	4	15	22	33	
78	18NMI/A0577	5	5	5	5	5	5	5	5	5	25	4	5	2	5	5	6	22	65	64	
79	18NMI/A0578	5	5	5	5	5	5	5	5	7	27	5	5	5	5	5	4	24	57	53	
80	18NMI/A0579	3	1	4	5	5	5	5	5	3	16	4		0.5	5	5	3	13	17	63	
81	18NMI/A0580	5	4	5	5	5	5	5	5	4	23	5	3	5	5	5	3	21	55	60	
82	18NMI/A0581	5	2	3	5	5	5	5	5	3	18				5	5	4	9	44	46	
83	18NMI/A0582	3	3	3	5	5	5	5	5	2	16	5		1	5	5	3	14	44	35	
84	18NMI/A0583	4	4	5	5	5	5	5	5	6	24	5	4	5	5	5	5	24	50	63	
85	18NMI/A0584	1	1	3	5	5	5	5	5	4	14	4	4	5	5	5	3	21	39	55	
86	18NMI/A0585	5	5	5	5	5	5	5	5	5	25	5	5	5	5	5	3	23	55	60	
87	18NMI/A0586	1	1	3	5	5	5	5	5	3	13	4	3	2	5	5	3	17	46	56	
88	18NMI/A0587	5	5	5	5	5	5	5	5	5	25				5	5	5	5	59	46	
89	18NMI/A0588				5	5	5	5	5	5	5	4		5	5	5	1	13	59	49	
90	18NMI/A0589	5	3	5	5	5	5	5	5	5	23				5	5	5	5	66	48	
91	18NMI/A0590	5	5	5	5	5	5	5	5	4	24	5	5	5	5	5	2	22	40	47	
92	18NMI/A0591	5	5	5	5	5	5	5	5	4	24	5	5	4	5	5	4	23	49	63	
93	18NMI/A0592	3	5	5	5	5	5	5	5	4	22	5	3	1	5	5	1	15	59	46	
94	18NMI/A0593	5	5	5	5	5	5	5	5	4	24	4	5	5	5	5	3	22	59	49	
95	18NMI/A0594	5	5	5	5	5	5	5	5	2	22	4		3	5	5	1	13	66	48	
96	18NMI/A0595	5	5	5	5	5	5	5	5	5	25				5	5	5	5	40	47	
97	18NMI/A0596	5	5	4	5	5	5	5	5	3	22	5	5	4	5	5	5	24	49	63	
98	18NMI/A0597	5	5	5	5	5	5	5	5	2		3	5	4	5	5	3	20	40	47	
99	18NMI/A0598	3	5	5	5	5	5	5	5	2	7	5	2	3	5	5	2	17	40	47	
100	18NMI/A0599	3.5	4	5	5	5	5	5	5	6	24	3	2	4	5	5	6	20	49	63	
101	18NMI/A05A0	3	5	5	5	5	5	5	5	4	22	5			5	5	5	5	49	63	
102	18NMI/A05A1	5	3	3	5	5	5	5	5	4	20	4	4	5	5	5	5	5	58	68	
103	18NMI/A05A2	5	5	5	5	5	5	5	5	7	27	5	5	5	5	5	5	5	58	68	
104	18NMI/A05A3	5	5	5	5	5	5	5	5	5	20	5	4	5	5	5	5	5	58	68	
105	18NMI/A05A4	5	5	5	5	5	5	5	5	5	25	5	5	5	5	5	5	5	25	65	60

PRINCIPAL  
 Women's Institute for Women  
 Engineering, VSEZ (P.O.),  
 Peta, Visakhapatnam-49



106	18NMI A05A5	2	0	5	5	5	5	5	3	15	5	1	3	5	5	5	1	15	65
107	18NMI A05A6	5	5	5	5	5	5	5	5	25	5	4	5	5	5	5	2	21	35
108	18NMI A05A7	5	4	5	5	5	5	5	4	23	4	2	5	5	5	5	5	21	77
109	18NMI A05A8	5	5	5	5	5	5	5	6	26	5	5	5	5	5	5	4	24	24
110	18NMI A05A9	3	2	2	5	5	5	5	5	17	4	3		5	5	3	3	15	63
111	18NMI A05B0	5	4	5	5	5	5	5	5	24	5	5	5	5	5	5	5	25	55
112	18NMI A05B1	5	5	5	5	5	5	5	5	25	5	5	3	5	5	4	4	22	5
113	18NMI A05B2	3	3	3	5	5	5	5	4	18	5	3	3	5	5	3	3	19	41
114	18NMI A05B3	4	4	5	5	5	5	5	4	22	4	2	0.5	5	5	3	3	15	49
115	18NMI A05B4	4	4	5	5	5	5	5	5	23	5	3	3	5	5	6	22	47	
116	18NMI A05B5	5	5	5	5	5	5	5	6	26	5	5	5	5	5	2	22	54	
117	18NMI A05B6	5	3	4	5	5	5	5	4	21	5	5	5	5	5	4	24	36	
118	18NMI A05B7	1	4	5	5	5	5	5	4	19	5	0.5	2	5	5	6	19	61	
119	18NMI A05B8	3	2	4	5	5	5	5	4	18	3	1		5	5	2	11	63	
120	19NM5A0501	5	4	5	5	5	5	5	5	24	3	5	1	5	5	4	18	57	
121	19NM5A0502	5	4	5	5	5	5	5	3	22	5	5	3	5	5	3	21	48	
122	19NM5A0503	4	4	5	5	5	5	5	4	22	5	5	3	5	5	0	18	58	
123	19NM5A0504	5	5	5	5	5	5	5	4	24	5	5	5	5	5	4	24	36	
124	19NM5A0505	5	4	5	5	5	5	5	4	23	5	5	2	5	5	2	19	47	
125	19NM5A0506	3	5	5	5	5	5	5	6	24	5	2	3	5	5	4	19	47	
126	19NM5A0507	1	4	5	5	5	5	5	4	19	5	2	2	5	5	3	17	61	
127	18NMI A05B9	4	5	5	5	5	5	5	2	21	5	5	5	5	5	7	27	54	
128	18NMI A05C0	5	5	5	5	5	5	5	6	26	5	5	5	5	5	4	24	34	
129	18NMI A05C1	5	5	5	5	5	5	5	5	25	5	5	5	5	5	3	23	25	
130	18NMI A05C2	5	5	5	5	5	5	5	4	24	5	5	5	5	5	6	26	54	
131	18NMI A05C3	5	5	5	5	5	5	5	7	27	5	5	5	5	5	6	26	23	
132	18NMI A05C4	4	5	5	5	5	5	5	5	24	5	5	5	5	5	5	25	45	
133	18NMI A05C5	5	5	5	5	5	5	5	2	22	5	4	5	5	5	4	23	37	
134	18NMI A05C6	5	5	5	5	5	5	5	1	21	3	5	5	5	5	4	22	48	
135	18NMI A05C7	4	4	5	5	5	5	5	2	20	5	5	3	5	5	2	20	40	
136	18NMI A05C8	4	5	5	5	5	5	5	3	22	4	4	4	5	5	4	21	48	
137	18NMI A05C9	3	4	5	5	5	5	5	1	18	5	3	2	5	5	3	18	62	
138	18NMI A05D0	4	3	5	5	5	5	5	4	21	4		5	5	5	3	17	59	
139	18NMI A05D1	5	5	5	5	5	5	5		20	5	4	4	5	5	5	18	40	
140	18NMI A05D2	4	3	5	5	5	5	5	3	20				5	5	5	5	5	5
141	18NMI A05D3	4	3	5	5	5	5	5	2	19	5	5		5	5	3	18	5	5
142	18NMI A05D4	4	4	5	5	5	5	5	3	21				5	5		5	5	5
143	18NMI A05D5	5	5	5	5	5	5	5	6	26	5	4	5	5	5	4	23	5	5
144	18NMI A05D6									5	5	5	5	5	5	4	24	5	5
145	18NMI A05D7	5	5	5	5	5	5	5	7	27	5	4	5	5	5	5	24	5	5





186	19NM5A0514	3	5	5	5	5	5	5	5	23	5	1	5	5	5	3	14	48			
187	19NM5A0515	5	5	5	5	5	5	5	5	25	5	5	4	5	5	3	22	55			
188	19NM5A0516	5	5	5	5	5	5	5	2	22				5	5		5	61			
189	19NM5A0517	5	5	5	5	5	5	5	5	25				5	5		5	59			
190	19NM5A0518	4	4	5	5	5	5	5	6	24	5	5	4	5	5	3	22	36			
191	18NM5A0510	5	5	5	5	5	5	5		20	5	5	5	5	5	4	24	66			
192	17NM1A05C8	5	4	5	5	5	5	5	5	24	5	4	5	5	5	3	22	56			
<b>Class Average Marks of MID 1</b>										<b>18.00</b>	<b>Class Average Marks of MID 2</b>										<b>18.00</b>
<b>Target</b>										<b>60%</b>	<b>Target</b>										<b>60%</b>
<b>University end average marks is</b>																			<b>35.00</b>		

Knowledge Levels MID 1					
U	A	P	U	A	P
CO1	CO2	CO3	CO1	CO2	CO3

Knowledge Levels MID II					
P	P	P	P	P	P
CO1	CO2	GO3	CO1	CO2	CO3



  
 PRINCIPAL  
 Vignans Institute of  
 Engineering for Women  
 Visakhapatnam-49

S.No	Regd.No.	INTERNAL												EXTERNAL	
		MID 1						MID 2						University end exam CO1:CO6	
		CO1	CO2	CO3	CO4	CO5	CO6	CO1	CO2	CO3	CO4	CO5	CO6		
1	18NM1A0501	8.3	8.33	8.33	8.0	7.00	8.00	10M	10M	10M	8.0	7.00	8.00	70M	55
2	18NM1A0502	8.0	7.00	8.00	6.7	6.67	7.67	10M	10M	10M	6.7	6.67	7.67	47	47
3	18NM1A0503	8.3	8.33	8.33	8.0	7.00	8.00	10M	10M	10M	8.0	7.00	8.00	55	55
4	18NM1A0504	7.3	7.33	7.33	6.3	6.33	6.33	10M	10M	10M	6.3	6.33	6.33	68	68
5	18NM1A0505	8.0	8.00	8.00	8.3	7.33	8.33	10M	10M	10M	8.3	7.33	8.33	56	56
6	18NM1A0506	8.0	8.00	8.00	6.7	5.67	5.67	10M	10M	10M	6.7	5.67	5.67	47	47
7	18NM1A0507	7.7	7.67	7.67	7.3	6.33	6.33	10M	10M	10M	7.3	6.33	6.33	57	57
8	18NM1A0508	8.0	7.00	8.00	8.0	8.00	7.00	10M	10M	10M	8.0	8.00	7.00	57	57
9	18NM1A0509	8.0	7.00	8.00	7.3	5.33	7.33	10M	10M	10M	7.3	5.33	7.33	47	47
10	18NM1A0510	8.3	8.33	8.33	8.0	8.00	9.00	10M	10M	10M	8.0	8.00	9.00	55	55
11	18NM1A0511	8.0	7.00	8.00	6.3	5.33	7.33	10M	10M	10M	6.3	5.33	7.33	47	47
12	18NM1A0512	8.3	8.33	8.33	8.7	6.67	7.67	10M	10M	10M	8.7	6.67	7.67	55	55
13	18NM1A0513	8.3	8.33	8.33	8.0	6.00	8.00	10M	10M	10M	8.0	6.00	8.00	55	55
14	18NM1A0514	6.0	7.00	7.00	6.7	5.67	6.67	10M	10M	10M	6.7	5.67	6.67	40	40
15	18NM1A0515	8.7	8.67	8.67	8.7	6.67	7.67	10M	10M	10M	8.7	6.67	7.67	54	54
16	18NM1A0516	7.7	5.67	5.67	7.3	6.33	5.33	10M	10M	10M	7.3	6.33	5.33	51	51
17	18NM1A0517	7.0	7.00	6.00	1.7	1.67	1.67	10M	10M	10M	1.7	1.67	1.67	43	43
18	18NM1A0518	8.3	7.33	8.33	8.3	6.33	8.33	10M	10M	10M	8.3	6.33	8.33	56	56
19	18NM1A0519	8.3	8.33	8.33	9.0	7.00	9.00	10M	10M	10M	9.0	7.00	9.00	55	55
20	18NM1A0520	8.3	8.33	8.33	7.3	6.33	7.33	10M	10M	10M	7.3	6.33	7.33	75	75
21	18NM1A0521	8.7	8.67	8.67	8.0	7.00	8.00	10M	10M	10M	8.0	7.00	8.00	54	54
22	18NM1A0522	8.3	6.33	8.33	8.0	7.00	7.00	10M	10M	10M	8.0	7.00	7.00	47	47
23	18NM1A0523	7.7	7.67	7.67	7.3	6.33	7.33	10M	10M	10M	7.3	6.33	7.33	57	57
24	18NM1A0524	8.3	8.33	8.33	8.0	6.00	7.00	10M	10M	10M	8.0	6.00	7.00	65	65
25	18NM1A0525	1.7	1.67	1.67	7.7	6.67	4.67	10M	10M	10M	7.7	6.67	4.67	33	33
26	18NM1A0526	7.0	4.00	5.00	7.7	5.67	5.67	10M	10M	10M	7.7	5.67	5.67	61	61
27	18NM1A0527	7.7	5.67	7.67	8.0	7.00	6.00	10M	10M	10M	8.0	7.00	6.00	49	49
28	18NM1A0528	8.7	7.67	8.67	7.7	2.67	7.67	10M	10M	10M	7.7	2.67	7.67	66	66
29	18NM1A0529	7.7	7.67	7.67	8.0	7.00	8.00	10M	10M	10M	8.0	7.00	8.00	57	57
30	18NM1A0530	8.7	7.67	6.67	8.0	7.00	8.00	10M	10M	10M	8.0	7.00	8.00	47	47
31	18NM1A0531	8.0	8.00	8.00	8.0	7.00	7.00	10M	10M	10M	8.0	7.00	7.00	56	56
32	18NM1A0532	8.3	8.33	8.33	8.0	7.00	8.00	10M	10M	10M	8.0	7.00	8.00	55	55
33	18NM1A0533	8.3	8.33	8.33	8.0	7.00	8.00	10M	10M	10M	8.0	7.00	8.00	45	45

Bench Mark	Target Students	Target level
If 60 % students got more than Target	115.2	1
If 70 % students got more than Target	134.4	2
If 80 % students got more than Target	153.6	3

Class Average Marks of MID 2	18
Target is	0.6
Attained for COs	Students attained
Students attained CO1	168
Students attained CO2	160
Students attained CO3	172

Class Average Marks of MID 2	18
Target is	0.6
Attained for COs	Students attained
Students attained CO1	170
Students attained CO2	125
Students attained CO3	130

University Exam Assessment	70
Target is	0.4
Target Mark	28
No of students attended	192
No. of students attained	184
Students above the Target	Target Students
University Exam	184

Indirect Assessment - Average for CO's

CO1	CO2	CO3	CO4	CO5	CO6
2.61458	2.72917	2.56011	2.71875	2.34375	2.557291667



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72	18NM1A0571	6.7	7.67	7.67	8.0	8.00	8.00	36
73	18NM1A0572	5.7	5.67	7.67	6.7	4.67	4.67	61
74	18NM1A0573	8.3	4.33	8.33	7.7	5.67	5.67	49
75	18NM1A0574	1.7	1.67	1.67	7.7	4.67	5.67	64
76	18NM1A0575	8.3	8.33	8.33	8.7	7.67	6.67	45
77	18NM1A0576	5.7	4.67	5.67	8.0	3.00	4.00	54
78	18NM1A0577	8.3	8.33	8.33	7.7	8.67	5.67	65
79	18NM1A0578	9.0	9.00	9.00	8.0	8.00	8.00	33
80	18NM1A0579	5.7	3.67	6.67	6.7	2.67	3.17	64
81	18NM1A0580	8.0	7.00	8.00	7.7	5.67	7.67	57
82	18NM1A0581	7.7	4.67	5.67	3.0	3.00	3.00	53
83	18NM1A0582	5.3	5.33	5.33	7.7	2.67	3.67	44
84	18NM1A0583	7.7	7.67	8.67	8.3	7.33	8.33	46
85	18NM1A0584	4.0	4.00	6.00	6.7	6.67	7.67	50
86	18NM1A0585	8.3	8.33	8.33	7.7	7.67	7.67	35
87	18NM1A0586	3.7	3.67	5.67	6.7	5.67	4.67	63
88	18NM1A0587	8.3	8.33	8.33	1.7	1.67	1.67	39
89	18NM1A0588	1.7	1.67	1.67	6.7	2.67	7.67	55
90	18NM1A0589	8.3	6.33	8.33	1.7	1.67	1.67	60
91	18NM1A0590	8.0	8.00	8.00	7.3	7.33	7.33	46
92	18NM1A0591	8.0	8.00	8.00	8.0	8.00	7.00	56
93	18NM1A0592	6.0	8.00	8.00	7.0	5.00	3.00	59
94	18NM1A0593	8.0	8.00	8.00	6.7	7.67	7.67	46
95	18NM1A0594	7.3	7.33	7.33	6.0	2.00	5.00	59
96	18NM1A0595	8.3	8.33	8.33	1.7	1.67	1.67	49
97	18NM1A0596	7.7	7.67	6.67	8.3	8.33	7.33	66
98	18NM1A0597	7.3	7.33	7.33	5.7	7.67	6.67	48
99	18NM1A0598	5.3	7.33	7.33	7.3	4.33	5.33	40
100	18NM1A0599	7.2	7.67	8.67	6.7	5.67	7.67	47
101	18NM1A05A0	6.0	8.00	8.00	8.3	3.33	3.33	49
102	18NM1A05A1	8.0	6.00	6.00	6.7	6.67	7.67	49
103	18NM1A05A2	9.0	9.00	9.00	8.7	8.67	8.67	63
104	18NM1A05A3	6.7	6.67	6.67	7.7	6.67	7.67	58
105	18NM1A05A4	8.3	8.33	8.33	8.0	8.00	8.00	25
106	18NM1A05A5	4.7	2.67	7.67	7.0	3.00	5.00	65
107	18NM1A05A6	8.3	8.33	8.33	7.3	6.33	7.33	35
108	18NM1A05A7	8.0	7.00	8.00	7.3	5.33	8.33	77
109	18NM1A05A8	8.7	8.67	8.67	8.0	8.00	8.00	24



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110	18NM1A05A9	6.3	5.33	5.33	6.7	5.67	2.67	63
111	18NM1A05B0	8.3	7.33	8.33	8.3	8.33	8.33	55
112	18NM1A05B1	8.3	8.33	8.33	8.0	8.00	6.00	5
113	18NM1A05B2	6.0	6.00	6.00	7.7	5.67	5.67	41
114	18NM1A05B3	7.0	7.00	8.00	6.7	4.67	3.17	49
115	18NM1A05B4	7.3	7.33	8.33	8.7	6.67	6.67	47
116	18NM1A05B5	8.7	8.67	8.67	7.3	7.33	7.33	54
117	18NM1A05B6	8.0	6.00	7.00	8.0	8.00	8.00	36
118	18NM1A05B7	4.0	7.00	8.00	8.7	4.17	5.67	61
119	18NM1A05B8	6.0	5.00	7.00	5.3	3.33	2.33	63
120	19NM5A0501	8.3	7.33	8.33	6.0	8.00	4.00	57
121	19NM5A0502	7.7	6.67	7.67	7.7	7.67	5.67	48
122	19NM5A0503	7.0	7.00	8.00	6.7	6.67	4.67	58
123	19NM5A0504	8.0	8.00	8.00	8.0	8.00	8.00	36
124	19NM5A0505	8.0	7.00	8.00	7.3	7.33	4.33	47
125	19NM5A0506	6.7	8.67	8.67	8.0	5.00	6.00	47
126	19NM5A0507	4.0	7.00	8.00	7.7	4.67	4.67	61
127	18NM1A05B9	6.3	7.33	7.33	9.0	9.00	9.00	54
128	18NM1A05C0	8.7	8.67	8.67	8.0	8.00	8.00	34
129	18NM1A05C1	8.3	8.33	8.33	7.7	7.67	7.67	25
130	18NM1A05C2	8.0	8.00	8.00	8.7	8.67	8.67	54
131	18NM1A05C3	9.0	9.00	9.00	8.7	8.67	8.67	23
132	18NM1A05C4	7.3	8.33	8.33	8.3	8.33	8.33	45
133	18NM1A05C5	7.3	7.33	7.33	8.0	7.00	8.00	37
134	18NM1A05C6	7.0	7.00	7.00	6.0	8.00	8.00	48
135	18NM1A05C7	6.3	6.33	7.33	7.3	7.33	5.33	40
136	18NM1A05C8	6.7	7.67	7.67	7.0	7.00	7.00	48
137	18NM1A05C9	5.0	6.00	7.00	7.7	5.67	4.67	62
138	18NM1A05D0	7.0	6.00	8.00	6.7	2.67	7.67	59
139	18NM1A05D1	6.7	6.67	6.67	6.7	5.67	5.67	40
140	18NM1A05D2	6.7	5.67	7.67	1.7	1.67	1.67	53
141	18NM1A05D3	6.3	5.33	7.33	7.7	7.67	2.67	41
142	18NM1A05D4	6.7	6.67	7.67	1.7	1.67	1.67	52
143	18NM1A05D5	8.7	8.67	8.67	8.0	7.00	8.00	54
144	18NM1A05D6	1.7	1.67	1.67	8.0	8.00	8.00	59
145	18NM1A05D7	9.0	9.00	9.00	8.3	7.33	8.33	53
146	18NM1A05D8	8.3	8.33	8.33	8.7	5.67	8.67	45
147	18NM1A05D9	8.3	7.33	8.33	8.7	8.67	8.67	44



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148	18NM1A05E1	7.7	7.67	7.67	2.7	7.67	7.67	68
149	18NM1A05E2	9.0	7.00	9.00	7.7	5.67	7.67	35
150	18NM1A05E3	8.0	9.00	9.00	7.7	6.67	6.67	45
151	18NM1A05E4	6.0	7.00	8.00	7.3	7.33	7.33	48
152	18NM1A05E5	8.3	6.33	8.33	6.7	7.67	7.67	47
153	18NM1A05E6	9.0	9.00	9.00	8.7	7.67	8.67	23
154	18NM1A05E7	8.3	6.33	6.33	7.3	6.33	7.33	39
155	18NM1A05E8	8.7	7.67	8.67	7.3	7.33	8.33	55
156	18NM1A05E9	8.3	8.33	8.33	9.0	9.00	9.00	53
157	18NM1A05F0	5.0	7.00	7.00	8.0	3.00	6.00	41
158	18NM1A05F1	7.0	8.00	8.00	8.0	7.00	8.00	37
159	18NM1A05F2	5.7	7.67	7.67	1.7	1.67	1.67	62
160	18NM1A05F3	8.7	7.67	8.67	7.7	7.67	6.67	55
161	18NM1A05F4	5.3	5.33	7.33	6.7	6.67	4.67	42
162	18NM1A05F5	6.7	6.67	4.67	8.0	7.00	7.00	38
163	18NM1A05F6	8.7	7.67	8.67	7.7	5.67	6.67	66
164	18NM1A05F7	8.3	7.33	8.33	8.0	7.00	8.00	66
165	18NM1A05F8	7.7	6.67	8.67	8.3	7.33	7.33	47
166	18NM1A05F9	6.0	7.00	7.00	1.7	1.67	1.67	43
167	18NM1A05G0	8.3	8.33	8.33	8.0	8.00	8.00	45
168	18NM1A05G1	6.3	8.33	8.33	1.7	1.67	1.67	50
169	18NM1A05G2	6.7	5.67	6.67	1.7	1.67	1.67	43
170	18NM1A05G3	6.3	4.33	6.33	1.7	1.67	1.67	55
171	18NM1A05G4	8.3	8.33	8.33	8.3	8.33	8.33	55
172	18NM1A05G5	7.0	8.00	8.00	8.3	8.33	6.33	57
173	18NM1A05G6	8.3	8.33	8.33	7.0	7.00	8.00	45
174	18NM1A05G7	7.3	7.33	7.33	7.3	6.33	6.33	58
175	18NM1A05G8	5.0	5.00	7.00	7.3	6.33	2.33	43
176	18NM1A05G9	7.7	7.67	7.67	1.7	1.67	1.67	40
177	18NM1A05H0	6.0	8.00	8.00	7.3	6.33	7.33	38
178	18NM1A05H1	7.7	6.67	7.67	7.7	6.67	6.67	48
179	17NM1A0575	8.3	8.33	8.33	8.7	8.67	8.67	64
180	17NM1A05A4	8.0	8.00	8.00	8.0	7.00	5.00	36
181	19NM5A0508	8.3	8.33	8.33	8.0	8.00	8.00	55
182	19NM5A0510	7.3	8.33	8.33	8.0	8.00	4.00	46
183	19NM5A0511	6.3	5.33	7.33	8.0	6.00	8.00	48
184	19NM5A0512	8.3	3.33	8.33	9.0	9.00	9.00	54
185	19NM5A0513	8.3	8.33	8.33	7.7	7.67	7.67	5



  
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186	19NM5A0514	6.3	8.33	8.33	7.7	3.67	2.67	48
187	19NM5A0515	8.3	8.33	8.33	7.7	7.67	6.67	55
188	19NM5A0516	7.3	7.33	7.33	1.7	1.67	1.67	61
189	19NM5A0517	8.3	8.33	8.33	1.7	1.67	1.67	59
190	19NM5A0518	7.7	7.67	8.67	7.7	7.67	6.67	36
191	18NM5A0510	6.7	6.67	6.67	8.0	8.00	8.00	66
192	17NM1A05G8	8.3	7.33	8.33	7.7	6.67	7.67	56
Average of COs		7.3	7.1	7.6	7.1	6.1	6.4	
CO Wise Max Marks		10.0	10.0	10.0	10.0	10.0	10.0	
Compliance of Target		6.0	6.0	6.0	6.0	6.0	6.0	



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**Indirect Assessment - Feedback from students**

Course Name: CPP	Course Code:C412	Admitted Batch: 2018-22
Year/ Sem : IV B TECH II SEM	Regulation: R16	Academic Year:2021-22
Course Coordinator : Mrs.Sk.Rahimunnisa		

S.No.	Reg.No.	CO1	CO2	CO3	CO4	CO5	CO6
1	18NM1A0501	3	3	3	2	2	3
2	18NM1A0502	2	3	3	3	3	1
3	18NM1A0503	3	3	1	3	1	3
4	18NM1A0504	1	3	2	3	3	3
5	18NM1A0505	3	3	3	3	3	3
6	18NM1A0506	3	3	2	3	3	3
7	18NM1A0507	3	3	3	3	3	3
8	18NM1A0508	3	3	3	3	2	3
9	18NM1A0509	3	3	3	3	3	3
10	18NM1A0510	2	3	2	3	3	3
11	18NM1A0511	3	3	1	3	1	3
12	18NM1A0512	1	3	3	3	3	2
13	18NM1A0513	3	2	3	2	1	3
14	18NM1A0514	3	3	3	3	3	1
15	18NM1A0515	3	3	3	3	3	3
16	18NM1A0516	3	3	2	3	2	3
17	18NM1A0517	3	3	3	3	3	2
18	18NM1A0518	2	3	3	2	3	3
19	18NM1A0519	3	3	3	3	3	3
20	18NM1A0520	3	3	3	3	3	3
21	18NM1A0521	3	3	2	3	2	3
22	18NM1A0522	3	2	3	3	3	3
23	18NM1A0523	3	3	3	3	3	3
24	18NM1A0524	3	2	3	0	2	3
25	18NM1A0525	3	3	3	3	3	1
26	18NM1A0526	3	3	2	3	3	3
27	18NM1A0527	1	1	1	3	3	1
28	18NM1A0528	3	3	3	1	3	3
29	18NM1A0529	1	3	3	3	3	3
30	18NM1A0530	3	3	2	3	3	3
31	18NM1A0531	1	3	3	3	3	1
32	18NM1A0532	3	3	3	3	3	3
33	18NM1A0533	3	3	3	3	3	3
34	18NM1A0534	3	2	2	3	3	3
35	18NM1A0535	3	3	3	3	3	3
36	18NM1A0536	3	3	3	3	2	3
37	18NM1A0537	3	2	3	3	3	0
38	18NM1A0538	3	3	3	3	3	3
39	18NM1A0539	2	3	2	3	2	3
40	18NM1A0540	3	1	3	3	3	1
41	18NM1A0541	3	3	3	1	2	3

Strongly Agree	3
Agree	2
Neutral	1
Disagree	0



  
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42	18NM1A0542	3	0	3	3	3	3
43	18NM1A0543	3	3	2	3	3	3
44	18NM1A0544	2	3	3	2	3	3
45	18NM1A0545	3	3	1	3	3	3
46	18NM1A0546	1	3	3	3	3	2
47	18NM1A0547	3	3	2	3	3	3
48	18NM1A0548	2	3	3	3	3	3
49	18NM1A0549	3	2	3	2	3	3
50	18NM1A0550	3	3	3	3	3	3
51	18NM1A0551	3	2	2	3	2	3
52	18NM1A0552	3	3	3	3	3	3
53	18NM1A0553	3	3	3	3	3	2
54	18NM1A0554	3	3	3	2	3	3
55	18NM1A0555	2	3	1	3	3	3
56	18NM1A0556	3	3	3	1	1	3
57	18NM1A0557	3	3	3	3	3	1
58	18NM1A0558	1	3	3	1	3	3
59	18NM1A0559	3	3	2	3	3	1
60	18NM1A0560	3	3	3	3	1	3
61	18B41A0501	1	3	3	3	3	3
62	18NM1A0561	3	3	3	3	3	3
63	18NM1A0562	2	3	1	3	3	1
64	18NM1A0563	3	3	3	3	3	3
65	18NM1A0564	3	3	3	3	3	3
66	18NM1A0565	3	2	3	2	3	2
67	18NM1A0566	3	3	2	3	3	3
68	18NM1A0567	3	3	3	3	3	3
69	18NM1A0568	3	3	3	3	3	3
70	18NM1A0569	3	3	1	3	3	3
71	18NM1A0570	2	3	3	3	3	2
72	18NM1A0571	3	3	3	3	3	3
73	18NM1A0572	3	3	1	3	3	3
74	18NM1A0573	3	3	3	3	3	1
75	18NM1A0574	3	1	3	1	1	3
76	18NM1A0575	3	3	2	3	3	3
77	18NM1A0576	3	3	3	3	3	1
78	18NM1A0577	2	3	3	1	3	3
79	18NM1A0578	3	3	3	3	2	0
80	18NM1A0579	1	1	1	3	3	3
81	18NM1A0580	2	3	3	3	3	2
82	18NM1A0581	3	3	3	2	3	3
83	18NM1A0582	0	3	2	3	3	3
84	18NM1A0583	3	3	3	3	3	3
85	18NM1A0584	3	3	3	0	3	3
86	18NM1A0585	3	3	3	3	3	3
87	18NM1A0586	3	3	1	3	3	3
88	18NM1A0587	3	3	3	3	3	3
89	18NM1A0588	3	3	3	3	3	1



300  
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Visakhapatnam-49

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*3/20/20*


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## Course Attainment Calculation

Course Name: CPP	Course Code: C412	Admitted Batch: 2018-22
Year/ Sem : IV B TECH II SEM	Regulation: R16	Academic Year: 2021-22
Course Coordinator : Mrs.Sk.Rahimunnisa		

	Direct Attainment		Indirect Attainment	
	Internal	University	Feedback	
CO1	3	3	CO1	2.6146
CO2	3	3	CO2	2.7292
CO3	3	3	CO3	2.6042
CO4	3	3	CO4	2.72
CO5	3	3	CO5	2.7344
CO6	3	3	CO6	2.5573
Average	3.00	3.00		
Weightage	30%	70%		
Attainment	0.9	2.1		
<b>Final Direct Attainment</b>	<b>3</b>		<b>Final Indirect Attainment</b>	<b>2.6597</b>
Weightage	80%		20%	
Attainment	2.4		0.53	
<b>Course Attainment</b>	<b>2.93</b>			



  
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 Visakhapatnam-49



# VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN

Approved by AICTE, New Delhi. Affiliated to JNTU-Kakinada  
Kapu Jaggarajupeta, VSEZ(post), Visakhapatnam-530049, AP

## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Course Name: Concurrent and Parallel Programming	Course Code: C411	Admitted Batch: 2017
Year/ Sem : IV B TECH II SEM	Regulation: R16	Academic Year: 2020-21
Course Coordinator : Dr.P.Vijaya Bharati	Faculty: Mrs.G.Sandhya, Dr.T.V.Madhusudhan Rao, Dr.P.Vijaya Bharati	

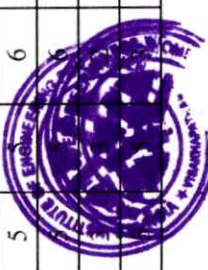
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		Descriptive			Assignment			Quiz 1 (CO1: CO3)	Total (CO1: CO3)	Descriptive			Assignment			Total (CO4: CO6)								
		Q1 (CO1)	Q2 (CO2)	Q3 (CO3)	A1 (CO1)	A2 (CO2)	A3 (CO3)			Q1 (CO4)	Q2 (CO5)	Q3 (CO6)	A4 (CO4)	A5 (CO5)	A6 (CO6)									
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Principal Officer  
 Pragna Institute of  
 Engineering & Technology  
 (P.O.)  
 Bangalore  
 Karnataka





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University end Target marks is 28.00																			

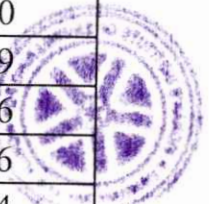
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CO1	CO2	CO3	CO1	CO2	CO3

Knowledge Levels MID II					
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CO4	CO5	CO6	CO4	CO5	CO6

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Visakhapatnam-49



S.No	Regd.No.	INTERNAL						EXTERNAL
		MID 1			MID 2			University end exam CO1:CO6 70M
		CO1 10M	CO2 10M	CO3 10M	CO4 10M	CO5 10M	CO6 10M	
1	17NM1A0501	8.00	5.00	8.00	7.33	6.33	8.33	37
2	17NM1A0502	7.33	6.33	5.33	8.67	6.67	8.67	36
3	17NM1A0503	10.00	9.00	10.00	5.33	6.33	6.33	3
4	17NM1A0504	8.33	8.33	8.33	7.33	8.33	8.33	44
5	17NM1A0505	8.00	5.00	7.00	7.00	6.00	6.00	29
6	17NM1A0506	7.67	4.67	7.67	6.00	5.00	3.00	30
7	17NM1A0507	8.67	8.67	8.67	8.00	8.00	8.00	43
8	17NM1A0508	8.67	4.67	8.67	5.33	3.33	8.33	28
9	17NM1A0509	10.00	7.00	10.00	7.67	6.67	9.67	33
10	17NM1A0510	9.67	9.67	9.67	7.00	8.00	8.00	31
11	17NM1A0511	8.33	8.33	6.33	5.67	5.67	5.67	27
12	17NM1A0512	8.33	8.33	7.33	6.33	6.33	8.33	36
13	17NM1A0513	7.00	7.00	9.00	1.67	1.67	1.67	30
14	17NM1A0514	8.00	8.00	8.00	8.00	6.00	8.00	35
15	17NM1A0515	9.67	9.67	9.67	7.33	9.33	9.33	31
16	17NM1A0516	8.33	3.33	8.33	5.67	7.67	2.67	50
17	17NM1A0517	9.67	9.67	8.67	6.33	7.33	8.33	32
18	17NM1A0518	8.00	5.00	8.00	7.67	7.67	5.67	28
19	17NM1A0519	8.00	7.00	7.00	7.33	5.33	5.33	38
20	17NM1A0520	8.67	8.67	8.67	7.33	5.33	7.33	34
21	17NM1A0521	9.33	9.33	9.33	5.67	7.67	5.67	33
22	17NM1A0522	8.33	8.33	7.33	8.33	3.33	8.33	46
23	17NM1A0523	7.67	4.67	6.67	6.67	7.67	6.67	28
24	17NM1A0524	7.67	4.67	7.67	6.33	7.33	3.33	30
25	17NM1A0525	9.00	8.00	8.00	5.33	6.33	6.33	28
26	17NM1A0526	8.00	8.00	7.00	4.00	4.00	7.00	38
27	17NM1A0527	8.00	8.00	3.00	5.00	3.00	5.00	31
28	17NM1A0528	6.67	4.67	8.67	5.67	6.67	3.67	30
29	17NM1A0529	6.67	5.67	7.67	8.00	6.00	8.00	29
30	17NM1A0530	9.00	5.00	9.00	6.33	8.33	6.33	26
31	17NM1A0531	8.67	7.67	8.67	6.33	6.33	3.33	36
32	17NM1A0532	9.33	9.33	6.00	5.00	6.00	6.00	24
33	17NM1A0533	7.00	6.00	8.67	6.67	8.67	8.67	36
34	17NM1A0534	5.00	5.00	7.67	8.67	7.67	8.67	30
35	17NM1A0535	8.67	7.67	8.67	6.33	3.33	6.33	36
36	17NM1A0536	6.67	7.67	5.67	7.33	7.33	7.33	30
37	17NM1A0537	9.33	9.33	8.00	8.00	7.00	7.00	32



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Vasakhapatnam

38	17NM1A0538	7.00	8.00	7.00	6.33	5.33	6.33	38
39	17NM1A0539	7.00	8.00	8.00	6.00	6.00	6.00	37
40	17NM1A0540	7.00	7.00	9.00	6.33	6.33	3.33	29
41	17NM1A0541	8.00	4.00	8.00	5.33	3.33	6.33	30
42	17NM1A0542	10.00	7.00	8.00	7.00	7.00	7.00	35
43	17NM1A0543	8.33	7.33	6.33	6.00	6.00	3.00	38
44	17NM1A0544	7.67	7.67	6.67	6.00	6.00	7.00	28
45	17NM1A0545	8.67	7.67	8.67	8.33	6.33	7.33	35
46	17NM1A0546	6.67	7.67	7.67	6.33	6.33	5.33	38
47	17NM1A0548	8.33	8.33	7.33	6.33	8.33	8.33	35
48	17NM1A0549	5.00	6.00	5.00	6.00	5.00	3.00	33
49	17NM1A0550	4.67	5.67	4.67	5.33	6.33	5.33	32
50	17NM1A0551	9.67	8.67	8.67	8.67	9.67	4.67	33
51	17NM1A0552	7.67	5.67	5.67	6.00	7.00	5.00	30
52	17NM1A0553	8.33	7.33	5.33	6.67	8.67	8.67	36
53	17NM1A0554	8.00	7.00	8.00	8.00	8.00	7.00	36
54	17NM1A0555	8.67	5.67	4.67	8.33	6.33	3.33	30
55	17NM1A0556	8.33	8.33	8.33	8.33	6.33	8.33	34
56	17NM1A0557	9.00	9.00	9.00	8.33	8.33	5.33	33
57	17NM1A0558	8.00	8.00	3.00	7.00	5.00	4.00	41
58	17NM1A0559	8.33	8.33	6.33	5.33	6.33	8.33	27
59	17NM1A0560	8.00	6.00	3.00	5.00	6.00	3.00	14
60	17NM1A0561	8.33	7.33	8.33	7.33	7.33	8.33	35
61	17NM1A0562	8.00	8.00	7.00	5.33	8.33	5.33	27
62	16NM1A0580	8.33	7.33	8.33	5.33	8.33	7.33	26
63	17A61A0507	8.33	8.33	8.33	6.33	7.33	5.33	35
64	17NN1A05B5	8.00	3.00	8.00	4.67	4.67	6.67	31
65	17NM1A0563	7.33	6.33	4.33	8.00	5.00	6.00	30
66	17NM1A0564	8.67	6.67	7.67	8.33	3.33	8.33	37
67	17NM1A0565	8.00	7.00	6.00	7.33	8.33	3.33	28
68	17NM1A0566	8.00	3.00	8.00	5.67	8.67	3.67	11
69	17NM1A0567	8.67	4.67	5.67	5.33	8.33	3.33	30
70	17NM1A0568	7.67	7.67	7.67	7.33	7.33	7.33	36
71	17NM1A0569	4.33	4.33	6.33	7.00	4.33	4.33	34
72	17NM1A0570	5.33	5.33	5.33	6.67	2.67	5.67	33
73	17NM1A0571	8.00	5.00	3.00	8.00	6.00	3.00	32
74	17NM1A0572	8.00	4.00	4.00	5.33	8.33	3.33	42
75	17NM1A0573	9.00	4.00	4.00	4.33	7.33	6.33	31
76	17NM1A0574	5.00	4.00	5.00	8.33	3.33	5.33	33
77	17NM1A0576	6.67	3.67	3.67	6.33	2.67	6.67	35
78	17NM1A0577	6.67	3.67	5.67	6.33	3.33	5.33	14



320  
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 Visakhapatnam-531 025



120	18NM5A0501	8.00	5.00	6.00	9.00	6.00	7.00	48
121	18NM5A0502	9.67	7.67	9.67	8.00	8.00	8.00	33
122	18NM5A0503	8.67	3.67	7.67	8.00	8.00	8.00	36
123	18NM5A0504	7.33	4.33	5.33	6.33	7.33	7.33	29
124	18NM5A0505	8.67	4.67	3.67	4.67	7.67	2.67	32
125	18NM5A0506	8.33	5.33	4.33	5.67	8.67	8.67	37
126	18NM5A0507	7.33	7.33	6.33	8.33	7.33	6.33	37
127	18NM5A0508	8.67	5.67	6.67	8.00	8.00	6.00	27
128	18NM5A0509	9.33	6.33	5.33	8.33	8.33	7.33	26
129	17NM1A05C0	8.33	5.33	3.33	4.33	6.33	6.33	32
130	17NM1A05C1	9.00	6.00	4.67	5.33	7.33	8.33	28
131	17NM1A05C2	8.33	4.33	8.33	7.67	7.67	6.67	27
132	17NM1A05C3	8.33	4.33	8.33	5.00	7.00	8.00	28
133	17NM1A05C4	6.33	3.33	7.33	4.33	6.33	6.33	32
134	17NM1A05C5	8.33	5.33	6.33	8.33	8.33	8.33	35
135	17NM1A05C6	8.33	5.33	8.33	5.00	7.00	8.00	27
136	17NM1A05C7	10.00	6.00	8.00	7.00	10.00	10.00	33
137	17NM1A05C8	8.67	3.67	6.67	6.67	5.67	6.67	30
138	17NM1A05C9	8.00	8.00	7.00	5.00	6.00	7.00	27
139	17NM1A05D0	8.67	5.67	7.67	6.33	8.33	7.33	37
140	17NM1A05D1	9.67	5.67	9.67	6.00	8.00	3.00	26
141	17NM1A05D2	9.00	4.00	6.00	7.67	6.67	5.67	29
142	17NM1A05D3	9.00	4.00	9.00	7.67	7.67	8.67	25
143	17NM1A05D4	8.67	4.67	7.67	6.33	8.33	7.33	37
144	17NM1A05D6	6.33	5.33	8.33	4.67	7.67	7.67	29
145	17NM1A05D7	9.00	6.00	5.00	6.67	7.67	3.67	29
146	17NM1A05D8	8.67	5.67	6.67	5.33	8.33	8.33	37
147	17NM1A05D9	8.67	4.67	8.67	8.00	8.00	8.00	35
148	17NM1A05E0	8.33	3.33	7.33	7.00	4.67	5.67	30
149	17NM1A05E1	8.67	4.67	6.67	8.33	8.33	3.33	29
150	17NM1A05E2	8.33	5.33	3.33	4.67	7.67	6.67	30
151	17NM1A05E3	8.33	6.33	3.33	5.33	8.33	8.33	38
152	17NM1A05E4	8.00	6.00	7.00	5.00	8.00	7.00	28
153	17NM1A05E5	5.67	6.67	7.67	7.67	7.67	7.67	37
154	17NM1A05E6	8.67	5.67	7.67	8.33	8.33	7.33	35
155	17NM1A05E7	8.33	5.33	8.33	8.00	8.00	8.00	35
156	17NM1A05E8	8.33	4.33	8.33	8.67	8.67	8.67	34
157	17NM1A05E9	8.00	4.00	5.00	6.00	7.00	5.00	31
158	17NM1A05F0	9.00	5.00	5.00	7.33	5.33	5.33	11
159	17NM1A05F1	9.00	5.00	6.00	8.00	8.00	3.00	39
160	17NM1A05F2	8.33	3.33	3.33	5.00	8.00	3.00	14



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 Vignans Institute of Engineering & Technology

161	17NM1A05F3	8.33	4.33	7.33	7.00	8.00	8.00	37
162	17NM1A05F4	7.67	2.67	4.67	4.67	7.67	2.67	34
163	17NM1A05F5	8.33	5.33	8.33	6.00	8.00	6.00	37
164	17NM1A05F6	8.33	5.33	4.33	5.33	8.33	5.33	30
165	17NM1A05F7	8.33	3.33	4.33	5.33	8.33	8.33	28
166	17NM1A05F8	8.33	4.33	5.33	6.00	7.00	3.00	12
167	17NM1A05F9	5.67	3.67	4.67	7.00	6.00	7.00	11
168	17NM1A05G0	8.33	4.33	8.33	8.33	7.33	7.33	26
169	17NM1A05G2	8.33	5.33	4.33	5.33	6.33	3.33	32
170	17NM1A05G3	8.33	3.33	8.33	7.00	7.00	3.00	30
171	17NM1A05G4	8.67	4.67	7.67	5.00	7.00	8.00	28
172	17NM1A05G5	9.00	4.00	9.00	7.00	5.00	8.00	27
173	17NM1A05G6	7.67	5.67	7.67	8.00	8.00	6.00	27
174	17NM1A05G7	8.33	7.33	8.33	6.67	7.67	6.67	36
175	17NM1A05G9	8.00	5.00	8.00	7.33	6.33	6.33	28
176	17NM1A05H0	8.67	5.67	8.67	7.67	6.67	7.67	26
177	17NM1A05H1	8.67	5.67	5.67	7.67	7.67	5.67	38
178	17NM1A05H2	7.67	4.67	5.67	7.67	5.67	6.67	29
179	17NM1A05H3	8.00	7.00	6.00	8.00	7.00	6.00	28
180	17NM1A05H4	8.67	5.67	5.67	5.00	8.00	5.00	29
181	17NM1A05H5	8.33	3.33	4.33	7.00	7.00	6.00	11
182	17NM1A05H6	7.67	5.67	2.67	4.67	5.67	6.67	32
183	17NM1A05H8	4.67	6.67	4.67	5.00	6.00	6.00	32
184	18NM5A0511	8.33	3.33	5.33	7.67	7.67	3.67	40
185	18NM5A0512	8.00	3.00	8.00	7.67	7.67	3.67	30
186	18NM5A0513	9.33	6.33	9.33	8.33	8.33	6.33	24
187	18NM5A0514	8.33	5.33	8.33	8.00	8.00	3.00	28
188	18NM5A0515	8.67	6.67	8.67	7.33	7.33	7.33	25
189	18NM5A0516	9.00	4.00	9.00	7.67	5.67	7.67	37
190	18NM5A0517	8.00	6.00	8.00	4.33	6.33	6.33	28
191	18NM5A0518	8.00	4.00	8.00	8.67	8.67	8.67	34
192	18NM5A0519	8.67	3.67	3.67	7.33	7.33	7.33	28
193	18NM5A0520	8.67	3.67	6.67	5.67	6.67	3.67	31
194	18NM5A0521	6.00	8.00	6.00	6.00	8.00	3.00	30
Average of COs		8.0	5.7	6.6	6.6	6.6	6.0	
CO Wise Max Marks		10.0	10.0	10.0	10.0	10.0	10.0	
Competance of Target		6.0	6.0	6.0	6.0	6.0	6.0	



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Visakhapatnam-531029

Total No.of Students	194	
Target is	60%	
Class Average Marks of MID 1	18.00	
Bench Mark	Target Students	Target level
If 60 % students got more than Target	116	1
If 70 % students got more than Target	136	2
If 80 % students got more than Target	155	3

Attained for COs	Students attained	Attained level
Students attained CO1	180	3
Students attained CO2	76	0
Students attained CO3	123	1

Target is	60%	
Class Average Marks of MID 2	18.00	
Attained for COs	Students attained	Attained level
Students attained CO4	127	1
Students attained CO5	140	2
Students attained CO6	117	1

University Exam Assessment	70	
Target is	40%	
Target Mark	28	
No of students attended	194	
No. of students attained	156	
Students above the Target	Target Students	Target level
University Exam	156	3

Indirect Assessment - Average for CO's					
CO1	CO2	CO3	CO4	CO5	CO6
2.92	2.94	2.90	2.93	2.92	2.92

290  
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 Women's Institute of  
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 K. J. Peta, VSEZ (P.O.)  
 Visakhapatnam-49





### Indirect Assessment - Course End Survey

Course Name: Concurrent and Parallel Prog	Course Code:C411	Admitted Batch: 2017
Year/ Sem : IV B TECH II SEM	Regulation: R16	Academic Year:2020-21

S.No.	Reg.No.	CO1	CO2	CO3	CO4	CO5	CO6
1	17NM1A0501	3	3	3	2	2	3
2	17NM1A0502	2	3	3	3	3	2
3	17NM1A0503	3	3	2	3	2	3
4	17NM1A0505	2	3	2	3	3	3
5	17NM1A0506	3	3	3	3	3	3
6	17NM1A0508	3	3	2	3	3	3
7	17NM1A0509	3	3	3	3	3	3
8	17NM1A0510	3	3	3	3	3	3
9	17NM1A0511	2	3	2	3	3	3
10	17NM1A0512	3	3	2	3	2	3
11	17NM1A0514	2	3	3	3	3	2
12	17NM1A0515	3	2	3	2	2	3
13	17NM1A0516	3	3	3	3	3	2
14	17NM1A0518	3	3	2	3	2	3
15	17NM1A0520	3	3	3	3	3	2
16	17NM1A0521	2	3	3	2	3	3
17	17NM1A0522	3	3	2	3	2	3
18	17NM1A0524	3	2	3	3	3	3
19	17NM1A0525	3	3	3	3	3	3
20	17NM1A0526	3	2	3	2	2	3
21	17NM1A0528	3	3	3	3	3	2
22	17NM1A0529	2	2	2	3	3	2
23	17NM1A0531	3	3	2	3	3	3
24	17NM1A0532	3	3	3	3	3	3
25	17NM1A0534	3	3	3	3	3	3
26	17NM1A0536	3	3	3	3	3	3
27	17NM1A0537	3	3	3	2	2	3
28	17NM1A0539	3	2	3	3	3	3
29	17NM1A0540	3	3	2	3	3	3
30	17NM1A0541	2	3	3	3	3	2
31	17NM1A0543	3	3	2	3	3	3
32	17NM1A0544	3	2	3	2	3	3
33	17NM1A0546	3	2	2	3	2	3
34	17NM1A0548	3	3	3	3	3	2
35	17NM1A0550	3	3	3	2	3	3



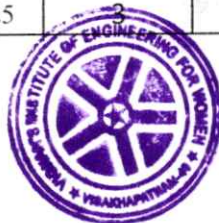
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 Vignan's Institute of  
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 K.J. Peta, VSEZ (P.)  
 Visakhapatnam

36	17NM1A0551	2	3	2	3	3	3
37	17NM1A0553	3	3	3	2	2	3
38	17NM1A0554	3	3	3	3	3	2
39	17NM1A0555	2	3	3	2	3	3
40	17NM1A0556	3	3	3	3	2	3
41	17NM1A0557	2	3	3	3	3	3
42	17NM1A0558	3	3	3	3	3	3
43	17NM1A0559	2	3	2	3	3	2
44	17NM1A0560	3	3	3	3	3	3
45	17NM1A0562	3	3	3	3	3	3
46	16NM1A0580	3	2	3	2	3	2
47	17507	3	3	2	3	3	3
48	17NN1A05B5	3	3	3	3	3	3
49	17NM1A0563	3	3	3	3	3	3
50	17NM1A0564	3	3	3	3	3	3
51	17NM1A0565	3	3	3	3	3	3
52	17NM1A0566	3	3	3	3	3	3
53	17NM1A0567	3	3	3	3	3	3
54	17NM1A0568	3	3	3	3	3	3
55	17NM1A0569	3	3	3	3	3	3
56	17NM1A0570	3	3	3	3	3	3
57	17NM1A0572	3	3	3	3	3	3
58	17NM1A0573	3	3	3	3	3	3
59	17NM1A0576	3	3	3	3	3	3
60	17NM1A0577	3	3	3	3	3	3
61	17NM1A0578	3	3	3	3	3	3
62	17NM1A0579	3	3	3	3	3	3
63	17NM1A0581	3	3	3	3	3	3
64	17NM1A0582	3	3	3	3	3	3
65	17NM1A0583	3	3	3	3	3	3
66	17NM1A0584	3	3	3	3	3	3
67	17NM1A0586	3	3	3	3	3	3
68	17NM1A0587	3	3	3	3	3	3
69	17NM1A0588	3	3	3	3	3	3
70	17NM1A0589	3	3	3	3	3	3
71	17NM1A0591	3	3	3	3	3	3
72	17NM1A0592	3	3	3	3	3	3
73	17NM1A0593	3	3	3	3	3	3
74	17NM1A0594	3	3	3	3	3	3
	17NM1A0596	3	3	3	3	3	3
	17NM1A0597	3	3	3	3	3	3



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Vignan's Institute for Women  
Engineering for Women  
K.J. Peta, VSEZ (P.O.)  
Visakhapatnam-49

77	17NM1A0598	3	3	3	3	3	3
78	17NM1A0599	3	3	3	3	3	3
79	17NM1A05A1	3	3	3	3	3	3
80	17NM1A05A2	3	3	3	3	3	3
81	17NM1A05A3	3	3	3	3	3	3
82	17NM1A05A5	3	3	3	3	3	3
83	17NM1A05A7	3	3	3	3	3	3
84	17NM1A05A8	3	3	3	3	3	3
85	17NM1A05A9	3	3	3	3	3	3
86	17NM1A05B0	3	3	3	3	3	3
87	17NM1A05B2	3	3	3	3	3	3
88	17NM1A05B3	3	3	3	3	3	3
89	17NM1A05B4	3	3	3	3	3	3
90	17NM1A05B6	3	3	3	3	3	3
91	17NM1A05B7	3	3	3	3	3	3
92	18NM5A0501	3	3	3	3	3	3
93	18NM5A0502	3	3	3	3	3	3
94	18NM5A0503	3	3	3	3	3	3
95	18NM5A0504	3	3	3	3	3	3
96	18NM5A0505	3	3	3	3	3	3
97	18NM5A0506	3	3	3	3	3	3
98	18NM5A0507	3	3	3	3	3	3
99	18NM5A0509	3	3	3	3	3	3
100	17NM1A05C0	3	3	3	3	3	3
101	17NM1A05C2	3	3	3	3	3	3
102	17NM1A05C3	3	3	3	3	3	3
103	17NM1A05C5	3	3	3	3	3	3
104	17NM1A05C6	3	3	3	3	3	3
105	17NM1A05C8	3	3	3	3	3	3
106	17NM1A05C9	3	3	3	3	3	3
107	17NM1A05D1	3	3	3	3	3	3
108	17NM1A05D3	3	3	3	3	3	3
109	17NM1A05D4	3	3	3	3	3	3
110	17NM1A05D6	3	3	3	3	3	3
111	17NM1A05D7	3	3	3	3	3	3
112	17NM1A05D8	3	3	3	3	3	3
113	17NM1A05E0	3	3	3	3	3	3
114	17NM1A05E2	3	3	3	3	3	3
115	17NM1A05E3	3	3	3	3	3	3
116	17NM1A05E4	3	3	3	3	3	3
117	17NM1A05E5	3	3	3	3	3	3



29  
**PRINCIPAL**  
 V. An's Institute of  
 Engineering for Women  
 K.J. Peta, VSEZ (P.O.)  
 Visakhapatnam-49

118	17NM1A05E6	3	3	3	3	3	3
119	17NM1A05E7	3	3	3	3	3	3
120	17NM1A05F0	3	3	3	3	3	3
121	17NM1A05F1	3	3	3	3	3	3
122	17NM1A05F2	3	3	3	3	3	3
123	17NM1A05F3	3	3	3	3	3	3
124	17NM1A05F4	3	3	3	3	3	3
125	17NM1A05F6	3	3	3	3	3	3
126	17NM1A05F7	3	3	3	3	3	3
127	17NM1A05F8	3	3	3	3	3	3
128	17NM1A05G0	3	3	3	3	3	3
129	17NM1A05G2	3	3	3	3	3	3
130	17NM1A05G4	3	3	3	3	3	3
131	17NM1A05G5	3	3	3	3	3	3
132	17NM1A05G6	3	3	3	3	3	3
133	17NM1A05G7	3	3	3	3	3	3
134	17NM1A05G8	3	3	3	3	3	3
135	17NM1A05G9	3	3	3	3	3	3
136	17NM1A05H0	3	3	3	3	3	3
137	17NM1A05H1	3	3	3	3	3	3
138	17NM1A05H2	3	3	3	3	3	3
139	17NM1A05H3	3	3	3	3	3	3
140	17NM1A05H8	3	3	3	3	3	3
141	18NM5A0514	3	3	3	3	3	3
142	18NM5A0516	3	3	3	3	3	3
143	18NM5A0517	3	3	3	3	3	3
144	18NM5A0518	3	3	3	3	3	3
145	18NM5A0521	3	3	3	3	3	3
	<b>Average</b>	<b>2.92</b>	<b>2.94</b>	<b>2.90</b>	<b>2.93</b>	<b>2.92</b>	<b>2.92</b>

Strongly Agree	3
Agree	2
Partially Agree	1

3290  
**PRINCIPAL**  
 Women's Institute of Women  
 423C, Rajawadee Road, Bangkok 10110 (P.O.)  
 10110, Bangkok, Thailand  
 Tel: 02-2542300, Fax: 02-2542301  
 Email: woiw@woiw.ac.th



## Course Attainment Calculation

Course Name: Concurrent and Parallel Programming	Course Code: C411	Admitted Batch: 2017
Year/ Sem : IV B TECH II SEM	Regulation: R16	Academic Year: 2020-21
Course Coordinator : Dr.P. Vijaya Bharati	Faculty: Mrs.G.Sandhya, Dr. T. V. Madhusudhan Rao, Dr. P. Vijaya Bharati	

	Direct Attainment		Indirect Attainment	
	Internal	University	Feedback	
CO1	3	3	CO1	2.92
CO2	0	3	CO2	2.94
CO3	1	3	CO3	2.90
CO4	1	3	CO4	2.93
CO5	2	3	CO5	2.92
CO6	1	3	CO6	2.92
Average	1.33	3.00		
Weightage	30%	70%		
Attainment	0.4	2.1		
<b>Final Direct Attainment</b>	<b>2.5</b>		<b>Final Indirect Attainment</b>	<b>2.92</b>
Weightage	80%			
Attainment	2			
<b>Course Attainment</b>	<b>2.58</b>			

### CO PO MAPPING & ATTAINMENT

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	3	-	-	-	-	-	-	-	-	-	2	3	2
CO2	3	3	-	3	-	-	-	-	-	-	-	2	3	2
CO3	3	3	3	3	-	-	-	-	-	-	-	-	3	2
CO4	3	2	-	-	-	-	-	-	-	-	-	-	3	2
CO5	3	3	3	3	3	-	-	-	-	-	-	3	3	2
CO6	3	2	2	-	2	-	-	-	-	-	-	-	3	2
Average	3.00	2.67	2.67	3.00	2.50	-	-	-	-	-	-	2.33	3.00	2.00
Course - PO Attainment	2.58	2.30	2.30	2.58	2.15	-	-	-	-	-	-	2.01	2.58	1.72



PRINCIPAL  
 Anna's Institute of  
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 V. I. Peta, VSEZ (P.O.)  
 Visakhapatnam-90

Course PO Attainment -

Course Attainment \* Average of PO

3



# VISWAN'S INSTITUTE OF ENGINEERING FOR WOMEN

Approved by AICTE, New Delhi, Affiliated to JNTU Kakinada

Kapujaggarajupeta, VSEZ(post), Visakhapatnam-530049, AP

## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Course Name: Concurrent and Parallel Programming	Course Code: C411	Admitted Batch: 2016
Year/ Sem : IV B TECH II SEM	Regulation: R16	Academic Year: 2019-20
Course Coordinator : Mrs.B.Madhavi	Faculty: Dr.P.Vijaya Bharati, Mrs.B.Madhavi, Mrs.B.Madhavi	



S.No	Reg. No.	MID 1										MID 2										Total (CO4: CO6)	University end exam (CO1:CO6)
		Descriptive			Assignment			Quiz 1 (CO1: CO3)	Total (CO1: CO3)	Descriptive			Assignment			Quiz 2 (CO4: CO6)							
		Q1 (CO1)	Q2 (CO2)	Q3 (CO3)	A1 (CO1)	A2 (CO2)	A3 (CO3)			Q1 (CO4)	Q2 (CO5)	Q3 (CO6)	A4 (CO4)	A5 (CO5)	A6 (CO6)								
1	16NM1A0501	5	5	5	5	5	5	10	30 M	5	5	5	5	5	5	10	30 M	70M					
2	16NM1A0502	4	5	3	5	5	5	2	19	1	3	4	5	5	5	4	17	37					
3	16NM1A0503	5	5	5	5	5	5	3	23				5	5	5		5	34					
4	16NM1A0504	5	5	5	5	5	5	4	24	2	0	5	5	5	4	16	45						
5	16NM1A0505	5	5	5	5	5	5	6	26	5	4	2	5	5	4	20	57						
6	16NM1A0506	5	0	3	5	5	5	4	20	3	3	3	5	5	2	16	62						
7	16NM1A0507	5	1	4	5	5	5	2	15				5	5	5	5	42						
8	16NM1A0508	5	5	1	5	5	5	6	22	1	1	2	5	5	3	8	28						
9	16NM1A0509	5	4	4	5	5	5	3	21	4	4	2	5	5	6	21	55						
10	16NM1A0510	5	5	0	5	5	5	4	19	4	0	3	5	5	3	15	37						
11	16NM1A0511	5	3	4	5	5	5	3	20	3	3	3	5	5	4	18	38						
12	16NM1A0512	5	4	4	5	5	5	4	22				5	5	5	5	36						
13	16NM1A0513	5	5	3	5	5	5	5	23	3	3	4	5	5	4	19	47						
14	16NM1A0514	5	5	3	5	5	5	2	20	2	2	3	5	5	4	16	37						
15	16NM1A0515	5	5	4	5	5	5	9	28				5	5	5	10	59						
16	16NM1A0516	4	0	5	5	5	5	2	16				5	5	5	5	40						
17	16NM1A0517	5	4	4	5	5	5	4	22				5	5	5	10	38						
18	16NM1A0518	5	4	3	5	5	5	4	21				5	5	4	9	26						
19	16NM1A0519	5	3	3	5	5	5	3	20				5	5	5	5	39						
20	16NM1A0520	5	5	5	5	5	5	5	25	4	4	3	5	5	5	21	48						
21	16NM1A0521	5	5	5	5	5	5	5	25				5	5	5	5	52						
22	16NM1A0522	5	5	5	5	5	5	5	25				5	5	3	8	26						
23	16NM1A0523	5	3	4	5	5	5	5	23				5	5	4	9	47						



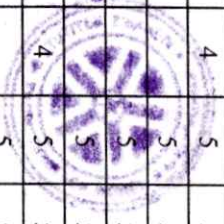
Principal  
Mrs. B. Madhavi  
VSEZ (Post)  
Visakhapatnam-48







94	16NMI1A0597	5	5	4	5	5	5	5	5	4	23	4.5	4.5	4	5	5	5	5	0	18	49
95	16NMI1A0598	5	5	5	5	5	5	5	5	5	25			5	5	5	5	5	2	7	35
96	16NMI1A0599	4	5	4.5	5	5	5	5	5	4	23			5	5	5	5	5	4	9	33
97	16NMI1A05A0	4	4	5	5	5	5	5	5	9	27			5	5	5	5	5	6	11	31
98	16NMI1A05A1	5	5	2.5	5	5	5	5	5	6	24			5	5	5	5	5	5	14	43
99	16NMI1A05A2	4	4	2	5	5	5	5	5	6	21			5	5	5	5	5	0	5	32
100	16NMI1A05A3	5	4.5	1.5	5	5	5	5	5	4	20			5	5	5	5	5	3	8	52
101	16NMI1A05A4	5	4	3	5	5	5	5	5	3	20			5	5	5	5	5	4	9	39
102	16NMI1A05A5	5	4	5	5	5	5	5	5	9	28	1		3	5	5	5	5	6	15	38
103	16NMI1A05A7	5	5	2	5	5	5	5	5	7				5	5	5	5	5	5		27
104	16NMI1A05A8	4	5	1.5	5	5	5	5	5	6	7			5	5	5	5	5	4	9	60
105	16NMI1A05A9	5	4	1.5	5	5	5	5	5	5	21	4	3	1	5	5	5	5	4	17	20
106	16NMI1A05B0	5	4.5	5	5	5	5	5	5	5	25			5	5	5	5	5	3	8	37
107	16NMI1A05B1	5	4	3.5	5	5	5	5	5	3	21			5	5	5	5	5	4	9	40
108	16NMI1A05B2	3	5	3	5	5	5	5	5	3	19			5	5	5	5	5	4	9	40
109	16NMI1A05B3	5	4	5	5	5	5	5	5	9	28	4.5		3	5	5	5	5	4	17	49
110	16NMI1A05B4	3.5	5	5	5	5	5	5	5	6	25	4.5	3	3	5	5	5	5	5	21	46
111	16NMI1A05B5	5	4.5	5	5	5	5	5	5	3	23	4.5	4	4	5	5	5	5	6	24	49
112	16NMI1A05B6	5	5	4	5	5	5	5	5	4	23	5	5	2	5	5	5	5	3	20	54
113	16NMI1A05B7	4	3	2	5	5	5	5	5	4	18			5	5	5	5	5	5	10	7
114	16NMI1A05B8	5	4.5	5	5	5	5	5	5	4	24	5	4	5	5	5	5	5	6	25	47
115	16NMI1A05B9	5	5	5	5	5	5	5	5	4	24			5	5	5	5	5	3	8	37
116	16NMI1A05C0	5	4	4	5	5	5	5	5	4	22			5	5	5	5	5	5	10	47
117	16NMI1A05C1	5	5	5	5	5	5	5	5	4	24			5	5	5	5	5	3	8	58
118	16NMI1A05C2	5	5	5	5	5	5	5	5	4	24			5	5	5	5	5	5	10	47
119	16NMI1A05C3	5	5	5	5	5	5	5	5	4	24			5	5	5	5	5	4	9	48
120	16NMI1A05C4	4	5	4.5	5	5	5	5	5	4	23	4	4	2	5	5	5	5	6	21	48
121	16NMI1A05C5	5	5	4.5	5	5	5	5	5	4	24	5	5	5	5	5	5	5	3	23	69
122	16NMI1A05C6	4	4.5	2	5	5	5	5	5	2	18	2	1.5	3	5	5	5	5	5	17	38
123	15NMI1A05A7	4.5	3	4	5	5	5	5	5	3	20	4	3	3	5	5	5	5	6	21	38
124	16NMI1A05C7	5	4	3	5	5	5	5	5	3	20	5	3	5	5	5	5	5	5	21	49
125	16NMI1A05C8	3	2	4	5	5	5	5	5	4	18			2	5	5	5	5	11	44	
126	16NMI1A05C9	5	4	5	5	5	5	5	5	5	24			5	5	5	5	5	5	5	51
127	16NMI1A05D0	5	4	4	5	5	5	5	5	4	22			5	5	5	5	5	4	16	42
128	16NMI1A05D1	3	5	5	5	5	5	5	5	5	23			5	5	5	5	5	3	13	42



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Srisahebapuram-19



164	16NM1A05G7	5	3	3	5	5	5	5	4	20	1	5	2	5	5	5	5	7	20	48	
165	16NM1A05G8	5	5	4	5	5	5	5	5	24				5	5	5	5		5	48	
166	16NM1A05G9	3	4	3	5	5	5	5	3	18	0	4	4	5	5	5	5	5	14	33	
167	16NM1A05H0	1	3	4	5	5	5	5	4	17	4	0	5	5	5	5	5	4	18	34	
168	16NM1A05H1	3	5	4	5	5	5	5	9	26	4	2	3	5	5	5	5	4	18	38	
169	16NM1A05H2	0	5	4	5	5	5	5	5	19	5		3	5	5	5	5	3	16	48	
170	16NM1A05H3	3	0	5	5	5	5	5	4	17	5	1	2	5	5	5	5	6	19	31	
171	16NM1A05H4	3	0	4	5	5	5	5	5	17				5	5	5	5		5	25	
172	16NM1A05H6	0	0	4	5	5	5	5	4	13	4	4	4	5	5	5	5	5	22	33	
173	16NM1A05H7	4	3	1	5	5	5	5	6	19	3	3	5	5	5	5	5	4	15	35	
174	16NM1A05H8	5	4	3	5	5	5	5	3	20	1	4	5	5	5	5	5	4	19	47	
175	16NM1A05H9	4	5	3	5	5	5	5	9	26	0		2	5	5	5	5	6	13	30	
176	17NM5A0501	5	4	5	5	5	5	5	3	22				5	5	5	5		5	52	
177	17NM5A0502	4	5	5	5	5	5	5	7	26	5	3	5	5	5	5	5	5	23	57	
178	17NM5A0503	2	2	5	5	5	5	5	5	19	5	1	1	5	5	5	5	4	16	43	
179	17NM5A0504	5	4	4	5	5	5	5	5	23	1		1	5	5	5	5	2	9	53	
180	17NM5A0505	5	2	4	5	5	5	5	5	21	3	2	3	5	5	5	5	6	19	48	
181	17NM5A0506	3	3	4	5	5	5	5	4	19	3	3	3	5	5	5	5	2	16	43	
182	17NM5A0507	4	3	4	5	5	5	5	5	21	3	2	2	5	5	5	5	6	18	53	
183	17NM5A0508	2	3	5	5	5	5	5	5	20	4	2	2	5	5	5	5	3	16	34	
184	17NM5A0510	5	5	5	5	5	5	5	5	25	5	5	5	5	5	5	5	6	26	49	
185	17NM5A0511	4	4	5	5	5	5	5	4	22	5	4	5	5	5	5	5	3	22	41	
186	17NM5A0512	3	3	3	5	5	5	5	5	19				5	5	5	5		5	57	
187	17NM5A0513	4	4	5	5	5	5	5	5	23	5	5	3	5	5	5	5	3	21	40	
188	17NM5A0514	3	4	5	5	5	5	5	4		4	4	4	5	5	5	5	4		39	
189	14NM1A05D8	4	3	4	5	5	5	5	2					5	5	5	5			40	
Class Target Marks of MID 1										18.00	Class Target Marks of MID 2										18.00
Target										60%	Target										60%
University end Target marks is										28.00	University end Target marks is										28.00

Knowledge Levels MID I					
A	P	P	A	P	P
CO1	CO2	CO3	CO1	CO2	CO3

Knowledge Levels MID II					
P	A	P	P	A	P
CO4	CO5	CO6	CO4	CO5	CO6



Vignans Institute of Engineering for Women  
K. J. Sota, VSEZ (P.O.)  
Visakhapatnam-AP

S.No	Regd.No.	INTERNAL						EXTERNAL
		MID 1			MID 2			University end exam CO1:CO6 70M
		CO1 10M	CO2 10M	CO3 10M	CO4 10M	CO5 10M	CO6 10M	
1	16NM1A0501	6.33	7.33	5.33	4.00	6.00	7.00	37
2	16NM1A0502	7.67	7.67	7.67	1.67	1.67	1.67	34
3	16NM1A0503	8.00	8.00	8.00	5.00	3.00	8.00	45
4	16NM1A0504	8.67	8.67	8.67	8.00	7.00	5.00	57
5	16NM1A0505	6.00	6.00	8.00	5.33	5.33	5.33	62
6	16NM1A0506	7.33	2.33	5.33	1.67	1.67	1.67	42
7	16NM1A0507	7.67	3.67	6.67	2.67	2.67	2.67	28
8	16NM1A0508	8.67	8.67	4.67	3.67	3.67	4.67	47
9	16NM1A0509	7.67	6.67	6.67	7.67	7.67	5.67	55
10	16NM1A0510	8.00	8.00	3.00	6.67	2.67	5.67	37
11	16NM1A0511	7.67	5.67	6.67	6.00	6.00	6.00	38
12	16NM1A0512	8.00	7.00	7.00	1.67	1.67	1.67	36
13	16NM1A0513	8.33	8.33	6.33	6.00	6.00	7.00	47
14	16NM1A0514	7.33	7.33	5.33	5.00	5.00	6.00	37
15	16NM1A0515	9.67	9.67	8.67	3.33	3.33	3.33	59
16	16NM1A0516	6.33	2.33	7.33	1.67	1.67	1.67	40
17	16NM1A0517	8.00	7.00	7.00	3.33	3.33	3.33	38
18	16NM1A0518	8.00	7.00	6.00	3.00	3.00	3.00	26
19	16NM1A0519	7.67	5.67	6.67	1.67	1.67	1.67	39
20	16NM1A0520	8.33	7.33	8.33	7.33	7.33	6.33	48
21	16NM1A0521	7.67	5.67	5.67	1.67	1.67	1.67	52
22	16NM1A0522	9.00	9.00	8.00	2.67	2.67	2.67	26
23	16NM1A0523	8.00	6.00	7.00	3.00	3.00	3.00	47
24	16NM1A0524	8.67	8.67	8.67	1.67	1.67	1.67	51
25	16NM1A0525	8.00	7.00	7.00	1.67	1.67	1.67	48
26	16NM1A0526	8.00	8.00	8.00	3.00	3.00	3.00	37
27	16NM1A0527	7.67	7.67	6.67	6.67	4.67	6.67	48
28	16NM1A0528	7.00	5.00	7.00	1.67	1.67	1.67	47
29	16NM1A0529	8.00	6.00	8.00	6.67	4.67	2.67	50
30	16NM1A0530	8.33	6.33	7.33	8.33	6.33	6.33	36
31	16NM1A0531	8.67	8.67	7.67	6.67	2.67	2.67	58
32	16NM1A0533	9.67	9.67	9.67	1.67	1.67	1.67	46
33	16NM1A0534	8.00	8.00	8.00	1.67	1.67	1.67	46
34	16NM1A0535	8.33	8.33	8.33	1.67	1.67	1.67	45
35	16NM1A0536	6.67	5.67	7.67	1.67	1.67	1.67	50
36	16NM1A0537	8.00	7.00	8.00	9.00	5.00	4.00	3
37	16NM1A0538	7.67	6.67	7.67	8.00	6.00	6.00	4
38	16NM1A0539	8.33	7.33	7.33	6.67	5.67	7.67	4
39	16NM1A0541	7.67	6.67	6.67	6.67	6.67	4.67	37

*Handwritten signature*  
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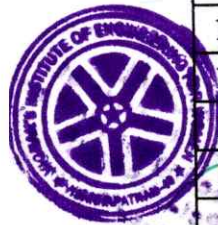


40	16NM1A0542	8.33	6.33	7.33	7.33	5.33	5.33	57
41	16NM1A0543	6.33	8.33	7.33	7.00	3.00	6.00	49
42	16NM1A0544	8.67	6.67	8.67	2.67	2.67	2.67	37
43	16NM1A0545	7.33	6.33	7.33	1.67	1.67	1.67	36
44	16NM1A0546	8.00	7.00	8.00	1.67	1.67	1.67	47
45	16NM1A0547	9.67	9.67	9.67	2.67	2.67	2.67	59
46	16NM1A0548	7.33	5.33	6.33	8.00	7.00	7.00	37
47	16NM1A0549	7.67	7.67	6.67	1.67	1.67	1.67	58
48	16NM1A0550	8.67	9.67	9.67	3.00	3.00	3.00	59
49	16NM1A0551	7.00	6.00	6.00	1.67	1.67	1.67	41
50	16NM1A0552	7.67	6.67	7.67	2.67	2.67	2.67	39
51	16NM1A0553	6.00	6.00	7.00	2.67	2.67	2.67	40
52	16NM1A0554	9.67	9.67	9.67	2.67	2.67	2.67	41
53	16NM1A0555	8.00	6.00	6.00	3.00	3.00	3.00	40
54	16NM1A0556	8.33	8.33	7.33	8.00	6.00	7.00	48
55	16NM1A0557	8.33	8.33	8.33	3.33	3.33	3.33	57
56	16NM1A0558	7.67	5.67	7.67	8.33	6.33	6.33	49
57	16NM1A0559	7.67	2.67	7.67	3.00	3.00	3.00	47
58	16NM1A0560	8.00	8.00	8.00	2.67	2.67	2.67	49
59	16NM1A0561	8.33	8.33	8.33	1.67	1.67	1.67	38
60	16NM1A0562	7.67	7.67	7.67	3.00	3.00	3.00	46
61	16NM1A0563	7.67	6.67	7.67	3.00	3.00	3.00	46
62	16NM1A0564	8.00	8.00	5.50	7.33	6.33	6.33	49
63	16NM1A0565	8.67	8.67	9.67	4.33	5.83	6.33	39
64	16NM1A0566	6.67	6.67	6.67	3.00	3.00	3.00	34
65	16NM1A0567	7.67	7.67	7.67	3.33	3.33	3.33	59
66	16NM1A0568	7.67	6.67	6.67	6.67	6.17	6.67	39
67	16NM1A0569	9.67	8.67	9.67	3.00	3.00	3.00	35
68	16NM1A0570	7.67	7.67	7.67	3.00	3.00	3.00	52
69	16NM1A0571	9.67	8.67	9.67	9.33	6.33	4.33	37
70	16NM1A0572	6.67	6.67	6.67	7.00	3.00	6.00	50
71	16NM1A0573	7.67	7.67	6.67	4.67	1.67	4.67	43
72	16NM1A0574	6.00	3.00	3.00	3.00	3.00	3.00	9
73	16NM1A0575	8.00	8.00	8.00	2.33	2.33	2.33	51
74	16NM1A0576	9.67	9.67	9.67	2.33	2.33	2.33	41
75	16NM1A0577	7.67	7.67	6.67	3.33	3.33	3.33	37
76	16NM1A0578	8.33	8.33	5.83	1.67	1.67	1.67	59
77	16NM1A0579	7.33	7.33	4.83	3.00	3.00	3.00	38
78	16NM1A0581	7.67	7.67	6.67	3.00	3.00	3.00	40
79	16NM1A0582	8.00	7.00	5.50	2.33	2.33	2.33	31
80	16NM1A0583	7.67	7.67	6.17	2.33	2.33	2.33	42
81	16NM1A0584	9.67	9.67	2.67	2.67	2.67	2.67	32
82	16NM1A0585	8.67	8.67	9.67	2.33	2.33	2.33	28

83.	16NM1A0586	7.17	7.67	6.67	6.33	5.83	6.33	20
84	16NM1A0587	8.33	8.33	8.33	3.00	3.00	3.00	60
85	16NM1A0588	8.00	7.00	7.50	6.17	6.17	6.67	38
86	16NM1A0589	8.67	8.67	8.67	7.67	5.67	6.67	39
87	16NM1A0590	8.67	6.67	7.17	6.67	6.67	7.17	42
88	16NM1A0591	6.67	6.67	6.67	3.67	3.67	3.67	38
89	16NM1A0592	9.67	9.67	9.67	6.67	6.67	6.67	42
90	16NM1A0593	8.33	8.33	6.33	3.33	3.33	3.33	37
91	16NM1A0594	7.67	7.17	7.67	3.67	3.67	3.67	38
92	16NM1A0595	8.33	7.33	5.33	2.67	2.67	2.67	61
93	16NM1A0596	8.00	8.00	8.00	3.33	3.33	3.33	47
94	16NM1A0597	8.00	8.00	7.00	6.17	6.17	5.67	49
95	16NM1A0598	8.33	8.33	8.33	2.33	2.33	2.33	35
96	16NM1A0599	7.00	8.00	7.50	3.00	3.00	3.00	33
97	16NM1A05A0	8.67	8.67	9.67	3.67	3.67	3.67	31
98	16NM1A05A1	8.67	8.67	6.17	3.33	3.33	7.33	43
99	16NM1A05A2	7.67	7.67	5.67	1.67	1.67	1.67	32
100	16NM1A05A3	8.00	7.50	4.50	2.67	2.67	2.67	52
101	16NM1A05A4	7.67	6.67	5.67	3.00	3.00	3.00	39
102	16NM1A05A5	9.67	8.67	9.67	4.67	3.67	6.67	38
103	16NM1A05A7	9.00	9.00	6.00	3.33	3.33	3.33	27
104	16NM1A05A8	7.67	8.67	5.17	3.00	3.00	3.00	60
105	16NM1A05A9	8.33	7.33	4.83	7.00	6.00	4.00	20
106	16NM1A05B0	8.33	7.83	8.33	2.67	2.67	2.67	37
107	16NM1A05B1	7.67	6.67	6.17	3.00	3.00	3.00	40
108	16NM1A05B2	5.67	7.67	5.67	3.00	3.00	3.00	40
109	16NM1A05B3	9.67	8.67	9.67	7.50	3.00	6.00	49
110	16NM1A05B4	7.17	8.67	8.67	7.83	6.33	6.33	46
111	16NM1A05B5	7.67	7.17	7.67	8.17	7.67	7.67	49
112	16NM1A05B6	8.00	8.00	7.00	7.67	7.67	4.67	54
113	16NM1A05B7	7.00	6.00	5.00	3.33	3.33	3.33	7
114	16NM1A05B8	8.00	7.50	8.00	8.67	7.67	8.67	47
115	16NM1A05B9	8.00	8.00	8.00	2.67	2.67	2.67	37
116	16NM1A05C0	8.00	7.00	7.00	3.33	3.33	3.33	47
117	16NM1A05C1	8.00	8.00	8.00	2.67	2.67	2.67	58
118	16NM1A05C2	8.00	8.00	8.00	3.33	3.33	3.33	47
119	16NM1A05C3	8.00	8.00	8.00	3.00	3.00	3.00	48
120	16NM1A05C4	7.00	8.00	7.50	7.67	7.67	5.67	48
121	16NM1A05C5	8.00	8.00	7.50	7.67	7.67	7.67	69
122	16NM1A05C6	6.33	6.83	4.33	5.33	4.83	6.33	38
123	15NM1A05A7	7.17	5.67	6.67	7.67	6.67	6.67	38
124	16NM1A05C7	7.67	6.67	5.67	7.67	5.67	7.67	49
125	16NM1A05C8	6.00	5.00	7.00	3.67	2.67	4.67	44



126	16NM1A05C9	8.33	7.33	8.33	1.67	1.67	1.67	51
127	16NM1A05D0	8.00	7.00	7.00	6.00	5.00	5.00	42
128	16NM1A05D1	6.33	8.33	8.33	7.67	2.67	2.67	42
129	16NM1A05D2	4.67	5.67	2.33	7.33	4.33	5.33	31
130	16NM1A05D3	7.67	2.67	5.67	6.33	6.33	5.33	35
131	16NM1A05D4	8.00	7.00	7.00	6.33	6.33	6.33	38
132	16NM1A05D5	7.67	7.67	6.67	7.00	8.00	8.00	46
133	16NM1A05D6	5.67	9.67	9.67	2.33	3.33	5.33	32
134	16NM1A05D7	6.67	6.67	6.67	1.67	1.67	1.67	52
135	16NM1A05D8	8.33	8.33	6.33	7.67	2.67	5.67	43
136	16NM1A05D9	6.67	6.67	6.67	7.33	4.33	4.33	44
137	16NM1A05E0	6.33	5.33	7.33	8.00	3.00	3.00	39
138	16NM1A05E1	6.00	6.00	5.00	7.33	7.33	6.33	51
139	16NM1A05E2	7.00	6.00	7.00	5.00	3.00	6.00	33
140	16NM1A05E3	7.33	7.33	7.33	1.67	1.67	1.67	42
141	16NM1A05E4	8.67	9.67	8.67	5.00	5.00	5.00	26
142	16NM1A05E5	7.67	6.67	9.67	5.33	5.33	3.33	42
143	16NM1A05E6	7.33	3.33	7.33	5.67	5.67	2.67	25
144	16NM1A05E7	8.00	7.00	8.00	1.67	1.67	1.67	52
145	16NM1A05E8	7.00	5.00	6.00	2.33	6.33	5.33	14
146	16NM1A05E9	6.33	6.33	7.33	3.67	3.67	7.67	51
147	16NM1A05F0	7.33	6.33	5.33	8.00	3.67	3.67	50
148	16NM1A05F1	8.67	7.67	9.67	4.67	5.67	6.67	42
149	16NM1A05F2	7.67	2.67	6.67	4.00	4.00	9.00	62
150	16NM1A05F3	7.00	3.00	7.00	3.33	3.33	8.33	41
151	16NM1A05F4	5.33	5.33	5.33	1.67	1.67	1.67	45
152	16NM1A05F5	5.67	6.67	3.67	3.67	4.67	2.67	41
153	16NM1A05F6	6.67	5.67	6.67	6.33	5.33	6.33	59
154	16NM1A05F7	7.67	6.67	6.67	1.67	1.67	1.67	47
155	16NM1A05F8	5.33	5.33	7.33	5.67	2.67	2.67	42
156	16NM1A05F9	7.33	6.33	7.33	7.00	3.00	3.00	32
157	16NM1A05G0	8.33	8.33	7.33	8.00	7.00	7.00	49
158	16NM1A05G1	6.33	3.33	8.33	5.33	3.33	6.33	52
159	16NM1A05G2	7.33	7.33	7.33	6.33	6.33	6.33	48
160	16NM1A05G3	7.67	6.67	7.67	1.67	1.67	1.67	49
161	16NM1A05G4	7.67	5.67	7.67	1.67	1.67	1.67	49
162	16NM1A05G5	7.67	9.67	5.67	3.33	6.33	5.33	23
163	16NM1A05G6	6.33	6.33	6.33	4.67	5.67	8.67	42
164	16NM1A05G7	8.00	6.00	6.00	5.00	9.00	6.00	48
165	16NM1A05G8	8.33	8.33	7.33	1.67	1.67	1.67	48
166	16NM1A05G9	5.67	6.67	5.67	3.33	3.33	7.33	33
167	16NM1A05H0	4.00	6.00	7.00	7.00	3.00	8.00	34
168	16NM1A05H1	7.67	9.67	8.67	7.00	5.00	6.00	38



329  
 P.F. No. 16/2019  
 Engineering Department  
 2019

169	16NM1A05H2	3.33	8.33	7.33	7.67	2.67	5.67	48
170	16NM1A05H3	6.00	3.00	8.00	8.67	4.67	5.67	31
171	16NM1A05H4	6.33	3.33	7.33	1.67	1.67	1.67	25
172	16NM1A05H6	3.00	3.00	7.00	7.33	7.33	7.33	33
173	16NM1A05H7	7.67	6.67	4.67	6.00	3.00	6.00	35
174	16NM1A05H8	7.67	6.67	5.67	4.00	7.00	8.00	47
175	16NM1A05H9	8.67	9.67	7.67	3.67	3.67	5.67	30
176	17NM5A0501	7.67	6.67	7.67	1.67	1.67	1.67	52
177	17NM5A0502	8.00	9.00	9.00	8.33	6.33	8.33	57
178	17NM5A0503	5.33	5.33	8.33	8.00	4.00	4.00	43
179	17NM5A0504	8.33	7.33	7.33	3.33	2.33	3.33	53
180	17NM5A0505	8.33	5.33	7.33	6.67	5.67	6.67	48
181	17NM5A0506	6.00	6.00	7.00	5.33	5.33	5.33	43
182	17NM5A0507	7.33	6.33	7.33	6.67	5.67	5.67	53
183	17NM5A0508	5.33	6.33	8.33	6.67	4.67	4.67	34
184	17NM5A0510	8.33	8.33	8.33	8.67	8.67	8.67	49
185	17NM5A0511	7.00	7.00	8.00	7.67	6.67	7.67	41
186	17NM5A0512	6.33	6.33	6.33	1.67	1.67	1.67	57
187	17NM5A0513	7.33	7.33	8.33	7.67	7.67	5.67	40
188	17NM5A0514	6.00	7.00	8.00	7.00	7.00	7.00	39
189	14NM1A05D8	6.33	5.33	6.33	1.67	1.67	1.67	40
Average of COs		7.60	7.07	7.18	4.49	3.91	4.28	
CO Wise Max Marks		10.00	10.00	10.00	10.00	10.00	10.00	
Competance of Target		6.00	6.00	6.00	6.00	6.00	6.00	

249

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Vizakhapatnam-49



VIGNANI'S INSTITUTE OF ENGINEERING FOR WOMEN  
K.J. PETA, VSEZ (P.O.)  
VIZAKHAPATNAM-49



Total No.of Students	189	
Target is	60%	
Class Average Marks of MID 1	18.00	
Bench Mark	Target Students	Target level
If 60 % students got more than Target	113	1
If 70 % students got more than Target	132	2
If 80 % students got more than Target	151	3

Attained for COs	Students attained	Attained level
Students attained CO1	173	3
Students attained CO2	154	3
Students attained CO3	154	3

Target is	60%	
Class Average Marks of MID 2	18.00	
Attained for COs	Students attained	Attained level
Students attained CO4	67	0
Students attained CO5	41	0
Students attained CO6	57	0

University Exam Assessment	70	
Target is	40%	
Target Mark	28	
No of students attended	189	
No. of students attained	176	
Students above the Target	Target Students	Target level
University Exam	176	3

Indirect Assessment - Average for CO's					
CO1	CO2	CO3	CO4	CO5	CO6
2.60	2.73	2.60	2.70	2.70	2.62

310  
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 Visakhapatnam-49



### Indirect Assessment - Course End Survey

Course Name: Concurrent and Parallel Programming	Course Code: C411	Admitted Batch: 2016
Year/ Sem : IV B TECH II SEM	Regulation: R16	Academic Year: 2019-20

S.No.	Reg.No.	CO1	CO2	CO3	CO4	CO5	CO6
1	16NM1A0501	3	3	3	2	2	3
2	16NM1A0502	2	3	3	3	3	1
3	16NM1A0503	3	3	1	3	1	3
4	16NM1A0504	1	3	2	3	3	3
5	16NM1A0505	3	3	3	3	3	3
6	16NM1A0506	3	3	2	3	3	3
7	16NM1A0507	3	3	3	3	3	3
8	16NM1A0509	3	3	3	3	3	3
9	16NM1A0510	2	3	2	3	3	3
10	16NM1A0511	3	3	1	3	1	3
11	16NM1A0512	1	3	3	3	3	2
12	16NM1A0513	3	2	3	2	1	3
13	16NM1A0514	3	3	3	3	3	1
14	16NM1A0516	3	3	2	3	2	3
15	16NM1A0517	3	3	3	3	3	2
16	16NM1A0518	2	3	3	2	3	3
17	16NM1A0521	3	3	2	3	2	3
18	16NM1A0522	3	2	3	3	3	3
19	16NM1A0523	3	3	3	3	3	3
20	16NM1A0524	3	2	3	0	2	3
21	16NM1A0525	3	3	3	3	3	1
22	16NM1A0527	1	1	1	3	3	1
23	16NM1A0530	3	3	2	3	3	3
24	16NM1A0533	3	3	3	3	3	3
25	16NM1A0536	3	3	3	3	3	3
26	16NM1A0539	3	3	3	3	3	3
27	16NM1A0543	3	3	3	1	2	3
28	16NM1A0544	3	0	3	3	3	3
29	16NM1A0547	3	3	1	3	3	3
30	16NM1A0548	1	3	3	3	3	2
31	16NM1A0549	3	3	2	3	3	3
32	16NM1A0551	3	2	3	2	3	3
33	16NM1A0553	3	2	2	3	2	3
34	16NM1A0555	3	3	3	3	3	3
35	16NM1A0556	3	3	3	2	3	3
36	16NM1A0557	2	3	1	3	3	3
37	16NM1A0558	3	3	3	1	1	3
38	16NM1A0559	3	3	3	3	3	1



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39	16NM1A0560	1	3	3	1	3	3
40	16NM1A0562	3	3	3	3	1	3
41	16NM1A0563	1	3	3	3	3	3
42	16NM1A0564	3	3	3	3	3	3
43	16NM1A0565	2	3	1	3	3	1
44	16NM1A0566	3	3	3	3	3	3
45	16NM1A0567	3	3	3	3	3	3
46	16NM1A0568	3	2	3	2	3	2
47	16NM1A0569	3	3	2	3	3	3
48	16NM1A0570	3	3	3	3	3	3
49	16NM1A0571	3	3	3	3	3	3
50	16NM1A0572	3	3	1	3	3	3
51	16NM1A0573	2	3	3	3	3	2
52	16NM1A0575	3	3	1	3	3	3
53	16NM1A0577	3	1	3	1	1	3
54	16NM1A0578	3	3	2	3	3	3
55	16NM1A0579	3	3	3	3	3	1
56	16NM1A0581	2	3	3	1	3	3
57	16NM1A0582	3	3	3	3	2	0
58	16NM1A0583	1	1	1	3	3	3
59	16NM1A0585	3	3	3	2	3	3
60	16NM1A0586	0	3	2	3	3	3
61	16NM1A0589	3	3	3	3	3	3
62	16NM1A0591	3	3	3	3	3	3
63	16NM1A0593	3	3	3	1	3	3
64	16NM1A0594	3	3	2	3	3	2
65	16NM1A0595	3	3	3	1	3	3
66	16NM1A0597	3	3	3	3	3	3
67	16NM1A05A0	2	3	3	3	1	2
68	16NM1A05A1	3	3	3	3	3	3
69	16NM1A05A3	3	3	3	3	1	3
70	16NM1A05A4	3	3	3	3	3	1
71	16NM1A05A5	1	3	1	3	1	3
72	16NM1A05A7	3	3	3	3	3	3
73	16NM1A05A9	2	3	3	3	3	3
74	16NM1A05B3	3	2	1	3	3	1
75	16NM1A05B4	2	3	3	3	3	3
76	16NM1A05B6	3	3	3	3	2	1
77	16NM1A05B7	2	3	3	3	3	3
78	16NM1A05B8	3	3	2	3	1	3
79	16NM1A05B9	3	3	1	3	1	3
80	16NM1A05C0	1	3	3	3	3	3
81	16NM1A05C1	3	3	1	3	3	3
82	16NM1A05C2	3	3	3	3	3	3

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83	16NM1A05C3	3	3	3	3	3	2
84	16NM1A05C4	3	2	3	3	3	3
85	16NM1A05C5	3	3	2	1	2	3
86	16NM1A05C6	3	3	3	3	3	3
87	15NM1A05A7	2	1	3	3	1	3
88	16NM1A05C8	3	3	3	3	3	3
89	16NM1A05C9	1	3	1	3	3	3
90	16NM1A05D0	3	1	3	3	3	2
91	16NM1A05D1	2	0	3	2	3	3
92	16NM1A05D3	3	3	2	3	3	3
93	16NM1A05D4	3	3	3	3	3	3
94	16NM1A05D5	3	3	3	3	3	3
95	16NM1A05D6	3	3	3	1	3	3
96	16NM1A05D8	1	3	3	3	3	3
97	16NM1A05D9	3	3	3	1	3	3
98	16NM1A05E0	3	1	2	3	3	3
99	16NM1A05E1	1	3	3	3	3	2
100	16NM1A05E3	3	1	1	3	2	3
101	16NM1A05E4	3	3	3	3	3	1
102	16NM1A05E5	3	3	3	3	3	3
103	16NM1A05E7	3	3	2	3	3	1
104	16NM1A05E8	3	3	3	3	3	3
105	16NM1A05F0	3	3	3	3	3	3
106	16NM1A05F1	3	3	1	3	3	3
107	16NM1A05F3	3	3	3	3	3	3
108	16NM1A05F4	3	3	3	3	3	3
109	16NM1A05F5	1	3	2	3	3	3
110	16NM1A05F6	3	3	3	3	3	3
111	16NM1A05F8	1	3	1	3	3	3
112	16NM1A05F9	3	3	3	3	3	3
113	16NM1A05G1	2	3	2	3	1	3
114	16NM1A05G2	3	3	3	3	3	2
115	16NM1A05G3	2	3	3	3	3	3
116	16NM1A05G4	3	3	3	3	3	2
117	16NM1A05G6	3	3	3	3	3	1
118	16NM1A05G7	3	3	2	3	1	3
119	16NM1A05G8	3	3	3	3	3	3
120	16NM1A05G9	1	3	3	3	3	3
121	16NM1A05H0	3	3	3	3	3	3
122	16NM1A05H2	3	3	3	3	1	3
123	16NM1A05H3	2	3	3	3	3	3
124	16NM1A05H4	3	1	3	3		
125	16NM1A05H6	3	2	3	3		
126	16NM1A05H8	2	3	3	2		



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127	16NM1A05H9	2	3	3	1	3	1
128	17NM5A0501	3	3	3	3	3	3
129	17NM5A0502	3	2	3	3	3	2
130	17NM5A0503	3	0	3	2	3	3
131	17NM5A0505	2	3	3	1	3	1
132	17NM5A0506	3	3	3	3	3	3
133	17NM5A0507	3	1	3	3	3	2
134	17NM5A0508	2	2	3	3	3	3
135	17NM5A0511	3	3	3	1	1	3
136	17NM5A0512	3	3	3	3	3	1
137	17NM5A0513	1	3	3	1	3	3
138	17NM5A0514	3	3	2	3	3	1
139	14NM1A05D8	2	3	3	2	3	3
	<b>Average</b>	<b>2.60</b>	<b>2.73</b>	<b>2.60</b>	<b>2.70</b>	<b>2.70</b>	<b>2.62</b>

Strongly Agree	3
Agree	2
Partially Agree	1

*Handwritten signature in green ink.*

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*Faint handwritten text and a circular stamp at the bottom left of the page.*

## Course Attainment Calculation

Course Name: Concurrent and Parallel Programming	Course Code: C411	Admitted Batch: 2016
Year/ Sem : IV B TECH II SEM	Regulation: R16	Academic Year: 2019-20
Course Coordinator : Mrs.B.Madhavi		
Faculty: Dr.P.Vijaya Bharati, Mrs.B.Madhavi, Mrs.B.Madhavi		

	Direct Attainment		Indirect Attainment	
	Internal	University	Feedback	
CO1	3	3	CO1	2.60
CO2	3	3	CO2	2.73
CO3	3	3	CO3	2.60
CO4	0	3	CO4	2.70
CO5	0	3	CO5	2.70
CO6	0	3	CO6	2.62
Average	1.50	3.00		
Weightage	30%	70%		
Attainment	0.45	2.1		
<b>Final Direct Attainment</b>	<b>2.55</b>		<b>Final Indirect Attainment</b>	
Weightage	80%		<b>2.66</b>	
Attainment	2.04			
<b>Course Attainment</b>	<b>2.57</b>			

	CO PO MAPPING & ATTAINMENT											
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	-	-	-	-	-	-	-	-	-	-
CO2	3	3	-	2	-	-	-	2	-	-	2	2
CO3	3	3	3	3	-	-	-	2	-	-	3	3
CO4	3	2	-	-	-	-	-	-	-	-	-	-
CO5	3	3	3	2	3	-	-	-	-	-	2	2
CO6	3	2	2	-	2	-	-	-	-	-	-	-
<b>Average</b>	<b>3.00</b>	<b>2.67</b>	<b>2.67</b>	<b>2.33</b>	<b>2.50</b>	<b>-</b>	<b>-</b>	<b>2.00</b>	<b>-</b>	<b>-</b>	<b>2.33</b>	<b>2.33</b>
<b>Course - PO Attainment</b>	<b>2.57</b>	<b>2.29</b>	<b>2.29</b>	<b>2.00</b>	<b>2.14</b>	<b>-</b>	<b>-</b>	<b>1.71</b>	<b>-</b>	<b>-</b>	<b>2.00</b>	<b>2.00</b>



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Course Attainment \* Average of PO

3

Course PO Attainment =

## Course Attainment Calculation

Course Name: Concurrent and Parallel Programming	Course Code: C411	Admitted Batch: 2016
Year/ Sem : IV B TECH II SEM	Regulation: R16	Academic Year: 2019-20
Faculty: Dr.P.Vijaya Bharati, Mrs.B.Madhavi, Mrs.B.Madhavi		
Course Coordinator : Mrs.B.Madhavi		

	Direct Attainment		Indirect Attainment	
	Internal	University	Feedback	
CO1	3	3	CO1	2.60
CO2	3	3	CO2	2.75
CO3	3	3	CO3	2.60
CO4	0	3	CO4	2.71
CO5	0	3	CO5	2.70
CO6	0	3	CO6	2.63
Average	1.50	3.00		
Weightage	30%	70%		
Attainment	0.45	2.1		
<b>Final Direct Attainment</b>	<b>2.55</b>		<b>Final Indirect Attainment</b>	<b>2.66</b>
Weightage	80%			20%
Attainment	2.04			0.53
<b>Course Attainment</b>	<b>2.57</b>			

CO PO MAPPING & ATTAINMENT														
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	3	-	-	-	-	-	-	-	-	-	-	3	2
CO2	3	3	-	3	-	-	-	-	-	-	-	-	3	2
CO3	3	3	3	3	-	-	-	-	-	-	-	-	3	2
CO4	3	2	-	-	-	-	-	-	-	-	-	-	3	2
CO5	3	3	3	3	3	-	-	-	-	-	-	-	3	2
CO6	3	2	2	-	2	-	-	-	-	-	-	-	3	2
<b>Average</b>	<b>3.00</b>	<b>2.67</b>	<b>2.67</b>	<b>3.00</b>	<b>2.50</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>3.00</b>	<b>2.00</b>
<b>Course - PO Attainment</b>	<b>2.57</b>		<b>2.29</b>	<b>2.57</b>	<b>2.14</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2.57</b>	<b>1.72</b>



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Course PO Attainment –                      Course Attainment \* Average of PO                       
3



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**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**COURSE FILE CONTENTS**

1. Department Vision and Mission
2. Program Outcomes
3. Course Syllabus
4. CO-PO-PSO mapping
5. Course end survey questions
6. University Academic calendar
7. Department Academic calendar
8. Lecture plan
9. Class time table
10. Course time table
11. Internal Q.P and SoE
12. External Q.P and SoE
13. Result analysis at the end of semester
14. Course Attainment
15. Lab Manual
16. Program Beyond Syllabus

**HEAD OF THE DEPARTMENT**

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Computer Science & Engineering  
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### DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

#### Vision-Institute

To be a leading institution of women empowerment producing internationally accepted professionals with psychological strength, emotional balance and ethical values

#### Mission- Institute

**M1:** To empower women engineers through innovative teaching-learning practices.

**M2:** To encourage for higher education and research with well-equipped laboratories.

**M3:** To promote entrepreneurship through creativity and innovation.

**M4:** To promote environmental sustainability and inculcate ethical, emotional and social consciousness

#### Vision-Computer Science and Engineering

To evolve into a centre of excellence and to empower women in emerging areas of Computer Science and Engineering with human values

#### Mission-Computer Science and Engineering

**M1:** To train students to analyze, design, develop and test software applications

**M2:** To impart technical expertise in sustaining the needs of the IT industry

**M3:** To foster research activities and entrepreneurial skills in emerging technologies

**M4:** To inculcate lifelong learning skills in line with technological advancement and social consciousness

#### Program Specific Outcomes

**PSO 1:** Graduates exhibit knowledge of basic sciences, skills in engineering specialization like information security, cloud computing, networking, software engineering and data analytics.

**PSO 2:** Graduates can adapt to evolving technologies for the design and development of full-stack applications in diversified fields with optimal programming skills.

#### Program Educational Objectives

**PEO1:** Graduates are able to lead the diverse range of careers in IT sectors and initiate entrepreneurship in Software development.

**PEO2:** Graduates are able to excel in higher studies and research in emerging areas of Computer Science Engineering.

**PEO3:** Graduates are able to possess continuous learning by adapting to technological trends to help society with ethical values.

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## Program Outcomes

Engineering Graduates will be able to:

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.



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## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING SYLLABUS

Course Name: WEB TECHNOLOGIES LAB	Course Code: C408
Year/ Sem: IV B TECH I SEM	Regulation: R16

### OBJECTIVES:

- To acquire knowledge of XHTML, Java Script and XML to develop web applications
- Ability to develop dynamic web content using Java Servlets and JSP
- To understand JDBC connections and Java Mail API
- To understand the design and development process of a complete web application

### Programming:

1. Design the following static web pages required for an online book store web site.

#### 1) HOME PAGE:

The static home page must contain three frames.

Top frame: Logo and the college name and links to Home page, Login page, Registration page, Catalogue page and Cart page (the description of these pages will be given below).

Left frame: At least four links for navigation, which will display the catalogue of respective links.

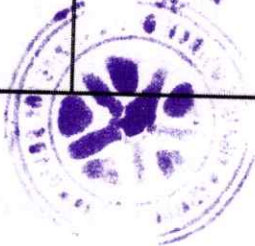
For e.g.: When you click the link "MCA" the catalogue for MCABooks should be displayed in the Right frame.

Right frame: The pages to the links in the left frame must be loaded here. Initially this page contains description of the web site.

Logo	Web Site Name			
Home	Login	Registration	Catalogue	Cart
mca mba BCA	Description of the Web Site			

#### 2) login page

Logo	Web Site Name			
Home	Login	Registration	Catalogue	Cart
MCA MBA BCA	<p>Login : <input type="text" value="11a51f0003"/></p> <p>Password: <input type="password" value="*****"/></p> <p><input type="button" value="Submit"/> <input type="button" value="Reset"/></p>			







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### 3) CATALOGUE PAGE:

The catalogue page should contain the details of all the books available in the web site in a table. The details should contain the following:

1. Snap shot of Cover Page.
2. Author Name.
3. Publisher.
4. Price.
5. Add to cart button.

Web Site Name					
Logo	Home	Login	Registration	Catalogue	Cart
MCA			Book : XML Bible Author : Winston Publication : Wiely	\$ 40.5	<input type="button" value="Add to cart"/>
MBA					
BCA			Book : AI Author : S.Russet Publication : Princeton hall	\$ 63	<input type="button" value="Add to cart"/>
			Book : Java 2 Author : Watson Publication : BPB publications	\$ 35.5	<input type="button" value="Add to cart"/>
			Book : HTML in 24 hours Author : Sam Peter Publication : Sam	\$ 50	<input type="button" value="Add to cart"/>

### 4. REGISTRATION PAGE:

Create a "registration form" with the following fields

- 1) Name (Text field)
- 2) Password (password field)
- 3) E-mail id (text field)
- 4) Phone number (text field)
- 5) Sex (radio button)
- 6) Date of birth (3 select boxes)
- 7) Languages known (check boxes – English, Telugu, Hindi, Tamil)
- 8) Address (text area)

### 5. Design a web page using CSS (Cascading Style Sheets) which includes the following:

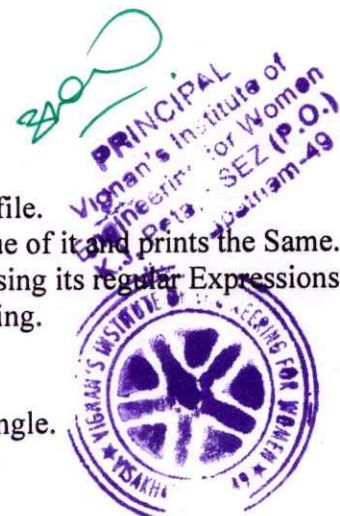
- 1) Use different font, styles: In the style definition you define how each selector should work (font, color etc.). Then, in the body of your pages, you refer to these selectors to activate the styles

### 6. Write an XML file which will display the Book information which includes the following:

- 1) Title of the book
- 2) Author Name
- 3) ISBN number
- 4) Publisher name
- 5) Edition
- 6) Price

Write a Document Type Definition (DTD) to validate the above XML file.

7. Write Ruby program reads a number and calculates the factorial value of it and prints the Same.
8. Write a Ruby program which counts number of lines in a text files using its regular Expressions facility.
9. Write a Ruby program that uses iterator to find out the length of a string.
10. Write simple Ruby programs that uses arrays in Ruby.
11. Write programs which uses associative arrays concept of Ruby.
12. Write Ruby program which uses Math module to find area of a triangle.





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## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### CO-PO-PSO MAPPING

Course Name: <b>Web Technologies Lab</b>	Course Code: <b>C408</b>
Year/ Sem : <b>IV B TECH I SEM</b>	Regulation: <b>R16</b>
Admitted Batch: <b>2018</b>	Academic Year: <b>2021-22</b>
Course Coordinator : <b>Dr.P. Vijaya Bharati</b>	

### COURSE OUTCOMES

CO	DESCRIPTION (Knowledge level)
C408.1	<b>Develop</b> Web pages using HTML.(K3)
C408.2	<b>Use</b> DTD, XSD for Validating XML pages and apply styles using XSL. (K3)
C408.3	<b>Write</b> simple programs using RUBY programming Language. (K3)
C408.4	<b>Connect</b> databases using PERL programming Language. (K4)
C408.5	<b>Apply</b> the knowledge of PHP programming to develop dynamic Web Pages. (K3)
C408.6	<b>Test</b> user's sessions using HTTP protocol. (K4)

### PROGRAM SPECIFIC OUTCOMES

PSO1	Graduates exhibit knowledge and skills in information security, cloud computing, networking, software engineering and data analytics.
PSO2	Graduates can adapt to evolving technologies for design and development of full stack applications, exploring with optimal programming skills

CO	PO												PSO	
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C408.1	3	-	3	-	3	3	-	2	2	-	-	3	3	2
C408.2	3	-	-	3	3	-	-	3	3	-	-	-	3	2
C408.3	3	3	-	3	3	-	2	3	-	-	-	-	-	2
C408.4	3	3	3	-	3	2	-	3	-	2	-	2	3	2
C408.5	3	3	3	-	3	2	3	3	2	2	-	2	3	2
C408.6	3	3	3	3	3	3	-	3	3	3	-	3	3	2
<b>Average</b>	<b>3.00</b>	<b>3.00</b>	<b>3.00</b>	<b>3.00</b>	<b>3.00</b>	<b>2.50</b>	<b>2.50</b>	<b>2.83</b>	<b>2.50</b>	<b>2.33</b>	<b>-</b>	<b>2.50</b>	<b>3.00</b>	<b>2.0</b>

Course Coordinator

Head of the Department

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## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### CO-PO-PSO MAPPING

Course Name: <b>Web Technologies Lab</b>	Course Code: <b>C408</b>
Year/ Sem : <b>IV B TECH I SEM</b>	Regulation: <b>R16</b>
Admitted Batch: <b>2017</b>	Academic Year: <b>2020-21</b>
Course Coordinator : <b>Mrs.P.Vijaya Bharati</b>	

### COURSE OUTCOMES

CO	DESCRIPTION (Knowledge level)
C408.1	<b>Develop</b> Web pages using HTML.(K3)
C408.2	<b>Use</b> DTD, XSD for Validating XML pages and apply styles using XSL. (K3)
C408.3	<b>Write</b> simple programs using RUBY programming Language. (K3)
C408.4	<b>Connect</b> databases using PERL programming Language. (K4)
C408.5	<b>Apply</b> the knowledge of PHP programming to develop dynamic Web Pages. (K3)
C408.6	<b>Test</b> user's sessions using HTTP protocol. (K4)

### PROGRAM SPECIFIC OUTCOMES

PSO1	Graduates exhibit knowledge and skills in information security, cloud computing, networking, software engineering and data analytics.
PSO2	Graduates can adapt to evolving technologies for design and development of full stack applications, exploring with optimal programming skills

CO	PO												PSO	
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSC
C408.1	3	-	3	-	3	3	-	2	2	-	-	3	3	2
C408.2	3	-	-	3	3	-	-	3	3	-	-	-	3	2
C408.3	3	3	-	3	3	-	2	3	-	-	-	-	-	2
C408.4	3	3	3	-	3	2	-	3	-	2	-	2	3	2
C408.5	3	3	3	-	3	2	3	3	2	2	-	2	3	2
C408.6	3	3	3	3	3	3	-	3	3	3	-	3	3	2
Average	3.00	3.00	3.00	3.00	3.00	2.50	2.50	2.83	2.50	2.33	-	2.50	3.00	2.0

Course Coordinator

Head of the Department



Principal

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Engineering for Women  
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Visakhapatnam-49

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Kapujaggarajupeta, VSEZ(Post), Visakhapatnam-530049, AP

## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### CO-PO-PSO MAPPING

Course Name: <b>Web Technologies Lab</b>	Course Code: <b>C408</b>
Year/ Sem : <b>IV B TECH I SEM</b>	Regulation: <b>R16</b>
Admitted Batch: <b>2016</b>	Academic Year: <b>2019-20</b>
Course Coordinator : <b>Mrs.P.Vijaya Bharati</b>	

### COURSE OUTCOMES

CO	DESCRIPTION (Knowledge level)
C408.1	<b>Develop</b> Web pages using HTML.(K3)
C408.2	<b>Use</b> DTD, XSD for Validating XML pages and apply styles using XSL. (K3)
C408.3	<b>Write</b> simple programs using RUBY programming Language. (K3)
C408.4	<b>Connect</b> databases using PERL programming Language. (K4)
C408.5	<b>Apply</b> the knowledge of PHP programming to develop dynamic Web Pages. (K3)
C408.6	<b>Test</b> user's sessions using HTTP protocol. (K4)

### PROGRAM SPECIFIC OUTCOMES

PSO1	Graduates exhibit knowledge and skills in information security, cloud computing, networking, software engineering and data analytics.
PSO 2	Graduates can adapt to evolving technologies for design and development of full stack applications, exploring with optimal programming skills

CO	PO												PSO	
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C408.1	2	-	3	3	3	3	-	2	2	-	-	3	3	2
C408.2	2	-	-	3	3	-	-	3	3	-	-	-	3	2
C408.3	3	3	-	2	3	-	2	3	-	-	-	-	-	2
C408.4	3	3	3	3	3	2	-	3	-	2	-	2	3	2
C408.5	3	3	3	3	3	2	3	3	2	2	-	2	3	2
C408.6	3	3	3	3	3	3	-	3	3	3	-	3	3	2
Average	<b>2.67</b>	<b>3.00</b>	<b>3.00</b>	<b>2.83</b>	<b>3.00</b>	<b>2.50</b>	<b>2.50</b>	<b>2.83</b>	<b>2.50</b>	<b>2.33</b>	<b>-</b>	<b>2.50</b>	<b>3.00</b>	<b>2.0</b>

Course Coordinator



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Head of the Department

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**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**COURSE END SURVEY QUESTIONS**

Course Name: <b>Web Technologies Lab</b>	Course Code: <b>C408</b>
Year/ Sem : <b>IV B TECH I SEM</b>	Regulation: <b>R16</b>


CO No.	CO Based Question
C408.1	Can you develop interactive web pages for different applications?
C408.2	Can you able to write DTD for various web applications?
C408.3	Are you able you write ruby scripts for various problems?
C408.4	Can you able establish a connection between Perl programs and database?
C408.5	Are you able to develop dynamic web pages using PHP?
C408.6	Can you able to test user sessions?

  
COURSE COORDINATOR

  
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## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

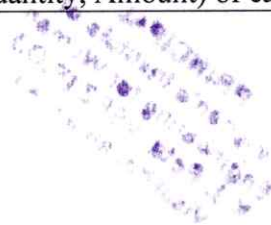
### LECTURE PLAN

Course Name: <b>Web Technologies Lab</b>	Course Code: <b>C408</b>
Year/ Sem: <b>IV B TECH I SEM</b>	Regulation: <b>R16</b>
Admitted Batch: <b>2018</b>	Academic Year: <b>2021-22</b>
Number of Lectures per week: <b>03</b>	
Course Coordinator : <b>Dr. P. Vijaya Bharati</b>	
Course handled: Section A- <b>Dr. P. Vijaya Bharati</b>	
Course handled: Section B – <b>Mr.A.Maheswara Rao</b>	
Course handled: Section C – <b>Mrs. N. Sowjanya Kumari</b>	

Week No.	Experiment No.	Experiment Name	Reference
I	1, 2	Create a Web page using HTML Tags, Creating a Login Page	TB: 8 Page No: 16-47 TB: 6 Page No: 20-21
II	3, 4, 5	Creating a Catalogue Page, Creating a Registration Page, Designing a Web Pages Using CSS	TB: 8- Ch:03 Page No: 57-58 TB: 8 Page No: 61-62 TB: 6 Page No: 38-39
III	6	Designing an XML file and write a DTD to validate xml file	TB: 8- Ch:14 Page No: 466- 471
IV	7-10	Write Ruby program reads a number and calculates the factorial value of it and prints the same. A Ruby program which counts number of lines in a text file using its regular expressions facility. Write a Ruby program that uses iterator to find out the length of a string. Write simple Ruby programs that uses arrays in Ruby.	Link1 Link2 Link3 TB: 1- Ch:14 Page No:598-600
V	11-14	Write programs which uses associative arrays concept of Ruby. Write Ruby program which uses Math module to find area of a	TB: 1- Ch:14 Page No:602-603 Link4 Link5 TB: 1- Ch:14 Page No:608-613

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		triangle. Write Ruby program which uses tk module to display a window. Define complex class in Ruby and do write methods to carry operations on complex objects.	
VI	15-16	Write a program which illustrates the use of associative arrays in perl. Write perl program takes a set names along the command line and prints whether they are regular files or special files.	TB: 3- Ch:13 Page No:509-513 Link6
VII	17-18	Write a perl program to implement UNIX 'passwd' program. An example perl program to connect to a MySQL database table and executing simple commands.	TB: 7- Ch:13 Page No: 536-537 Link7
VIII	19	Example PHP program for cotactus page	Link8
IX	20	User Authentication Assume four users user1,user2,user3 and user4 having the passwords pwd1,pwd2,pwd3 and pwd4 respectively. Write a PHP for doing the following. 1. Create a Cookie and add these four user id's and passwords to this Cookie. 2. Read the user id and passwords entered in the Login form (week1) and authenticate with the values (user id and passwords ) available in the cookies.	Link9
X	21	Example PHP program for registering users of a website and login	Link10
XI	22	Install a database(MySQL or Oracle)	Link11
XII	23	Write a PHP which does the following jobAuthenticate the user when he submits the login form using the user name and password from the database	Link12
XIII	24	Create tables in the database which contain the details of items (books in our case like Book name, Price, Quantity, Amount) of each	Link13



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		category. Modify your catalogue page (week 2) in such a way that you should connect to the database and extract data from the tables and display them in the catalogue page using PHP	
XIV	25	<b>HTTP</b> is a stateless protocol. Session is required to maintain the state. Every user will have his own session which will be created after his successful login to the website. When the user logs out his session should get invalidated (by using the method <code>session.invalidate()</code> ).	Link14

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**Link2.** <http://stackoverflow.com/questions/6002868/finding-lines-in-a-text-file-matching-a-regular-expression>

**Link3.** <https://code-maven.com/iterate-over-character-of-a-string-in-ruby>

**Link4.** <https://www.ruby-forum.com/topic/150819>

**Link5.** [https://www.tutorialspoint.com/ruby/ruby\\_tk\\_guide.htm](https://www.tutorialspoint.com/ruby/ruby_tk_guide.htm)

**Link6.** <https://affy.blogspot.in/p5be/ch09.htm>

**Link7.** [https://www.tutorialspoint.com/perl/perl\\_database\\_access.htm](https://www.tutorialspoint.com/perl/perl_database_access.htm)

**Link8.** <https://www.formget.com/send-an-email-on-form-submission-using-php/>

**Link9.** [https://www.tutorialspoint.com/php/php\\_cookies.htm](https://www.tutorialspoint.com/php/php_cookies.htm)

**Link10.** <http://creativealive.com/basic-registration-form-php-mysql-database-connectivity/>

**Link11.** <http://dev.mysql.com/doc/refman/5.7/en/windows-installation.html>

**Link12.** <http://php.net/manual/en/function.mysql-connect.php>

**Link13.** <https://www.codeofaninja.com/2013/04/shopping-cart-in-php.html>

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Link14.<https://www.tutorialspoint.com/as-http-is-a-stateless-then-how-to-maintain-the-session-between-web-browser-and-web-server>

  
**COURSE COORDINATOR**

  
**HEAD OF THE DEPARTMENT**

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Computer Science & Engineering  
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KapujaggarajuPeta, VSEZ(Post), Visakhapatnam-530049,AP

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING****LECTURE PLAN**

Course Name: <b>Web Technologies Lab</b>	Course Code: <b>C408</b>
Year/ Sem: <b>IV B TECH I SEM</b>	Regulation: <b>R16</b>
Admitted Batch: <b>2017</b>	Academic Year: <b>2020-21</b>
Number of Lectures per week: <b>03</b>	
Course Coordinator : <b>Mr.A.Maheswara Rao</b>	
Course handled: Section A- <b>Mr.A.Maheswara Rao</b>	
Course handled: Section B – <b>Ms.Afsheen Firdous</b>	
Course handled: Section C – <b>Mr.A.Maheswara Rao</b>	

Week No.	Experiment No.	Experiment Name	Reference
I	1, 2	Create a Web page using HTML Tags, Creating a Login Page	TB: 8 Page No: 16-47 TB: 6 Page No: 20-21
II	3, 4, 5	Creating a Catalogue Page, Creating a Registration Page, Designing a Web Pages Using CSS	TB: 8- Ch:03 Page No: 57-58 TB: 8 Page No: 61-62 TB: 6 Page No: 38-39
III	6	Designing an XML file and write a DTD to validate xml file	TB: 8- Ch:14 Page No: 466- 471
IV	7-10	Write Ruby program reads a number and calculates the factorial value of it and prints the same. A Ruby program which counts number of lines in a text file using its regular expressions facility. Write a Ruby program that uses iterator to find out the length of a string. Write simple Ruby programs that uses arrays in Ruby.	Link1 Link2 Link3 TB: 1- Ch:14 Page No:598-600
V	11-14	Write programs which uses associative arrays concept of Ruby. Write Ruby program which uses	TB: 1- Ch:14 Page No:602-603 Link4 Link5 TB: 1- Ch:14

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		Math module to find area of a triangle. Write Ruby program which uses tk module to display a window. Define complex class in Ruby and do write methods to carry operations on complex objects.	Page No:608-613
VI	15-16	Write a program which illustrates the use of associative arrays in perl. Write perl program takes a set names along the command line and prints whether they are regular files or special files.	TB: 3- Ch:13 Page No:509-513 Link6
VII	17-18	Write a perl program to implement UNIX 'passwd' program. An example perl program to connect to a MySQL database table and executing simple commands.	TB: 7- Ch:13 Page No: 536-537 Link7
VIII	19	Example PHP program for cotactus page	Link8
IX	20	User Authentication Assume four users user1,user2,user3 and user4 having the passwords pwd1,pwd2,pwd3 and pwd4 respectively. Write a PHP for doing the following. 1. Create a Cookie and add these four user id's and passwords to this Cookie. 2. Read the user id and passwords entered in the Login form (week1) and authenticate with the values (user id and passwords ) available in the cookies.	Link9
X	21	Example PHP program for registering users of a website and login	Link10
XI	22	Install a database(MySQL or Oracle)	Link11
XII	23	Write a PHP which does the following jobAuthenticate the user when he submits the login form using the user name and password from the database	Link12
XIII	24	Create tables in the database which	Link13

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		contain the details of items (books in our case like Book name, Price, Quantity, Amount) of each category. Modify your catalogue page (week 2) in such a way that you should connect to the database and extract data from the tables and display them in the catalogue page using PHP	
XIV	25	<b>HTTP</b> is a stateless protocol. Session is required to maintain the state. Every user will have his own session which will be created after his successful login to the website. When the user logs out his session should get invalidated (by using the method <code>session.invalidate()</code> ).	Link14

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- Link9. [https://www.tutorialspoint.com/php/php\\_cookies.htm](https://www.tutorialspoint.com/php/php_cookies.htm)
- Link10. <http://creativealive.com/basic-registration-form-php-mysql-database-connectivity/>
- Link11. <http://dev.mysql.com/doc/refman/5.7/en/windows-installation.html>
- Link12. <http://php.net/manual/en/function.mysql-connect.php>
- Link13. <https://www.codefaninja.com/2013/04/shopping-cart-in-php.html>
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*msl*

COURSE COORDINATOR



*msl*

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Visakhapatnam-49

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HEAD OF THE DEPARTMENT

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Computer Science & Engineering  
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## VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN

Approved by AICTE, New Delhi, Affiliated to JNTU Kakinada

KapujaggarajuPeta, VSEZ(Post), Visakhapatnam-530049,AP

### DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

#### LECTURE PLAN


Course Name: <b>Web Technologies Lab</b>	Course Code: <b>C408</b>
Year/ Sem: <b>IV B TECH I SEM</b>	Regulation: <b>R16</b>
Admitted Batch: <b>2016</b>	Academic Year: <b>2019-20</b>
Number of Lectures per week: <b>03</b>	
Course Coordinator : <b>Mrs. P. VijayaBharati</b>	
Course handled: Section A- <b>Mrs. P. VijayaBharati</b>	
Course handled: Section B – <b>Dr. B. Prasad</b>	
Course handled: Section C – <b>Mr. Maheshwar Rao</b>	

Week No.	Experiment No.	ExperimentName	Reference
I	1, 2	Create a Web page using HTML Tags, Creating a Login Page	TB: 8 Page No: 16-47 TB: 6 Page No: 20-21
II	3, 4, 5	Creating a Catalogue Page, Creating a Registration Page, Designing a Web Pages Using CSS	TB: 8- Ch:03 Page No: 57-58 TB: 8 Page No: 61-62 TB: 6 Page No: 38-39
III	6	Designing an XML file and write a DTD to validate xml file	TB: 8- Ch:14 Page No: 466- 471
IV	7-10	Write Ruby program reads a number and calculates the factorial value of it and prints the same. A Ruby program which counts number of lines in a text file using its regular expressions facility. Write a Ruby program that uses iterator to find out the length of a string. Write simple Ruby programs that uses arrays in Ruby.	Link1 Link2 Link3 TB: 1- Ch:14 Page No:598-600
V	11-14	Write programs which uses associative arrays concept of Ruby. Write Ruby program which uses	TB: 1- Ch:14 Page No:602-603 Link4 Link5 TB: 1- Ch:14

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		Math module to find area of a triangle. Write Ruby program which uses tk module to display a window. Define complex class in Ruby and do write methods to carry operations on complex objects.	Page No:608-613
VI	15-16	Write a program which illustrates the use of associative arrays in perl. Write perl program takes a set names along the command line and prints whether they are regular files or special files.	TB: 3- Ch:13 Page No:509-513 Link6
VII	17-18	Write a perl program to implement UNIX 'passwd' program. An example perl program to connect to a MySQL database table and executing simple commands.	TB: 7- Ch:13 Page No: 536-537 Link7
VIII	19	Example PHP program for cotactus page	Link8
IX	20	User Authentication Assume four users user1,user2,user3 and user4 having the passwords pwd1,pwd2,pwd3 and pwd4 respectively. Write a PHP for doing the following. 1. Create a Cookie and add these four user id's and passwords to this Cookie. 2. Read the user id and passwords entered in the Login form (week1) and authenticate with the values (user id and passwords ) available in the cookies.	Link9
X	21	Example PHP program for registering users of a website and login	Link10
XI	22	Install a database(MySQL or Oracle)	Link11
XII	23	Write a PHP which does the following jobAuthenticate the user when he submits the login form using the user name and password from the database	Link12
XIII	24	Create tables in the database which	

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		contain the details of items (books in our case like Book name, Price, Quantity, Amount) of each category. Modify your catalogue page (week 2) in such a way that you should connect to the database and extract data from the tables and display them in the catalogue page using PHP	
XIV	25	<p><b>HTTP</b> is a stateless protocol. Session is required to maintain the state. Every user will have his own session which will be created after his successful login to the website. When the user logs out his session should get invalidated (by using the method <code>session.invalidate()</code>).</p>	Link14

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**Link2.** <http://stackoverflow.com/questions/6002868/finding-lines-in-a-text-file-matching-a-regular-expression>  
**Link3.** <https://code-maven.com/iterate-over-character-of-a-string-in-ruby>  
**Link4.** <https://www.ruby-forum.com/topic/150819>  
**Link5.** [https://www.tutorialspoint.com/ruby/ruby\\_tk\\_guide.htm](https://www.tutorialspoint.com/ruby/ruby_tk_guide.htm)  
**Link6.** <https://affy.blogspot.in/p5be/ch09.htm>  
**Link7.** [https://www.tutorialspoint.com/perl/perl\\_database\\_access.htm](https://www.tutorialspoint.com/perl/perl_database_access.htm)  
**Link8.** <https://www.formget.com/send-an-email-on-form-submission-using-php/>

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- Link9. [https://www.tutorialspoint.com/php/php\\_cookies.htm](https://www.tutorialspoint.com/php/php_cookies.htm)
- Link10. <http://creativealive.com/basic-registration-form-php-mysql-database-connectivity/>
- Link11. <http://dev.mysql.com/doc/refman/5.7/en/windows-installation.html>
- Link12. <http://php.net/manual/en/function.mysql-connect.php>
- Link13. <https://www.codeofaninja.com/2013/04/shopping-cart-in-php.html>
- Link14. <https://www.tutorialspoint.com/as-http-is-a-stateless-then-how-to-maintain-the-session-between-web-browser-and-web-server>

COURSE COORDINATOR



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**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**ACADEMIC YEAR :2021-22**

**SEMESTER: I**

**LABORATORY COURSES TIME TABLE**

Name of the lab: DataBase & Design Lab


DAY	10:10 AM – 01:00 PM	01:50 PM – 04:40 PM
MONDAY	Python Programming Lab II-I ECE A (Mrs.V.Sri Lahari / Mrs.M.Mamatha Laxmi)	
TUESDAY		
WEDNESDAY	Python Programming Lab II-I ECE B (Mr.A.Maheshwara Rao/ Mrs.J.Hima Bindhu)	OOPS_JAVA II-I ECE A (Ms.Ch.Thanuja/Mr. V.Sita Ram Prasad)
THURSDAY	Python Programming Lab II-I ECE C (Mrs.V.Sri Lahari / Mrs.J.Hima Bindhu)	
FRIDAY		OOPS_JAVA II-I ECE B (Ms.Ch.Thanuja / Mrs.Ch.Usha)
SATURDAY		OOPS_JAVA II-I ECE C (Mr. V.Sita Ram Prasad / Mrs.Ch.Usha)

Name of the lab:Basic Programming Lab

DAY	10:10 AM – 01:00 PM	01:50 PM – 04:40 PM
MONDAY	Data Mining Lab III-I CSE A (Mrs.B.Haritha Laxmi/ Mrs.B.Sailaja/ Ms P. Sravani)	Software Architecture Design Patterns Lab IV-I CSE C (Mr.D.Rajendra Dev/ Ms.Y.Vineela Sravya/Dr G. Narasimha Rao)
TUESDAY	Software Architecture Design Patterns Lab IV-I CSE B (Mr.V.Sita Ram Prasad/ Mrs. R. Pravallika/Dr.K.Vijaya Kumar)	
WEDNESDAY	Web Technologies Lab IV-I CSE A (Mrs.P. Vijaya Bharati/ Ms.M.Pallavi/Ms. Afsheen Firdous)	
THURSDAY	Web Technologies Lab IV-I CSE C (Mrs.N.Sowjanya Kumari/ Ms.Afsheen Firdous/Dr. P. Vijaya Bharati)	Data Mining Lab III-I CSE B (Mrs.Ch.Usha/ Mrs.R.Pravallika/Mrs.N.Sowjanya Kumari)
FRIDAY		Web Technologies Lab IV-I CSE B (Mr.A.Maheswararao/ Dr.K. Vijaya Kumar/Dr.K.Jayasri)
SATURDAY	Data Mining Lab III-I CSE C (Mrs.B.Haritha Laxmi/Ms.P.Sravani/ Mrs.M.Nagasravani)	Software Architecture Design Patterns Lab IV-I CSE A (Mr.D.Rajendra Dev/Ms.Y.Vineela Sravya/Dr G. Narasimha Rao)

  
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Principal



**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**ACADEMIC YEAR :2020-21**

**SEMESTER: I**

**LABORATORY COURSES TIME TABLE**


Name of the lab: Basic Programming Lab

DAY	10:10AM – 01:00 PM	01:50PM – 04:40PM
MONDAY	Data Structures using C++ - II-I CSE A (Mrs. J. Hima Bindhu/ Ms.M.Pallavi/ Mrs. G. Pavani latha)	
TUESDAY	Data Structures using C++ - II-I CSE B (Mrs.N. Suneetha/ Dr. G. Neelima/ Mrs. B Haritha Laxmi)	
WEDNESDAY		
THURSDAY		
FRIDAY		
SATURDAY	Data Structures using C++ - II-I CSE C (Mrs.M.Mamatha Lakshmi/ Mrs. B Haritha Laxmi/ Mr.Mohan Mahanty)	

Name of the lab: Advanced Programming Lab

DAY	10:10AM – 01:00 PM	01:50PM – 04:40PM
MONDAY	Web Technologies lab – IV-I CSE A (Mr. A. Maheswara Rao/ Ms. Ch. Thanuja/Dr. K. Vijaya Kumar)	IT LAB1 I MBA I SEM (Mrs.B.Sailaja/ Ms. Ch. Thanuja)
TUESDAY	Python Programming lab- II-I CSE C (Dr. K.Rajendra Prasad / Mrs. G. Sandhya/ Mrs.M.N. Sravani)	
WEDNESDAY	Web Technologies lab – IV-I CSE B (Ms. Afsheen Firdous/ Mr.M.Ramesh/Mr.M.Anil Kumar)	
THURSDAY	Python Programming lab- II-I CSE A (Mrs.P.Akhila/ Mrs. G. Pavani latha/ Mr.A.Srinivas)	
FRIDAY		Python Programming lab- II-I CSE B (Ms. D. Ramya/ Mrs. J. Hima Bindhu/ Ms. Mrs.P.Akhila)
SATURDAY		Web Technologies lab – IV-I CSE C (Mr. A. Maheswara Rao/Mr.V. Rama Rao/Mr.I.Raju)

  
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**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**ACADEMIC YEAR :2019-20**

**SEMESTER: I**

**LABORATORY COURSES TIME TABLE**

Name of the lab: Basic Programming Lab

DAY	10:10AM – 01:00 PM	01:50PM – 04:40PM
MONDAY	Data Structures using C++ - II-I CSE A (Mrs.G.Sandhya/Mrs.R.Pravallika /Mr.S.Venkatesh)	IT workshop I-I CSE A (Mr. Ch. Sekhar/ Mr. M. Sinivasa Rao/ Mr. G. Vinay Reddy)
TUESDAY	Data Structures using C++ - II-I CSE B (Dr. G. Neelima /Mrs.J.Hima Bindu /Mrs.G.Sandhya)	PPSC Lab I-I ECE A (Mr. M. Srinivasa Rao/ Mrs. K. Guru Lakshmi/ Mr.G. Vinay Reddy)
WEDNESDAY		PPSC Lab I-I ECE B ( Mr. G. Vinay Reddy/Mr. M. Srinivasa Rao /Mrs. K. Guru Lakshmi)
THURSDAY	PPSC Lab I-I ME ( Mr. A. Khan)	IT workshop I-I CSE B (Mr. Ch. Sekhar/Mr.G. Vinay Reddy/ Mr. A. Khan)
FRIDAY	PPSC Lab I-I ECE C (Mr. G. Vinay Reddy/ Mrs. K. Guru Lakshmi)	IT workshop I-I IT (Mr. A. Kahn/ Mr. G. Vinay Reddy/ Mr. Ch. Sekhar)
SATURDAY	Data Structures using C++ - II-I CSE C (Mr. S. Raju Chintalapati / Dr.T.V.Madhusudhan Rao / Mrs. Sheik Rahamuinissa)	IT workshop I-I CSE C (Mrs. K. Guru Lakshmi/ Mr. A. Khan/ Mr. Ch. Sekhar)

Name of the lab: Advanced Programming Lab

DAY	10:10AM – 01:00 PM	01:50PM – 04:40PM
MONDAY	Web Technologies lab – IV-I CSE A (Mrs.P. Vijaya Bharati / Mrs. D. Kamal Kumari/ Mr. D. Rajendra Dev)	IT LAB I MBA I SEM (Mr.P.Praveen Kumar/Mr.L.Bhupathi Rao/ Ms.B.Haritha Laxmi)
TUESDAY	Python Programming lab- II-I CSE C (Mr. S. Venkatesh /Mr.B.Venkatesh / Mr.S.Raju Chintalapati)	
WEDNESDAY	Web Technologies lab – IV-I CSE B (Dr.B.Prasad/ Mrs.G.Neelima / Ms. Y.Vineela Sravya)	
THURSDAY	Python Programming lab- II-I CSE A (Ms.T.Padmavathy /Mr.M.Krishnam Raju / Mr.Mohan Mahanty)	PPSC Lab I-I EEE (Mr. A. Khan/ Mr. M. Srinivasa Rao)
FRIDAY		Python Programming lab- II-I CSE B (Ms.B.Haritha Laxmi /Mrs.B.Madhavi / Mrs.D.Kamal Kumari)
SATURDAY		Web Technologies lab – IV-I CSE C (Mrs.D.Savitri / Mr.A.N.Suresh / Mrs.K.Deepthi Krishna)

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Coordinator

*Principal*  
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## Web Technologies Lab External Exam

(IV- B.Tech I Sem, Reg: R16)

Subject : WT LAB

Max Time: 1:30hrs

Branch : CSE A/B/C

Max Marks: 10-M

Faculty : Dr.P. VijayaBharati /Mr.A.Maheswararao/ Mrs.N.SowjanyaKumari

1) Assume four users user1, user2, user3 and user4 having the passwords pwd1, pwd2, pwd3 and pwd4 respectively. Write a PHP for doing the following.

(i) Create a Cookie and add these four user id's and passwords to this Cookie.

(ii) Read the user id and passwords entered in the Login form and authenticate with the values (user id and passwords) available in the cookies. If he is a valid user you should welcome by user-name else you should display "You are not an authenticated user".

b. Write a Ruby program which uses Math module to find area of triangle.

2) a) Write an XML file which will display the Book information which includes the following:

1) Title of the book 2) Author Name 3) ISBN number 4) Publisher name 5) Edition 6) Price  
Write a DTD to validate the above XML file.

b) Write a Ruby program which uses tk module to display a window.

3) Write a PHP program

a) To register users of a website

b) Display the details of the users

4) a. Write a Perl program takes a set of names along the command line and prints whether they are regular files or special files.

b. Design the catalogue page should contain the details of all the books available in the web site in a table. The details should contain the following:

1. Snap shot of Cover Page 2. Author Name 3. Publisher 4. Price 5. Add to cart button.

Web Site Name					
Logo	Home	Login	Registration	Catalogue	Cart
CSE			Book XML Bible Author Winston Publication Wiley	\$ 40.5	<input type="button" value="Add to cart"/>
ECE			Book AI Author S Russel Publication: Princeton hall	\$ 63	<input type="button" value="Add to cart"/>
EEE			Book Java 2 Author Watson Publication BPB publications	\$ 35.5	<input type="button" value="Add to cart"/>
CIVIL			Book HTML in 24 hours Author Sam Peter Publication Sam publication	\$ 50	<input type="button" value="Add to cart"/>



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- 5) a. Write a Perl program to connect to database and create a table Employee (Empid, Designation, Salary) and insert values into the table.  
 b. Write a Ruby program which to carry operations on Complex objects.
- 6) a. Create a HTML login page and Write a PHP program to validate the user is authenticated or not authenticated.  
 b. Write a Perl program to implement the UNIX password scheme.
- 7) a. Write a Perl program to connect to database and retrieve the data from table Employee (Empid, Designation, Salary)  
 b. Write a Ruby program which uses associative array concept.  
 c. Design a web page using CSS which includes different font, styles in the style tag.
- 8) Create table in the database which contain the details of Books (Bookname, Price, Quantity, Amount) of each category. Connect to the database and extract data from the tables and display them in the catalogue page using PHP.
- 9) a. Write a PHP program for registering users of a website.  
 b. Write Ruby program to calculate the factorial value of it and prints the same.
- 10) Design the following static home page with three frames.  
**Top frame:** Logo and the college name and links to Home page, Login page, Registration page, Catalogue page.  
**Left frame:** At least four links for navigation, which will display the catalogue of respective links.  
**Right frame:** The pages to the links in the left frame must be loaded here. Initially this page contains description of the web site.

Logo	Web Site Name			
Home	Login	Registration	Catalogue	Cart
CSE ECE EEE CIVIL	Description of the Web Site			

  
 Signature of Internal Examiner



  
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**Scheme of Evaluation Web Technologies Lab External Exam**

(IV- B.Tech I Sem, Reg: R16)

Subject : WT LAB

Max Time: 1:30hrs

Branch : CSE A/B/C

Max Marks: 10 M

Faculty : Dr.P. VijayaBharati /Mr.A.Maheswararao/ Mrs.N.SowjanyaKumari

Q. No	Scheme of Evaluation	Marks Allocate
01	Creation of Cookie	5M
	Ruby program which uses Math module to find area of triangle.	
	Execution	3M
	Viva	2M
02	XML file	5M
	Ruby program which uses tk module to display a window	
	Execution	3M
	Viva	2M
03	Write a PHP program ,to register users of a website and display the details of the users	5M
	Execution	3M
	Viva	2M
	04	Write a Perl program takes a set of names along the command line and design the catalogue page
Execution		3M
Viva		2M
05		Perl program to connect to database and create a table and Ruby program which to carry operations on Complex objects.
	Execution	3M
	Viva	2M
	06	HTML login page and PHP program to validate the user is authenticated or not authenticated and Perl program to implement the UNIX password scheme.
Execution		3M
Viva		2M
07		Perl program to connect to database and retrieve the data and Ruby program which uses associative array concept and web page using CSS which includes different font, styles in the style tag.
	Execution	3M
	Viva	2M



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08	Create table in the database which contain the details of Books and Connect to the database and extract data from the tables and display them in the catalogue page using PHP.	5M
	Execution	3M
	Viva	2M
09	PHP program for registering users and Ruby program to calculate the factorial	5M
	Execution	3M
	Viva	2M
10	Design the static home page with three frames.	5M
	Execution	3M
	Viva	2M



**Signature of Internal Examiner**




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Subject : WT LAB

Max Time: 1:30hrs

Branch : CSE A/B/C

Max Marks: 10 M

Faculty : Dr.P. VijayaBharati /Mr.A.Maheswararao/ Mrs.N.SowjanyaKumari

1) Assume four users user1, user2, user3 and user4 having the passwords pwd1, pwd2, pwd3 and pwd4 respectively. Write a PHP for doing the following.

(i) Create a Cookie and add these four user id's and passwords to this Cookie.

(ii) Read the user id and passwords entered in the Login form and authenticate with the values (user id and passwords) available in the cookies. If he is a valid user you should welcome by user-name else you should display "You are not an authenticated user".

b. Write a Ruby program which uses Math module to find area of triangle.

2) a) Write an XML file which will display the Book information which includes the following:

1) Title of the book 2) Author Name 3) ISBN number 4) Publisher name 5) Edition 6) Price

Write a DTD to validate the above XML file.

b) Write a Ruby program which uses tk module to display a window.

3) Write a PHP program

a) To register users of a website

b) Display the details of the users

4) a. Write a Perl program takes a set of names along the command line and prints whether they are regular files or special files.

b. Design the catalogue page should contain the details of all the books available in the web site in a table. The details should contain the following:

1. Snap shot of Cover Page 2. Author Name 3. Publisher 4. Price 5. Add to cart button.

Web Site Name					
Logo	Home	Login	Registration	Catalogue	Cart
CSE			Book: XML Bible Author: Winston Publication: Wiley	\$ 40 5	
ECE			Book: AI Author: S Russel Publication: Princeton hall	\$ 63	
EEE			Book: Java 2 Author: Watson Publication: BPB publications	\$ 35 5	
CIVIL			Book: HTML in 24 hours Author: Sam Peter Publication: Sam publication	\$ 50	



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- 5) a. Write a Perl program to connect to database and create a table Employee (Empid, Designation, Salary) and insert values into the table.  
 b. Write a Ruby program which to carry operations on Complex objects.
- 6) a. Create a HTML login page and Write a PHP program to validate the user is authenticated or not authenticated.  
 b. Write a Perl program to implement the UNIX password scheme.
- 7) a. Write a Perl program to connect to database and retrieve the data from table Employee (Empid, Designation, Salary)  
 b. Write a Ruby program which uses associative array concept.  
 c. Design a web page using CSS which includes different font, styles in the style tag.
- 8) Create table in the database which contain the details of Books (Bookname, Price, Quantity, Amount) of each category. Connect to the database and extract data from the tables and display them in the catalogue page using PHP.
- 9) a. Write a PHP program for registering users of a website.  
 b. Write Ruby program to calculate the factorial value of it and prints the same.
- 10) Design the following static home page with three frames.  
**Top frame:** Logo and the college name and links to Home page, Login page, Registration page, Catalogue page.  
**Left frame:** At least four links for navigation, which will display the catalogue of respective links.  
**Right frame:** The pages to the links in the left frame must be loaded here. Initially this page contains description of the web site.

Logo	Web Site Name			
Home	Login	Registration	Catalogue	Cart
CSE ECE EEE CIVIL	Description of the Web Site			

Signature of Internal Examiner-I

Signature of Internal Examiner-II



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**Scheme of Evaluation Web Technologies Lab Internal Exam**

(IV- B.Tech I Sem, Reg: R16)

Subject : WT LAB

Max Time: 1:30hrs

Branch : CSE A/B/C

Max Marks: 100

Faculty : Dr.P. VijayaBharati /Mr.A.Maheswararao/ Mrs.N.SowjanyaKumari

Q. No	Scheme of Evaluation	Marks Allocate
01	Creation of Cookie	5M
	Ruby program which uses Math module to find area of triangle.	
	Execution Viva	3M 2M
02	XML file	5M
	Ruby program which uses tk module to display a window	
	Execution Viva	3M 2M
03	Write a PHP program ,to register users of a website and display the details of the users	5M
	Execution	3M
	Viva	2M
04	Write a Perl program takes a set of names along the command line and design the catalogue page	5M
	Execution	3M
	Viva	2M
05	Perl program to connect to database and create a table and Ruby program which to carry operations on Complex objects.	5M
	Execution	3M
	Viva	2M
06	HTML login page and PHP program to validate the user is authenticated or not authenticated and Perl program to implement the UNIX password scheme.	5M
	Execution	3M
	Viva	2M
07	Perl program to connect to database and retrieve the data and Ruby program which uses associative array concept and web page using CSS which includes different font, styles in the style tag.	5M
	Execution	3M
	Viva	2M



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08	Create table in the database which contain the details of Books and Connect to the database and extract data from the tables and display them in the catalogue page using PHP.	5M
	Execution	3M
	Viva	2M
09	PHP program for registering users and Ruby program to calculate the factorial	5M
	Execution	3M
	Viva	2M
10	Design the static home page with three frames.	5M
	Execution	3M
	Viva	2M

Signature of Internal Examiner-I

Signature of Internal Examiner-II



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**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**Web Technologies Internal Exam**

(IV- B.Tech I Sem, Reg: R16)

Subject : WT LAB

Branch : CSE A/B/C

Faculty : Mr. A. Maheswararao/Mrs. Ch. Usha/ Mr. A. Maheswararao

Date: 25-02-2021

Max Time: 3hrs

Max Marks: 10 M

1.
  - a. Create tables in the database which contain the details of items (books in our case like Book name , Price, Quantity, Amount ) of each category. Modify your catalogue page in such a way that you should connect to the database and extract data from the tables and display them in the catalogue page using PHP.
2.
  - a. Write a PHP which does the following job:  
Insert the details of the 3 or 4 users who register with the web site (week9) by using registration form. Authenticate the user when he submits the login form using the user name and password from the database ( similar to week8 instead of cookies).
  - b. Write Ruby program which uses tk module to display a window.
3.
  - a. Example PHP program for registering users of a website and login.
  - b. Write perl program takes set names along the command line and prints whether they are regular files or special files
4.
  - a. Define complex class in Ruby and do write methods to carry operations on complex objects.
  - b. The catalogue page should contain the details of all the books available in the web site in a table.  
The details should contain the following:
    1. Snap shot of Cover Page



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2. Author Name.
3. Publisher.
4. Price.
5. Add to cart button.

5.

a. **HOME PAGE:**

The static home page must contain three **frames**.

Top frame: Logo and the college name and links to Home page, Login page, Registration page, Catalogue page and Cart page (the description of these pages will be given below).

Left frame: At least four links for navigation, which will display the catalogue of respective links.

For e.g.: When you click the link "MCA" the catalogue for MCABooks should be displayed in the Right frame.

Right frame: The *pages to the links in the left frame must be loaded here*. Initially this page contains description of the web site.

b. Write a perl program to implement UNIX 'passed' program

6.

a. Write a Ruby program that uses iterator to find out the length of a string.

b. User Authentication:

Assume four users user1, user2, user3 and user4 having the passwords pwd1, pwd2, pwd3 and pwd4 respectively. Write a PHP for doing the following.

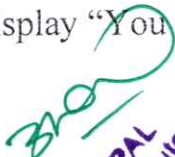
a) Create a Cookie and add these four user id's and passwords to this Cookie.

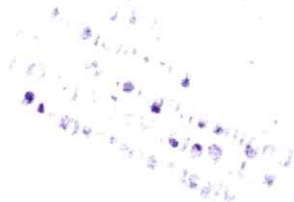
b) Read the user id and passwords entered in the Login form (week1) and authenticate with the values (user id and passwords) available in the cookies.

If he is a valid user (i.e., user-name and password match) you should welcome him by name

(user-name) else you should display "You are not an authenticated user".

Use init-parameters to do this.

  
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7.

- a. Write Ruby program reads a number and calculates the factorial value of it and prints the Same.
- b. Design the Login web page required for an online book store web site.

8.

- a. Write Ruby program which uses Math module to find area of a triangle.
- b. Write a program which illustrates the use of associative arrays in perl.

9.

- a. Write programs which uses associative arrays concept of Ruby.

**b. REGISTRATION PAGE:**

Create a "registration form" with the following fields

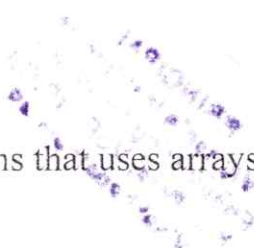
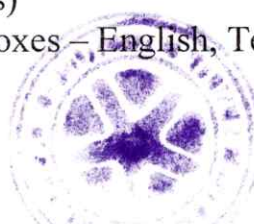
- 1) Name (Text field)
- 2) Password (password field)
- 3) E-mail id (text field)
- 4) Phone number (text field)
- 5) Sex (radio button)
- 6) Date of birth (3 select boxes)
- 7) Languages known (check boxes – English, Telugu, Hindi, Tamil)
- 8) Address (text area)

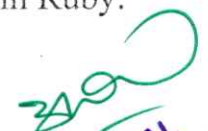
10.

- a. Write an XML file which will display the Book information which includes the following:

- 1) Title of the book
- 2) Author Name
- 3) ISBN number
- 4) Publisher name
- 5) Edition
- 6) Price

- b. Write simple Ruby programs that uses arrays in Ruby.



  
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11.

- a. An example perl program to connect to a MySQL database table and executing simple commands.
- b. Define complex class in Ruby and do write methods to carry operations on complex objects.

12.

- a. **Design a web page using CSS (Cascading Style Sheets)** which includes the following:
  - 1) Use different font, styles:  
In the style definition you define how each selector should work (font, color etc.).  
Then, in the body of your pages, you refer to these selectors to activate the styles
- b. Example PHP program for registering users of a website and login.

Signature of Internal Examiner-I



Signature of Internal Examiner-II

HEAD OF THE DEPARTMENT  
Computer Science & Engineering  
VIGNAN'S INSTITUTE OF  
ENGINEERING FOR WOMEN  
KapuJeggaraupeta, Visakhapatnam-49

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10/01/2020  
10:01:30 AM  
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KAPUJEGGARAUPEETA, VISAKHAPATNAM-49



# VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN

(Kapujaggarajupeta, VSEZ (Post), Visakhapatnam-530 049)

## Scheme of Evaluation: Internal Lab Examination

(IV- B.Tech I Semester, Regulations: R16)

Course Name: Web Technologies Lab

Branch/ Section: IV CSE A /B/C

Faculty: Mr. A. Maheswararao/Mrs.Ch. Usha/ Mr. A. MaheswaraRao


Max Time: 3 Hrs.

Max Marks: 10


Date: 25-02-2021

Each Question carries 10 Marks.

Q. No.	Scheme of Evaluation	Marks Allocated
01	a) Program	6M
	Output	2M
	Execution	2M
02	a) Program	2M
	Output	1M
	Execution	2M
	b) Program	2M
	Output	1M
	Execution	2M
03	a) Program	2M
	Output	1M
	Execution	2M
	b) Program	2M
	Output	1M
	Execution	2M
04	a) Program	2M
	Output	1M
	Execution	2M
	b) Program	2M
	Output	1M
	Execution	2M
05	a) Program	2M
	Output	1M

  
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(Kapujaggarajupeta, VSEZ (Post), Visakhapatnam-530 049)  
25-02-2021

	Execution	2M
	b) Program	2M
	Output	1M
	Execution	2M
06	a) Program	2M
	Output	1M
	Execution	2M
	b) Program	2M
	Output	1M
	Execution	2M
07	a) Program	2M
	Output	1M
	Execution	2M
	b) Program	2M
	Output	1M
	Execution	2M
08	a) Program	2M
	Output	1M
	Execution	2M
	b) Program	2M
	Output	1M
	Execution	2M
09	a) Program	2M
	Output	1M
	Execution	2M
	b) Program	2M
	Output	1M
	Execution	2M
10	a) Program	2M
	Output	1M
	Execution	2M
	b) Program	2M

  
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	Output	1M
	Execution	2M
11	a) Program	2M
	Output	1M
	Execution	2M
	b) Program	2M
	Output	1M
	Execution	2M
12	a) Program	2M
	Output	1M
	Execution	2M
	b) Program	2M
	Output	1M
	Execution	2M

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Signature of the Internal Examiner-I

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Signature of the Internal Examiner-II

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## VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN

Approved by AICTE, New Delhi, Affiliated to JNTU Kakinada

Kapujaggaraju Peta, VSEZ (Post), Visakhapatnam-530049, AP

### DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

#### Web Technologies External Exam

(IV- B.Tech I Sem, Reg: R16)

Subject : WT LAB

Max Time: 3hrs

Branch : CSE A/B/C

Max Marks: 10 M

Faculty : Mr. A. Maheswararao/Mrs. Ch. Usha/ Mr. A. Maheswararao

Date: 25-03-2021

1.

- a. Create tables in the database which contain the details of items (books in our case like Book name , Price, Quantity, Amount ) of each category. Modify your catalogue page in such a way that you should connect to the database and extract data from the tables and display them in the catalogue page using PHP.

2.

- a. Write a PHP which does the following job:  
Insert the details of the 3 or 4 users who register with the web site (week9) by using registration form. Authenticate the user when he submits the login form using the user name and password from the database ( similar to week8 instead of cookies).
- b. Write Ruby program which uses tk module to display a window.

3.

- a. Example PHP program for registering users of a website and login.
- b. Write perl program takes set names along the command line and prints whether they are regular files or special files

4.

- a. Define complex class in Ruby and do write methods to carry operations on complex objects.
- b. The catalogue page should contain the details of all the books available in the web site in a table.

The details should contain the following:

1. Snap shot of Cover Page.

  
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K. J. Peta, VSEZ (P.O.)  
Visakhapatnam-49

2. Author Name.
3. Publisher.
4. Price.
5. Add to cart button.

5.

a. **HOME PAGE:**

The static home page must contain three **frames**.

Top frame: Logo and the college name and links to Home page, Login page, Registration page, Catalogue page and Cart page (the description of these pages will be given below).

Left frame: At least four links for navigation, which will display the catalogue of respective links.

For e.g.: When you click the link “MCA” the catalogue for MCABooks should be displayed in the Right frame.

Right frame: The *pages to the links in the left frame must be loaded here*. Initially this page contains description of the web site.

- b. Write a perl program to implement UNIX 'passed' program

6.

- a. Write a Ruby program that uses iterator to find out the length of a string.

b. User Authentication:

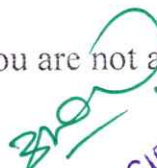
Assume four users user1, user2, user3 and user4 having the passwords pwd1, pwd2, pwd3 and pwd4 respectively. Write a PHP for doing the following.

- a) Create a Cookie and add these four user id's and passwords to this Cookie.
- b) Read the user id and passwords entered in the Login form (week1) and authenticate with the values (user id and passwords) available in the cookies.

If he is a valid user (i.e., user-name and password match) you should welcome him by name

(user-name) else you should display “You are not an authenticated user”.

Use init-parameters to do this.

  
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- 7.
- Write Ruby program reads a number and calculates the factorial value of it and prints the Same.
  - Design the Login web page required for an online book store web site.

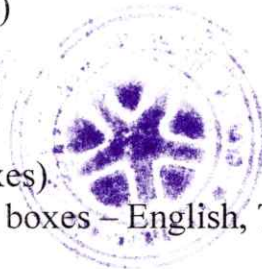
- 8.
- Write Ruby program which uses Math module to find area of a triangle.
  - Write a program which illustrates the use of associative arrays in perl.

- 9.
- Write programs which uses associative arrays concept of Ruby.

**b. REGISTRATION PAGE:**

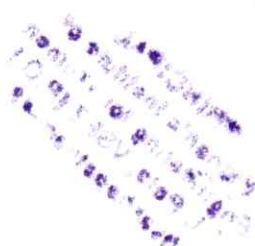
Create a "registration form" with the following fields

- Name (Text field)
- Password (password field)
- E-mail id (text field)
- Phone number (text field)
- Sex (radio button)
- Date of birth (3 select boxes)
- Languages known (check boxes – English, Telugu, Hindi, Tamil)
- Address (text area)




- 10.
- Write an XML file which will display the Book information which includes the following:

- Title of the book
- Author Name
- ISBN number
- Publisher name
- Edition
- Price



- Write simple Ruby programs that uses arrays in Ruby.

  
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11.

- a. An example perl program to connect to a MySQL database table and executing simple commands.
- b. Define complex class in Ruby and do write methods to carry operations on complex objects.

12.

- a. **Design a web page using CSS (Cascading Style Sheets)** which includes the following:
  - 1) Use different font, styles:  
In the style definition you define how each selector should work (font, color etc.).  
Then, in the body of your pages, you refer to these selectors to activate the styles
- b. Example PHP program for registering users of a website and login.



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*Siva*

Signature of External Examiner-II

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*Handwritten notes in blue ink, partially illegible.*



# VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN

(Kapujaggarajupeta, VSEZ (Post), Visakhapatnam-530 049)

## Scheme of Evaluation: External Lab Examination

(IV- B.Tech I Semester, Regulations: R16)

Course Name: Web Technologies Lab

Branch/ Section: IV CSE A /B/C

Faculty: Mr. A. Maheswararao/Mrs.Ch. Usha/ Mr. A. MaheswaraRao


Max Time: 3 Hrs.

Max Marks: 10

Date: 25-03-2021

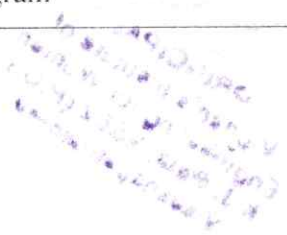
Each Question carries 10 Marks.

Q. No.	Scheme of Evaluation	Marks Allocated
01	a) Program	6M
	Output	2M
	Execution	2M
02	a) Program	2M
	Output	1M
	Execution	2M
	b) Program	2M
	Output	1M
	Execution	2M
03	a) Program	2M
	Output	1M
	Execution	2M
	b) Program	2M
	Output	1M
	Execution	2M
04	a) Program	2M
	Output	1M
	Execution	2M
	b) Program	2M
	Output	1M
	Execution	2M
05	a) Program	2M
	Output	1M

  
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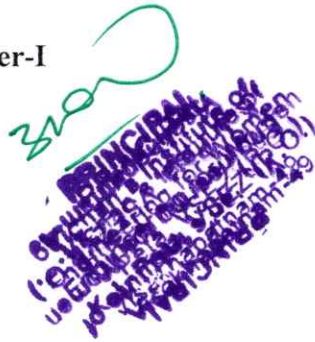
	Execution	2M
	b) Program	2M
	Output	1M
	Execution	2M
06	a) Program	2M
	Output	1M
	Execution	2M
	b) Program	2M
	Output	1M
	Execution	2M
07	a) Program	2M
	Output	1M
	Execution	2M
	b) Program	2M
	Output	1M
	Execution	2M
08	a) Program	2M
	Output	1M
	Execution	2M
	b) Program	2M
	Output	1M
	Execution	2M
09	a) Program	2M
	Output	1M
	Execution	2M
	b) Program	2M
	Output	1M
	Execution	2M
10	a) Program	2M
	Output	1M
	Execution	2M
	b) Program	2M

	Output	1M
	Execution	2M
11	a) Program	2M
	Output	1M
	Execution	2M
	b) Program	2M
	Output	1M
	Execution	2M
12	a) Program	2M
	Output	1M
	Execution	2M
	b) Program	2M
	Output	1M
	Execution	2M

  
 Signature of the Internal Examiner-I





## VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN

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### DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

#### Web Technologies Internal Exam

(IV- B.Tech I Sem, Reg: R16)

Subject : WT LAB

Branch : CSE A/B/C

Faculty : Mrs. P. Vijaya Bharati/ Dr. B. Prasad/ Mr. A. Maheshwararao

Max Time: 3hrs

Max Marks: 10 M

Date: 03-10-2019

1) Assume four users user1, user2, user3 and user4 having the passwords pwd1, pwd2, pwd3 and pwd4 respectively. Write a PHP for doing the following.

(i) Create a Cookie and add these four user id's and passwords to this Cookie.

(ii) Read the user id and passwords entered in the Login form and authenticate with the values (user id and passwords) available in the cookies. If he is a valid user you should welcome by user-name else you should display "You are not an authenticated user".

b. Write a Ruby program which uses Math module to find area of triangle.

2) a) Write an XML file which will display the Book information which includes the following:

1) Title of the book 2) Author Name 3) ISBN number 4) Publisher name 5) Edition 6) Price  
Write a DTD to validate the above XML file.

b) Write a Ruby program which uses tk module to display a window.

3) Write a PHP program

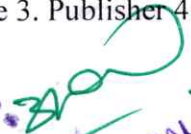
a) To register users of a website


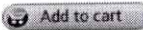

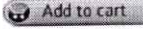



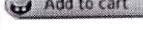
b) Display the details of the users

4) a. Write a Perl program takes a set of names along the command line and prints whether they are regular files or special files.

b. Design the catalogue page should contain the details of all the books available in the web site in a table. The details should contain the following:

1. Snap shot of Cover Page 2. Author Name 3. Publisher 4. Price 5. Add to cart button.

  
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Logo	Web Site Name			
Home	Login	Registration	Catalogue	Cart
CSE		Book : XML Bible Author : Winston Publication : Wiley	\$ 40.5	
ECE		Book : AI Author : S.Russel Publication : Princeton hall	\$ 63	
EEE		Book : Java 2 Author : Watson Publication : BPB publications	\$ 35.5	
CIVIL		Book : HTML in 24 hours Author : Sam Peter Publication : Sam publication	\$ 50	

5) a. Write a Perl program to connect to database and create a table Employee (Empid, Designation, Salary) and insert values into the table.

b. Write a Ruby program which to carry operations on Complex objects.

6) a. Create a HTML login page and Write a PHP program to validate the user is authenticated or not authenticated.

b. Write a Perl program to implement the UNIX password scheme.

7) a. Write a Perl program to connect to database and retrieve the data from table Employee (Empid, Designation, Salary)

b. Write a Ruby program which uses associative array concept.

c. Design a web page using CSS which includes different font, styles in the style tag.

8) Create table in the database which contain the details of Books (Bookname, Price, Quantity, Amount) of each category. Connect to the database and extract data from the tables and display them in the catalogue page using PHP.

9) a. Write a PHP program for registering users of a website.

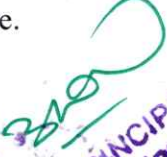
b. Write Ruby program to calculate the factorial value of it and prints the same.

10) Design the following static home page with three frames.

**Top frame:** Logo and the college name and links to Home page, Login page, Registration page, Catalogue page.

**Left frame:** At least four links for navigation, which will display the catalogue of respective links.

**Right frame:** The pages to the links in the left frame must be loaded here. Initially this page contains description of the web site.

  
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Logo	Web Site Name			
Home	Login	Registration	Catalogue	Cart
CSE ECE EEE CIVIL	Description of the Web Site			



Signature of Internal Examiner-I



Signature of Internal Examiner-II



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## VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN

(Kapujaggarajupeta, VSEZ (Post), Visakhapatnam-530 049)

### Scheme of Evaluation: Internal Lab Examination

(IV- B.Tech I Semester, Regulations: R16)

Course Name: Web Technologies Lab

Branch/ Section: IV CSE A /B/C

Faculty: Mrs. P. Vijaya Bharati/ Dr. B. Prasad/ Mr. A. MaheshwaraRao

Max Time: 3 Hrs.

Max Marks: 10

Date: 03-10-2019

Each Question carries 10 Marks.

Q. No.	Scheme of Evaluation	Marks Allocated
01	a) Program	2M
	Output	1M
	Execution	2M
	b) Program	2M
Output	1M	
Execution	2M	
02	a) Program	2M
	Output	1M
	Execution	2M
	b) Program	2M
Output	1M	
Execution	2M	
03	a) Program	2M
	Output	1M
	Execution	2M
	b) Program	2M
Output	1M	
Execution	2M	
04	a) Program	2M
	Output	1M
	Execution	2M
	b) Program	2M
Output	1M	
Execution	2M	

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05	a) Program Output Execution	2M 1M 2M
	b) Program Output Execution	2M 1M 2M
06	a) Program Output Execution	2M 1M 2M
	b) Program Output Execution	2M 1M 2M
07	a) Program Output Execution	2M 1M 1M
	b) Program Output Execution	1M 1M 1M
	c) Program Output Execution	1M 1M 1M
08	Program Output Execution	6M 2M 2M
09	a) Program Output Execution	2M 1M 2M
	b) Program Output Execution	2M 1M 2M
10	Program Output Execution	6M 2M 2M

Signature of Internal Examiner-I

Signature of Internal Examiner-II

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Mumbai-400 088



VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN

(Kapu jaggarajupeta, Vadlapudi, Visakhapatnam-530 049)

Web Technologies External Exam

(IV- B.Tech I Sem, Reg: R16)

Subject : WT LAB

Max Time: 3hrs

Branch : CSE A/B/C

Max Marks: 50 M

Faculty : Mrs. P. Vijaya Bharati/ Dr. B. Prasad/ Mr. A. MaheshwaraRao Date: 21-10-2019

1) Assume four users user1, user2, user3 and user4 having the passwords pwd1, pwd2, pwd3 and pwd4 respectively. Write a PHP for doing the following.

(i) Create a Cookie and add these four user id's and passwords to this Cookie.

(ii) Read the user id and passwords entered in the Login form and authenticate with the values (user id and passwords) available in the cookies. If he is a valid user you should welcome by user-name else you should display "You are not an authenticated user ".

b. Write a Ruby program which uses Math module to find area of triangle.

2) a) Write an XML file which will display the Book information which includes the following:

1) Title of the book 2) Author Name 3) ISBN number 4) Publisher name 5) Edition 6) Price

Write a DTD to validate the above XML file.

b) Write a Ruby program which uses tk module to display a window.

3) Write a PHP program

a) To register users of a website

b) Display the details of the users

4) a. Write a Perl program takes a set of names along the command line and prints whether they are regular files or special files.

b. Design the catalogue page should contain the details of all the books available in the web site in a table. The details should contain the following:

1. Snap shot of Cover Page 2. Author Name 3. Publisher 4. Price 5. Add to cart button.

Logo	Web Site Name			
	Home	Login	Registration	Catalogue
CSE		Book : XML Bible Author : Winston Publication : Wiley	\$ 40.5	
ECE		Book : AI Author : S.Russel Publication : Princeton hall	\$ 63	
EEE		Book : Java 2 Author : Watson Publication : BPB publications	\$ 35.5	
CIVIL		Book : HTML in 24 hours Author : Sam Peter Publication : Sam publication	\$ 50	

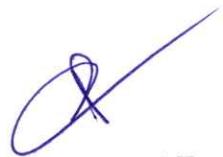


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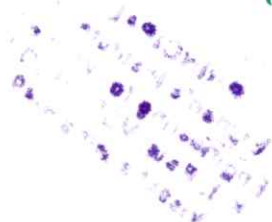
- 5) a. Write a Perl program to connect to database and create a table Employee (Empid, Designation, Salary) and insert values into the table.  
 b. Write a Ruby program which to carry operations on Complex objects.
- 6) a. Create a HTML login page and Write a PHP program to validate the user is authenticated or not authenticated.  
 b. Write a Perl program to implement the UNIX password scheme.
- 7) a. Write a Perl program to connect to database and retrieve the data from table Employee (Empid, Designation, Salary)  
 b. Write a Ruby program which uses associative array concept.
- 8) Create table in the database which contain the details of Books (Bookname, Price, Quantity, Amount) of each category. Connect to the database and extract data from the tables and display them in the catalogue page using PHP.
- 9) a. Write a PHP program for registering users of a website.  
 b. Write Ruby program to calculate the factorial value of it and prints the same.
- 10) a. Design the following static home page with three frames.  
**Top frame:** Logo and the college name and links to Home page, Login page, Registration page, Catalogue page.  
**Left frame:** At least four links for navigation, which will display the catalogue of respective links.  
**Right frame:** The pages to the links in the left frame must be loaded here. Initially this page contains description of the web site.

Web Site Name				
Logo				
Home	Login	Registration	Catalogue	Cart
CSE ECE EEE CIVIL	Description of the Web Site			

b. Design a web page using CSS which includes different font, styles in the style tag.

  
 Signature of External Examiner-I

  
 Signature of External Examiner-II



  
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# VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN

(Kapujaggarajupeta, VSEZ (Post), Visakhapatnam-530 049)

## Scheme of Evaluation: External Lab Examination

(IV- B.Tech I Semester, Regulations: R16)

Course Name: Web Technologies Lab

Branch/ Section: IV CSE A /B/C

Faculty: Mrs. P. Vijaya Bharati/ Dr. B. Prasad/ Mr. A. Maheshwararao

Max Time: 3 Hrs.

Max Marks: 10

Date: 21-10-2019

Each Question carries 10 Marks.

Q. No.	Scheme of Evaluation	Marks Allocated
01	a) Program	2M
	Output	1M
	Execution	2M
	b) Program	2M
02	Output	1M
	Execution	2M
	b) Program	2M
	Output	1M
03	Execution	2M
	b) Program	2M
	Output	1M
	Execution	2M
04	a) Program	2M
	Output	1M
	Execution	2M
	b) Program	2M
04	Output	1M
	Execution	2M



05	a) Program	2M
	Output Execution	1M 2M
06	b) Program	2M
	Output Execution	1M 2M
07	a) Program	2M
	Output Execution	1M 1M
08	b) Program	1M
	Output Execution	1M 1M
	c) Program	1M
09	Output Execution	1M 1M
	Program	6M
	Output Execution	2M 2M
10	a) Program	2M
	Output Execution	1M 2M
10	b) Program	2M
	Output Execution	1M 2M
10	Program	6M
	Output	2M
	Execution	2M

Signature of Internal Grammar



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**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**RESULT ANALYSIS AT THE END OF SEMESTER**

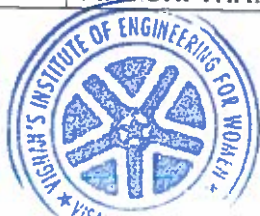
Year/Sem: IV B.Tech I Sem	Regulation: R16
Academic Year: 2021-22	Admitted batch:2018

S.No.	Roll No.	Name of the Student	CNS	SADP	WT	MEFA	BDA	CC	SADP LAB	WT LAB
1	18NM1A0501	ABBINA YAMINI SIRIVENNELA	7	6	8	6	8	5	10	10
2	18NM1A0502	ABBIREDDY SUSHMA SRILAYA	6	6	6	6	6	5	9	10
3	18NM1A0503	ADAKA VANI	6	6	8	6	7	5	9	10
4	18NM1A0504	ADDAGARLA BABY VYSHNAVI	7	6	8	7	7	6	9	10
5	18NM1A0505	AKKIREDDI DEVA DIVYA	8	6	9	7	8	6	10	10
6	18NM1A0506	ALAJANGI DHARANI	6	6	8	6	6	5	9	10
7	18NM1A0507	ALLU KAVYA	7	6	8	6	7	5	10	9
8	18NM1A0508	ANGADA VANDANA SATYA	7	6	7	7	6	6	9	9
9	18NM1A0509	BADDA SHEERISHA	7	6	8	7	8	5	9	10
10	18NM1A0510	BAGADI DHARANI	8	7	9	7	8	6	10	10
11	18NM1A0511	BAGADI JYOSHNA	8	6	8	6	7	5	10	9
12	18NM1A0512	BALIREDDY LATHA AMRUTHA	9	7	9	7	8	7	10	9
13	18NM1A0513	BANDARU DURGA RUKMINI	8	6	8	7	7	6	10	10
14	18NM1A0514	BANDARU SRAVYA	6	6	7	7	7	5	9	9
15	18NM1A0515	BATCHU SATYA SRI	6	8	7	7	7	6	10	10
16	18NM1A0516	BODDU SREEJA	6	7	5	6	6	5	9	9
17	18NM1A0517	BOMMIREDDY DIVYA	7	8	7	7	8	6	9	9
18	18NM1A0518	B SRI LAKSHMI PRASANNA	6	7	8	7	7	6	10	9
19	18NM1A0519	B KUSUMA SANDHYA RANI	7	8	8	8	8	7	10	10
20	18NM1A0520	CHAITANYA LAKSHMI CH	6	7	7	7	8	6	9	9
21	18NM1A0521	CHAVI AGARWAL	7	6	7	7	7	6	9	10
22	18NM1A0522	CHINTAKAYALA ANVITHA	7	7	6	7	6	5	9	9
23	18NM1A0523	CHINTAKAYALA NANDINI	7	7	6	8	7	7	9	9
24	18NM1A0524	DANTULURI REETU VARMA	6	6	7	8	8	7	9	9
25	18NM1A0525	DASARI LEELA JYOSHNA	5	0	5	5	6	5	10	9
26	18NM1A0526	D SOBHA ANANTHA LAKSHMI	6	6	8	8	7	7	9	9
27	18NM1A0527	DEEPTHI SAHU	6	8	8	8	7	7	9	9
28	18NM1A0528	DEVARA SAI PRATHYUSHA	7	7	8	7	6	6	9	9
29	18NM1A0529	D LAKSHMI VIMALA	7	8	9	8	8	7	9	10
30	18NM1A0530	DHARMALA PRASANNA PRIYA	7	8	7	8	8	7	10	10
31	18NM1A0531	DODDI PRATHYUSHA	6	6	7	7	7	6	10	10
32	18NM1A0532	DODDI TEJASWINI	7	8	8	7	8	7	10	10
33	18NM1A0533	ELLA INDU	8	6	6	7	8	7	9	9
34	18NM1A0534	ETTULA PREETHI	6	6	5	6	7	6	9	9
35	18NM1A0535	G VENKATA PRAVEENA	8	6	7	8	8	8	9	10
36	18NM1A0536	GANAGALLA PRAVALLIKA	8	5	7	6	8	7	10	9
37	18NM1A0537	GANAPATHIRAJU SRUJITHA	8	5	8	7	9	6	10	9
38	18NM1A0538	GANDEPALLI BHAVYA	7	6	6	6	7	6	10	9
39	18NM1A0539	GANDHAM ROJA DEVI	9	6	8	8	9	9	10	10



320  
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41	18NMIA0541	GANDI DIVYA	7	6	7	6	8	6	9	10
42	18NMIA0542	GANTA SAMEERA	8	6	6	7	8	7	10	9
43	18NMIA0543	GODRIHALA SUDESHA	7	6	5	6	8	6	10	9
44	18NMIA0544	GOKADA GAYATRI	8	5	8	7	8	6	10	9
45	18NMIA0545	GOLLAVILLI PRIYANKA	7	6	6	7	9	7	10	10
46	18NMIA0546	GOLLU ANTHONY RISHIKA	6	6	6	7	8	6	10	9
47	18NMIA0547	GONDESI LAKSHMI GOWTAMI	5	5	6	6	6	5	10	9
48	18NMIA0548	GORLE NANDINI	9	6	7	8	9	8	10	10
49	18NMIA0549	GORLE SIRI	7	6	6	7	8	6	10	9
50	18NMIA0550	GUDAPARTHI DHARANI	7	5	7	7	8	6	10	10
51	18NMIA0551	HARSHITA	7	8	7	7	7	5	10	9
52	18NMIA0552	JAGANA VASANTHA	6	8	7	5	7	0	10	9
53	18NMIA0553	JAGU JYOTHIKA	5	7	5	6	6	0	10	8
54	18NMIA0554	JAMI BHAVANA	8	8	7	7	7	5	10	10
55	18NMIA0555	JUTTUKA NAGA GAYATHRI	6	8	6	8	8	5	9	9
56	18NMIA0556	KAKI DAKSHAYANI	7	7	6	6	8	5	10	9
57	18NMIA0557	KALLEPALLI LAVANYA	7	8	7	8	9	6	10	10
58	18NMIA0558	KAMMA RESHMACHOWDARY	7	7	7	7	8	5	10	10
59	18NMIA0559	KANCHUBOINA YAMINI	7	8	7	7	9	6	10	10
60	18NMIA0560	KANDALAM HEMASREE	7	8	7	8	8	5	10	10
61	18NMIA0561	KANDREGULA KUSUMANJALI	7	9	7	7	9	6	10	10
62	18NMIA0562	KANDREGULA PARIMALA	7	8	6	7	8	5	10	10
63	18NMIA0563	KARAKA MOUNIKA	6	8	7	8	8	5	10	10
64	18NMIA0564	KARANAM VAHINI PRIYA	5	7	5	5	5	0	10	9
65	18NMIA0565	KARRI DIVYA SAI	0	5	5	5	5	0	9	10
66	18NMIA0566	KARRI USHA	6	8	7	8	8	5	9	9
67	18NMIA0567	KAVALI SRIVARSHINI	7	8	7	7	8	7	9	10
68	18NMIA0568	KODI MOUNIKA	7	8	7	7	8	7	10	9
69	18NMIA0569	KOLACHINA VAGDEVI	6	6	7	7	8	6	10	10
70	18NMIA0570	KOLLI AMRUTHA	6	6	8	7	7	7	9	10
71	18NMIA0571	KOLLI MERCY	6	7	8	7	8	6	9	9
72	18NMIA0572	KOMMANAPALLI JYOTHSNA	5	6	7	7	6	6	9	10
73	18NMIA0573	KONATHALA LAHARIKA	6	6	9	7	7	6	9	10
74	18NMIA0574	KOORAPATI SIREESHA	5	7	8	6	7	7	10	10
75	18NMIA0575	K MOULIKA SANDHYA SRI	6	7	8	7	8	7	10	10
76	18NMIA0576	KOSETTI HEMA LATHA	5	7	8	7	8	7	9	10
77	18NMIA0577	KOTANA MOUNIKA	6	7	8	7	7	6	10	10
78	18NMIA0578	KOTTANA VARSHINI	7	7	9	7	8	8	10	10
79	18NMIA0579	KSHATRIYA DIMPUL SINGH	5	7	6	6	6	5	10	10
80	18NMIA0580	K DHARANI SAI KEERTHI	6	7	8	7	7	7	10	10
81	18NMIA0581	KUPPA VENKATA ALEKHYA	6	6	8	7	7	8	9	10
82	18NMIA0582	K MANASA	5	6	6	6	6	0	10	10
83	18NMIA0583	KUTCHU MOUNIKA SAI SADHVI	6	7	7	6	8	5	10	10
84	18NMIA0584	MAJJI KUSUMA	6	6	8	6	7	6	9	9
85	18NMIA0585	MALLA GNANA PRASUNA	6	7	8	8	8	7	9	9
86	18NMIA0586	MANDAPATI SHREAYA	0	5	6	0	7	5	10	9
87	18NMIA0587	MANDHAPATI RUPADEVI	6	8	8	7	9	7	9	10
88	18NMIA0588	MANEPALLI PRAVALLIKA	7	7	6	6	6	6	9	10
89	18NMIA0589	M SENTHILKUMAR JANANI	8	8	8	7	9	6	10	10
90	18NMIA0590	MARRAPU HEMA SAI PUSHPA	7	8	8	7	6	7	10	10
91	18NMIA0591	MASAVARAPU KAVYA	7	6	6	7	7	6	10	10
92	18NMIA0592	MATHA BHARATHI	7	7	6	6	8	6	9	10
93	18NMIA0593	MAYURI THANUJA	7	7	6	7	8	6	9	10



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94	18NM1A0594	M MONIKA	7	5	5	6	8	5	9	10
95	18NM1A0595	MEDI BHARGAVI	5	5	7	6	8	6	9	10
96	18NM1A0596	M JYOTSNA YALLA SRI	8	8	7	8	8	6	10	10
97	18NM1A0597	MOLLI HEMA LATHA	8	6	7	7	9	7	10	9
98	18NM1A0598	MONICA MAXENA XAVIER	5	0	5	6	6	5	9	9
99	18NM1A0599	MOOLA NAGA SRI PRAVALLIKA	9	7	7	7	8	7	9	10
100	18NM1A05A0	MOSALI SRUJI	5	6	5	6	7	5	9	10
101	18NM1A05A1	MUDUNURI BHAGYA SRI	5	0	5	0	6	5	10	10
102	18NM1A05A2	MURUGESAN SIVA SANTHINI	6	7	6	6	8	6	10	10
103	18NM1A05A3	NAGIREDDY HARIKA	9	7	6	7	8	7	9	10
104	18NM1A05A4	NALABOTHU BHAVANA	6	7	7	7	9	7	9	10
105	18NM1A05A5	NANDA DEEPIKA	6	7	5	7	6	5	9	9
106	18NM1A05A6	NEELAPU YESASRI	6	8	8	8	8	7	9	10
107	18NM1A05A7	NELAPARTHI MONICA	6	8	6	6	7	6	10	10
108	18NM1A05A8	NIKHITA INDU KOVVURI	7	9	7	8	8	6	10	10
109	18NM1A05A9	PABBINEEDI SIRISHA	5	7	6	5	5	5	9	10
110	18NM1A05B0	PANDRANKI SOWJANYA	6	8	8	8	7	6	10	10
111	18NM1A05B1	P ANAUSHCA SRINIVAS	6	9	7	7	8	6	9	10
112	18NM1A05B2	P LAKSHMI BHAVANA	5	6	0	5	6	0	9	9
113	18NM1A05B3	P VENKATA SAI KEERTHANA	5	8	6	7	7	5	10	10
114	18NM1A05B4	PENUGONDA SATYA SOWJANYA	6	8	8	6	7	6	9	10
115	18NM1A05B5	PENUKONDA SANDHYA RANI	5	8	8	8	8	6	10	10
116	18NM1A05B6	PILLA SAIGAYATHRI	6	7	7	6	8	5	9	9
117	18NM1A05B7	PUPPALA NEEHARIKA	5	7	5	6	6	5	9	10
118	18NM1A05B8	PUSAPATI SAHITHI	6	8	5	7	7	5	9	9
119	18NM1A05B9	PENUMATSA SIVANI	6	8	6	7	6	5	10	10
120	18NM1A05C0	POLIMERA SAILAJA	6	5	8	7	8	6	10	9
121	18NM1A05C1	PRIYANKA KUMARI	7	8	7	8	8	7	10	9
122	18NM1A05C2	PUDI HEMA LATHA	9	6	7	6	8	5	10	10
123	18NM1A05C3	PUSHPA KANDA	8	7	7	7	8	7	10	10
124	18NM1A05C4	PYDADA MALATHI	8	7	6	6	7	5	10	10
125	18NM1A05C5	PYDI HARITHA	8	7	6	7	8	7	10	9
126	18NM1A05C6	RAYANA JAYA SRI	8	6	8	6	7	5	10	10
127	18NM1A05C7	RELANGI RAMYA	6	7	6	6	7	6	10	9
128	18NM1A05C8	REYYI LIKHITA	6	5	5	5	6	5	10	9
129	18NM1A05C9	R SRI SATYA VIJAYA UMASRI	6	6	5	7	7	5	10	9
130	18NM1A05D0	SABBAVARAPU CHANDU	8	7	7	6	8	6	10	9
131	18NM1A05D1	S VENKATA SOWJANYA	8	6	6	6	7	5	10	9
132	18NM1A05D2	SADAMALLA SHEKINAH	6	6	5	5	6	5	10	9
133	18NM1A05D3	SAI KAVYA SRI MATCHA	6	6	6	6	7	6	10	9
134	18NM1A05D4	SAI SERANYA NALLA	7	7	6	6	7	6	10	10
135	18NM1A05D5	S SAI SREE LAKSHMI MONIKA	8	7	8	6	7	6	10	9
136	18NM1A05D6	SANAPATHI SIREESHA	7	7	6	6	8	7	10	10
137	18NM1A05D7	SARAYU GINNI	8	7	7	7	8	7	10	10
138	18NM1A05D8	S POOJA VINAYA MANASA	8	6	7	6	7	7	10	9
139	18NM1A05D9	SARVASUDDI KANAKA RATNAM	7	6	6	7	7	5	10	10
140	18NM1A05E1	SATHIVILLI PRAVEENA	6	7	6	6	7	6	10	9
141	18NM1A05E2	SAVARA SWETHA	5	5	7	6	6	6	10	9
142	18NM1A05E3	SEERAMSETTI JAYASRI	6	6	8	7	7	6	10	10
143	18NM1A05E4	S HARIKA DAMAYANTHI	7	7	8	7	8	7	10	9
144	18NM1A05E5	SEÑAPATHI LAVANYA	7	7	9	7	7	7	10	10
145	18NM1A05E6	SIMHADRI RAMYA RANI	8	7	9	7	8	7	10	9
146	18NM1A05E7	SINGURU KAVYA	6	6	6	6	7	7	10	10



3/20  
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147	18NM1A05E8	SISTU BINDU	7	6	8	6	7	7	10	10
148	18NM1A05E9	SUNKARI DHANA LAKSHMI	8	7	8	7	7	7	10	9
149	18NM1A05F0	SUREDDI SAIKUMARI	6	5	7	6	6	5	9	9
150	18NM1A05F1	TALARI SANDHYA	7	6	8	7	8	7	10	10
151	18NM1A05F2	TAMANARA SWATHI	6	5	6	6	6	6	10	9
152	18NM1A05F3	TAMMINENI PRIYANKA	6	6	6	6	6	6	10	9
153	18NM1A05F4	TANGUDU HARSHITA	5	6	6	6	5	5	10	9
154	18NM1A05F5	TANGUDU SOWMYA	6	6	6	6	6	6	10	9
155	18NM1A05F6	TEPPALA PUSHPA HARIKA	6	7	7	6	6	7	10	9
156	18NM1A05F7	THIRUMAREDDI TANUJA	6	7	9	6	7	7	10	10
157	18NM1A05F8	THOKADA LAVANYA	6	6	7	6	7	6	10	9
158	18NM1A05F9	TIRUPATHI LALITHA	7	6	8	6	7	7	10	10
159	18NM1A05G0	U DURGA SANTHOSHI KUMARI	8	6	6	6	8	6	10	9
160	18NM1A05G1	VANKAYALAPATI JAHNAVI	7	5	6	7	7	6	10	10
161	18NM1A05G2	VEJARLA ASWITHA	8	6	6	6	7	7	10	9
162	18NM1A05G3	VELAGA NEERAJA	8	6	6	6	6	5	10	9
163	18NM1A05G4	VULLA YAGNA SRI	9	6	8	7	8	8	10	9
164	18NM1A05G5	YANAPARTHI POORNIMA	9	6	7	7	8	8	9	10
165	18NM1A05G6	YELLAPU TEJASWANI	7	6	6	7	7	6	10	10
166	18NM1A05G7	Y SREELAKSHMI SAHITHI	6	5	6	6	7	5	10	10
167	18NM1A05G8	MALAVIKA PYLA	8	6	6	7	6	6	10	9
168	18NM1A05G9	SIRIKI NANDINI	7	5	6	6	7	6	10	9
169	18NM1A05H0	DEVOJU VARA NOOKA KUMARI	6	6	6	7	7	6	10	9
170	18NM1A05H1	M PADMAVATI	5	0	6	6	6	0	9	8
171	19NM5A0501	ADIGARLA SRAVANI	8	6	7	7	8	7	10	10
172	19NM5A0502	CH KAVYA SAI DURGA	8	6	7	7	7	7	10	10
173	19NM5A0503	GULLIPALLI LOCHANA	7	7	6	7	6	6	10	10
174	19NM5A0504	KANCHRLA LIKITHA	8	6	6	7	7	7	10	10
175	19NM5A0505	KOSIREDDY JYOTHI	6	6	6	7	6	6	10	9
176	19NM5A0506	KOYLADA TEJASWINI	5	6	6	5	7	6	10	10
177	19NM5A0507	MADUTHURU RAMYA	5	6	6	5	7	5	10	10
178	19NM5A0508	MOHAMMED VAHAZARUNNISA	7	6	7	7	8	7	9	10
179	19NM5A0510	PITHANI MADHURI	6	5	7	7	8	6	10	9
180	19NM5A0511	POTNURU KRANTHI	5	5	6	5	6	6	10	9
181	19NM5A0512	RAMASWAMY RAMYA	6	6	7	7	7	6	10	10
182	19NM5A0513	RAVALAPOODI PAVANI	8	6	7	7	8	5	10	10
183	19NM5A0514	SINGAMPALLI ROHINI	5	5	6	7	6	5	10	10
184	19NM5A0515	SIYADRI SANDHYA	7	5	7	7	8	6	10	9
185	19NM5A0516	TUMPALA PUSHPA LATHA	7	6	8	7	8	6	9	9
186	19NM5A0517	VASUPALLI SATYA SUSHMA	7	5	7	7	8	6	10	9
187	19NM5A0518	NADIGATLA PARIMALARANI	6	5	7	7	7	6	9	9
188	17NM1A0575	PARIMALARANI	6	6	8	6	7	6	10	10
189	17NM1A05A4	MOLLETI SAI SRIVALLIKA	6	5	6	7	6	0	10	10
190	17NM1A05G8	VASAMSETTI NAVYA SREE	6	6	8	7	7	5	10	9
191	18B41A0501	BANDARU PRIYANKA	7	5	8	7	7	6	10	9
192	18NM5A0510	ALEKHYA P	7	6	7	7	7	7	10	10

Course Coordinator

Head of the Department



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**VIGNAN'S INSTITUTE OF ENGINEERING FOR WOMEN***Approved by AICTE, New Delhi, Affiliated to JNTU Kakinada*

Kapujaggarajupeta, VSEZ(Post), Visakhapatnam-530049,AP

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING****RESULT ANALYSIS AT THE END OF SEMESTER**

Year/ Sem : <b>IV B TECH I SEM</b>	Regulation: <b>R16</b>
Academic year : <b>2020-21</b>	Admitted Batch: <b>2017</b>

S.No.	Roll No.	Name Of The Student	CN S	SADP	WT	MEF A	BD A	CC	SADP LAB	WT LAB
1	17NM1A0501	A V K PRAVALLIKA	7	6	7	6	6	6	10	10
2	17NM1A0502	ADAPA SAI SANTHOSHI	8	7	6	8	7	8	10	10
3	17NM1A0503	ADDALA LAKSHMI	6	6	7	7	6	6	10	10
4	17NM1A0504	AGATHAMUDI MANASA	10	7	9	10	9	10	10	10
5	17NM1A0505	A U SAI NAGA DURGA CHINNI	6	7	8	8	6	8	10	9
6	17NM1A0506	ALLURI BHAVANA	0	7	6	7	5	7	9	10
7	17NM1A0507	AMBATI SIREESHA	8	7	8	9	7	8	10	10
8	17NM1A0508	ANGA DEEPIKA	7	6	5	7	8	6	9	10
9	17NM1A0509	ANNE SRI REKHA	7	8	7	8	6	8	10	10
10	17NM1A0510	ARIPAKA SUVARNA GEETHA	9	8	8	8	7	8	10	10
11	17NM1A0511	ARNIPALLI SHIVANI	7	8	7	8	7	7	10	10
12	17NM1A0512	AYITHI DEEPIKA	10	8	9	10	9	9	10	10
13	17NM1A0513	BALIBOYENA DIVYA	6	6	8	7	6	7	9	10
14	17NM1A0514	B CH NAGA SAI SARADA	6	8	5	6	7	8	10	10
15	17NM1A0515	BASANA HARSHINI	9	9	8	8	6	8	10	10
16	17NM1A0516	BATCHU SUSHMITA	9	6	8	9	7	8	9	10
17	17NM1A0517	BEHARA ANUSHA	7	7	8	7	6	8	10	10
18	17NM1A0518	BHIMUNI BHARGAVI	7	8	7	7	7	8	9	10
19	17NM1A0519	BIRLANGI SIRISHA	7	8	7	8	7	7	9	10
20	17NM1A0520	BODDA AKHILA	9	7	8	10	9	8	10	10
21	17NM1A0521	BODDEDA UTTEJA	7	8	7	7	7	8	10	10
22	17NM1A0522	BOKKA SRI SAI MANASA	8	7	6	8	7	8	10	10
23	17NM1A0523	B L ANANTA KIRANMAI	7	8	7	7	6	8	10	10
24	17NM1A0524	BONAM ROSHINI	8	7	7	9	7	6	10	10
25	17NM1A0525	BORRA SUNITHA	6	6	5	6	6	5	9	10
26	17NM1A0526	BOYIDI SUPRIYA	5	7	7	7	6	8	9	9
27	17NM1A0527	CHEVETI VIRINCHITA	6	7	7	7	6	6	9	9
28	17NM1A0528	CHIDAPAREDDI MONISHA	8	7	7	9	7	7	10	10
29	17NM1A0529	CHILAKALAPALLI SAI LIKHITA	5	5	6	6	5	6	9	9
30	17NM1A0530	CHINTADA ALEKHYA	7	6	6	6	6	7	9	10
31	17NM1A0531	CHONGALI MADHULIKA	7	8	7	9	6	7	10	10
32	17NM1A0532	CHOPPA NANDINI	7	6	7	10	7	7	10	10
33	17NM1A0533	D PRIYA	7	7	8	8	6	8	10	10
34	17NM1A0534	DADALA CHARANYA	7	6	6	6	6	7	9	10
35	17NM1A0535	DADI SOWMYA	6	6	6	7	6	9	10	10
36	17NM1A0536	DANDABATHINI ANKITHA	5	6	0	9	7	6	9	10
37	17NM1A0537	DEREDLA VINEETHA SRI	5	8	8	0	6	5	10	10
38	17NM1A0538	DULAM LAYASREE	8	6	5	8	6	8	9	8
39	17NM1A0539	DUNNA SINDHU	9	8	7	7	6	7	9	9

3202  
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Visakhapatnam-49

40	17NM1A0540	DWARAPUDI JOSHITHA	5	7	7	7	6	7	9	9
41	17NM1A0541	EDHARAPALLI SIRISHA RANI	5	6	6	5	5	5	9	10
42	17NM1A0542	ELURI HARSHA VARDHINI	7	0	7	7	7	7	10	9
43	17NM1A0543	G NAGAMANI	7	6	6	7	7	7	10	10
44	17NM1A0544	G POOJITHA SRI LAKSHMI	7	7	0	9	6	7	10	9
45	17NM1A0545	GADIDALA VATHSALYA	6	8	7	7	6	8	10	9
46	17NM1A0546	GALI TEJASWINI	7	7	7	8	7	8	9	10
47	17NM1A0548	GANTLA JOSHNA	7	9	7	7	7	8	9	10
48	17NM1A0549	GAVIREDDY MANASA	7	6	7	7	6	5	10	10
49	17NM1A0550	GAVVA RANI	6	8	9	6	6	7	10	10
50	17NM1A0551	GEDELA ANANDA BHAVANI	7	6	7	7	7	8	10	10
51	17NM1A0552	G SUBBALAKSHMI SIRISHA	5	6	7	7	5	6	10	10
52	17NM1A0553	GOMPA NIKHILA	8	8	8	10	8	9	10	10
53	17NM1A0554	GORUSU SRAVANI	6	8	8	6	6	6	9	10
54	17NM1A0555	GULLIPALLI JAHNAVI	6	0	5	7	6	6	10	9
55	17NM1A0556	GUMMADI SAI CHANDANA	7	8	7	7	6	8	10	10
56	17NM1A0557	GUNNA MADHUSRI	7	7	8	9	8	8	10	10
57	17NM1A0558	ISUKAPATLA RAMYA	5	7	6	6	6	6	9	10
58	17NM1A0559	JAKKUVU MANASA	7	6	6	7	6	7	10	8
59	17NM1A0560	J G K SATYA SREE SOWMYA	5	5	0	6	5	5	9	8
60	17NM1A0561	JERRIPOTHULA NADIYA	7	7	8	9	7	7	10	10
61	17NM1A0562	JOBA KUMARI	6	9	9	7	6	7	10	10
62	17NM1A0563	JOGAVAJHULA POORNIMA	7	7	6	7	6	6	10	10
63	17NM1A0564	JONNAKUTI SAI HARSHITHA	7	7	7	6	6	7	10	10
64	17NM1A0565	KADAGALA HARI SWETHA	6	7	7	8	7	7	10	10
65	17NM1A0566	KAKARA LAVANYA	5	5	5	0	5	0	10	9
66	17NM1A0567	KAKKALA JOGA SANDHYA	7	6	5	6	7	5	10	10
67	17NM1A0568	KALAGA SAHITYA	7	7	0	7	6	8	10	10
68	17NM1A0569	KALEPU SREEJA	6	6	6	7	7	7	10	10
69	17NM1A0570	KALIDINDI SUPRIYA	5	6	5	6	5	5	10	10
70	17NM1A0571	KALLA DIVYA	7	7	6	8	7	6	10	10
71	17NM1A0572	KALLADA YAMUNA	5	7	7	6	7	6	10	10
72	17NM1A0573	K VIJAYA VARSHINI	6	5	6	7	7	5	10	10
73	17NM1A0574	KAMMILI TANUJA	5	5	5	6	5	0	10	10
74	17NM1A0576	KANDRIKA SOUMYA	5	7	5	8	6	6	10	10
75	17NM1A0577	KANKIPATI BHAGYAVARSHA	0	6	5	6	0	5	10	9
76	17NM1A0578	KARADA POOJA	6	6	6	9	7	6	10	9
77	17NM1A0579	KARAKA JYOSHNA	6	6	8	8	6	7	10	9
78	17NM1A0580	KARANAM POOJA	6	6	5	7	6	7	10	9
79	17NM1A0581	KOLA LAVANYA	9	8	7	8	6	8	10	10
80	17NM1A0582	KOLLI LALITHA	8	7	9	7	8	7	10	9
81	17NM1A0583	KOLLI SOWJANYA	5	6	6	7	5	5	10	9
82	17NM1A0584	KOMANAPALLI SATYA PRIYA	6	8	6	8	7	7	10	9
83	17NM1A0585	K CHARISHMA CHOWDARY	5	5	5	5	5	5	10	9
84	17NM1A0586	KOMMINENI SRIVALLIKA	7	6	6	7	6	5	10	10
85	17NM1A0587	KONDA BASHEERA	5	6	5	7	5	5	10	9
86	17NM1A0588	KOSURI LAVANYA	6	7	6	8	6	7	10	10
87	17NM1A0589	KOVELA HEMA SRI	7	7	7	8	7	7	10	10
88	17NM1A0590	KUNCHALA VENNELA	6	7	7	8	7	7	10	10
89	17NM1A0591	KUNDRAPU DIVYA	5	6	7	7	7	5	10	9
90	17NM1A0592	KYCHARLA LEELAVATHI	7	7	6	6	7	8	10	10
91	17NM1A0593	L TRISHA	6	7	7	7	6	7	10	10

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 Vis. Jan's Institute of  
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 K.J. Peta, VSEZ (P.O.)  
 Visakhapatnam-531 149

92	17NM1A0594	LANKA SRUTHI	7	7	7	8	7	7	10	10	
93	17NM1A0595	MADAKA SAIMOUNICA	6	7	7	10	6	7	10	10	
94	17NM1A0596	MADDI ANNA PURNA	6	0	5	7	5	7	10	9	
95	17NM1A0597	MADE RATNA SHIVANI	6	7	6	8	5	7	10	9	
96	17NM1A0598	M VENKATA SAI PRAVALLIKA	6	6	8	6	7	5	10	10	
97	17NM1A0599	MADIMI DEBORAH ZENIFER	5	7	6	8	5	6	10	10	
98	17NM1A05A0	MANIKONDA RITHWIKAA	7	8	7	7	7	8	10	10	
99	17NM1A05A1	MARADA SAI BHAVANA	6	7	7	7	5	6	10	9	
100	17NM1A05A2	MEDISETTI JYOTHSNA	7	7	6	8	7	7	10	9	
101	17NM1A05A3	MOJJADA UMA MAHESWARI	6	6	8	7	6	6	10	9	
102	17NM1A05A5	MOLLETTI SHAILAJA PREETHI	0	6	5	6	5	6	10	9	
103	17NM1A05A6	M R LAKSHMI CHARANMAI	5	5	5	5	5	5	10	10	
104	17NM1A05A7	NAGIREDDY SWARUPA	6	6	6	9	7	6	10	10	
105	17NM1A05A8	NALLABATI ANUSHA	5	7	7	8	6	6	10	10	
106	17NM1A05A9	NALLANA POOJITHA	7	8	6	8	6	8	10	10	
107	17NM1A05B0	NAMBURI RAMADEVI	6	6	6	7	6	6	10	9	
108	17NM1A05B1	N SAI SRAVANI KRISHNA	6	5	0	7	6	5	10	9	
109	17NM1A05B2	NANDAVARAPU PADMA	5	7	7	6	8	7	10	9	
110	17NM1A05B3	NANNAPANENI SAI SANDHYA	6	8	6	8	7	7	10	10	
111	17NM1A05B4	NATTI POORNIMA	7	8	7	8	7	7	10	10	
112	17NM1A05B5	NUKALA SRUTHI	8	0	0	7	6	6	10	9	
113	17NM1A05B6	NUPUR DAS	6	7	8	6	7	7	10	10	
114	17NM1A05B7	PADILAM GNANESWARI	7	8	5	6	8	7	10	10	
115	17NM1A05B8	PALEM SUSHMA	8	7	7	8	8	7	10	10	
116	17NM1A05B9	PALLI VASANTHI	8	7	7	7	9	6	10	10	
117	17NM1A05C0	PAMULA GAYATHRI	6	7	9	6	7	8	10	9	
118	17NM1A05C1	PAPPU SRI SAI KEERTHI	6	7	5	8	7	7	10	10	
119	17NM1A05C2	PARICLARLA LAHARI	6	6	5	6	5	5	10	10	
120	17NM1A05C3	PASALA ANUSHA	7	5	5	8	7	7	10	10	
121	17NM1A05C4	PEDDADA JAYA CHANDRIKA	5	6	5	6	6	5	10	9	
122	17NM1A05C5	PEETHALA RAMA LAKSHMI	8	8	6	8	8	8	10	10	
123	17NM1A05C6	P VENKATA SATYA LIKHITHA	8	7	7	7	8	6	10	10	
124	17NM1A05C7	P SRI JYOTHI MEGHANA	9	8	7	9	7	8	10	10	
125	17NM1A05C8	PILLA MOUNIKA	6	5	6	6	6	7	10	10	
126	17NM1A05C9	POLISETTI TEJA SAI SREE	6	7	5	7	7	7	10	10	
127	17NM1A05D0	PONNADA BHAVYA	8	7	7	7	7	7	10	10	
128	17NM1A05D1	POTHULA JAHNAVI	7	6	7	8	6	6	10	9	
129	17NM1A05D2	PULIDINDI KRISHNA PRIYA	6	6	6	6	6	7	9	9	
130	17NM1A05D3	PURETI LIKHITHA	6	6	6	6	7	8	7	10	10

320  
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 Visakhapatnam-49

131	17NM1A05D 4	PUSAPATI REVATHI	7	8	7	7	7	7	10	10
132	17NM1A05D 6	RAGOLU SADHANA	6	6	5	7	6	6	10	10
133	17NM1A05D 7	RAMADALAI KEERTHI	7	7	7	7	7	6	9	9
134	17NM1A05D 8	RAYAPUREDDY ANUSHA	6	7	5	7	8	7	9	10
135	17NM1A05D 9	RAYUDU L V SRUJANA	7	8	8	8	8	7	10	10
136	17NM1A05E0	RONGALA BHARATHI JYOTHI	8	7	9	8	7	6	10	10
137	17NM1A05E1	RONGALI TANUJA	6	7	8	6	7	7	9	10
138	17NM1A05E2	RUDRA RAJU YAMINI VARMA	7	7	5	7	6	7	9	9
139	17NM1A05E3	SAI RAKSHITHA PULAGALA	6	8	7	8	6	7	10	10
140	17NM1A05E4	SANABOYINA SRI VARSHINI	7	6	6	8	7	6	9	9
141	17NM1A05E5	SANAM RUPA SRI	7	6	9	7	8	0	10	10
142	17NM1A05E6	SANAPATHI BHAGYASRI	6	7	5	6	6	7	9	10
143	17NM1A05E7	SANAPATHI SRAVANI	7	7	7	8	7	6	9	9
144	17NM1A05E8	SAPPA SANDHYA RANI	7	6	6	8	7	7	10	10
145	17NM1A05E9	SEEKARI RAMA DEVI	6	6	7	6	5	7	10	10
146	17NM1A05F0	SEERAMREDDI NAMRATHA	6	6	5	7	5	6	10	9
147	17NM1A05F1	SILAPARASETTY SUSHMA	7	8	6	8	7	7	10	10
148	17NM1A05F2	SINGAMPALLI RAMYA	5	5	5	7	5	5	9	9
149	17NM1A05F3	SINGAMPALLI SANDHYA RANI	6	7	9	6	7	8	9	10
150	17NM1A05F4	SINGAMPALLI YAMINI	5	6	5	6	5	6	9	10
151	17NM1A05F5	SIVALA DEEPIKA	6	6	6	7	6	6	10	10
152	17NM1A05F6	SIVARATRI UMA DEVI	6	7	6	9	8	6	10	9
153	17NM1A05F7	SONTI JAHANAVI	6	7	7	6	6	7	10	10
154	17NM1A05F8	SRISAILAPU SIREESHA	7	6	6	7	6	7	10	10
155	17NM1A05F9	SUNKARA VIJAYALAXMI	5	6	6	7	6	6	9	9
156	17NM1A05G 0	SURADA HARITHA	7	6	6	9	7	6	10	10
157	17NM1A05G 2	TADISETTI LEELA BHAVANI	6	6	8	6	6	7	9	10
158	17NM1A05G 3	TALLURI MEGHANA	7	7	6	9	6	8	9	9
159	17NM1A05G 4	T J N SURYAKUMARI	7	8	7	8	6	7	10	10
160	17NM1A05G 5	TOKACHICHU POOJITHA	6	6	6	8	7	6	10	10
161	17NM1A05G 6	VABBALISETTY KALPANA	6	6	7	6	6	6	10	9
162	17NM1A05G 7	VANTAKU KUSUMANJALI	7	8	6	8	7	8	10	10
163	17NM1A05G 9	VASIREDDY SWAPNIKA	5	6	7	7	5	5	10	10
164	17NM1A05H 0	VEDULA SHAANKARI	7	6	7	9	8	7	9	10
165	17NM1A05H 1	V DEVI LAKSHMI RAJESWARI	6	6	6	6	6	7	10	9
166	17NM1A05H 2	VETURU RAMYALAKSHMI	6	6	6	6	6	7	9	9
167	17NM1A05H	V VIJAYA LAKSHMI	6	6	6	8	6	7	9	9

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Visakhapatnam-53

	3									
168	17NM1A05H 4	VURUKUTI MOUNICA	6	7	6	9	7	6	9	9
169	17NM1A05H 5	YELLETI YAMINI	5	6	5	0	5	6	9	10
170	17NM1A05H 6	Y Y NAGA SAI BHANUSRI	6	7	5	7	6	6	9	10
172	17NM1A05H 8	CHINTA MEGHANA	7	7	7	9	7	6	10	10
173	18NM5A0501	ALLAVARAPU HEMALATHA	7	7	5	8	6	7	10	10
174	18NM5A0502	BAILAPUDI YAMUNA KUMARI	7	8	7	8	6	7	10	10
175	18NM5A0503	KALLA PAVANI	7	6	7	9	8	7	10	10
176	18NM5A0504	KAMBALA HEMA	5	7	6	5	6	6	10	9
177	18NM5A0505	KARANAM POORNA	7	7	6	8	6	8	10	10
178	18NM5A0506	K UMA SAI SIRISHA	7	8	7	8	5	8	10	10
179	18NM5A0507	KUNDHI KIRANMAI	8	6	7	7	8	7	10	9
180	18NM5A0508	KUNDRAPU PAVANI	5	7	7	0	6	6	10	10
181	18NM5A0509	MADAKA PADMAJA	7	7	6	6	6	8	10	10
182	18NM5A0511	NAGALA CHANDINI	7	8	7	7	6	8	10	10
183	18NM5A0512	N KOTI SIVA SAI PRIYANKA	7	7	7	8	8	6	9	10
184	18NM5A0513	NIDRABINGI KRISHNA VENI	6	7	8	7	7	7	9	10
185	18NM5A0514	PENAGANTI DEVI	7	6	6	6	6	8	10	9
186	18NM5A0515	POLAKI SWATHI	7	7	6	7	5	7	9	10
187	18NM5A0516	RAMIREDDI CHANDINI	9	7	8	9	8	9	10	10
188	18NM5A0517	SAMMINGI NIRMALA	6	7	8	6	7	7	10	10
189	18NM5A0518	SIYADRI NAGA LAXMI YAMINI	8	8	6	8	8	8	9	10
190	18NM5A0519	TEKKALI ROOPA SRAVANI	7	7	7	7	6	8	10	10
191	18NM5A0520	VASUPILLI HARINI	7	6	7	8	7	7	9	9
192	18NM5A0521	MAGAPU PRIYA MOUNIKA	5	6	7	7	7	6	9	10
193	16NM1A0580	NARIPALLI BALAMAHESWARI	8	9	7	8	7	8	10	10
194	17A61A0507	CHALLA RENUKA DEVI	7	6	7	9	8	7	10	10
195	17NN1A05B5	VUPPALA MANISHA	5	6	8	0	5	5	9	10

GRADE	%	POINTS	CNS	SADP	WT	MEF A	BD A
O	>=90	Outstanding (10 POINTS)	2	0	0	6	0
S	>=80 to <90	Excellent (9 POINTS)	8	4	9	21	4
A	>=70 to <80	Very Good (8 POINTS)	18	37	26	52	21
B	>=60 to <70	Good (7 POINTS)	71	73	68	67	63
C	>=50 to <60	Fair (6 POINTS)	60	65	51	39	76
D	>=40 to <50	Satisfactory (5 POINTS)	32	11	34	4	29
F	<40	FAIL	3	4	6	5	1
		ABSENTEES	1	1	1	1	1
TOTAL APPEARED			195	195	194	194	194
PASS					191	190	188
PASS %					98	98	97

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Approved by AICTE, New Delhi, Affiliated to JNTU Kakinada

Kapujaggarajupeta, VSEZ(Post), Visakhapatnam-530049, AP

## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### RESULT ANALYSIS AT THE END OF SEMESTER

Course Name: <b>Web Technologies Lab</b>	Course Code: <b>C408</b>
Year/ Sem: <b>IV B TECH I SEM</b>	Regulation: <b>R16</b>
Academic year: <b>2019-20</b>	Admitted Batch: <b>2016</b>

S.No.	Roll No.	Name of the Student	CNS	SADP	WT	MEFA	BDA	CC	SADP LAB	WT LAB
1	16NM1A0501	Ahamed Unnisa	7	7	7	7	7	7	10	10
2	16NM1A0502	Aishwarya Gantayath	7	8	6	8	6	6	10	10
3	16NM1A0503	Ampolu Soundarya	10	9	8	8	8	8	10	10
4	16NM1A0504	A Sai Vaishnavi	8	9	8	7	8	7	10	10
5	16NM1A0505	Ande Sowmya Sri	7	7	7	6	5	6	10	9
6	16NM1A0506	Anjali Sowgandhi Piridi	6	6	5	6	5	5	9	8
7	16NM1A0507	Appikonda Leelaveni	8	8	8	8	8	7	10	10
8	16NM1A0508	A Surya Sai Supriya	7	9	7	8	7	7	10	10
9	16NM1A0509	Asuri Sukanya	8	7	8	8	7	7	10	10
10	16NM1A0510	Atta Lavanya	6	7	6	8	6	5	10	10
11	16NM1A0511	Balaka Harika	8	7	7	7	7	6	10	9
12	16NM1A0512	Baliboyna Niharika	7	8	8	7	7	6	10	10
13	16NM1A0513	Balireddy Soniya Shyne	7	7	7	8	7	8	10	10
14	16NM1A0514	Bammidi Saritha	8	9	6	8	6	7	10	10
15	16NM1A0515	Bandaru Roshinidevi	7	7	8	8	7	7	10	9
16	16NM1A0516	Basheerunnisa Begum	6	7	6	6	5	6	9	9
17	16NM1A0517	Beela Yajnashireesha	6	6	6	7	6	6	9	9
18	16NM1A0518	Bera Mamala Sridevi	6	7	6	7	6	5	9	10
19	16NM1A0519	Bhairi Surya Teja	8	8	8	8	6	9	10	10
20	16NM1A0520	Bondhi Anjali	6	8	7	6	6	7	10	10
21	16NM1A0521	Bonugu Sushmitha	6	6	6	6	6	6	9	9
22	16NM1A0522	Borigi Bhanusree	7	8	6	8	6	5	10	10
23	16NM1A0523	Chakka Swapna	8	8	6	6	5	6	10	10
24	16NM1A0524	Chinta Sri Lalitha Navya Bharathi	7	8	7	7	7	7	8	9
25	16NM1A0525	Chintalapudi Deekshitha	8	7	7	7	7	8	10	10
26	16NM1A0526	Chittuluri Alekya	8	8	7	9	7	7	10	10
27	16NM1A0527	Chukka Ramya	9	8	8	7	7	7	10	10
28	16NM1A0528	Dadi Jyothsna	7	8	7	7	7	7	10	10
29	16NM1A0529	Damuluri Anusha	7	7	7	7	7	7	10	10
30	16NM1A0530	Dasari Vandana Sri	7	9	6	8	7	7	10	10
31	16NM1A0531	Devupalli Sirisha	7	8	8	8	8	8	10	10
32	16NM1A0533	Dunna Yamuna	6	8	6	6	7	6	10	10
33	16NM1A0534	Duvvada Vandana	9	8	8	8	8	8	9	10
34	16NM1A0535	Ejji Deepika	8	8	7	9	7	6	10	10
35	16NM1A0536	Gandi Mounika	6	6	6	6	6	6	10	9

320  
PRINCIPAL  
Vignan's Institute of  
Engineering for Women  
X J. Peta, VSEZ (P.O.)  
Visakhapatnam-49



36	16NM1A0537	G Krishna Kumar Sowmya	9	9	10	8	8	7	10	10
37	16NM1A0538	Gannu Rupa Santhi Sree	7	8	7	7	6	7	10	10
38	16NM1A0539	Ghattamaneni Praharsha	6	7	6	9	6	6	10	10
39	16NM1A0541	Gowripattapu Anusha	9	9	8	6	8	7	10	9
40	16NM1A0542	Gujjari Priyanka	7	8	7	8	8	7	10	10
41	16NM1A0543	Gunda Mounika	7	7	7	6	7	7	9	10
42	16NM1A0544	G Naga Sai Lalitya	8	7	6	8	6	6	10	10
43	16NM1A0545	Guntrothu Devi	9	8	8	9	9	6	10	10
44	16NM1A0546	Gunturu Lakshmi Tulasi	9	9	8	7	8	8	10	10
45	16NM1A0547	Indala Bhagya Lakshmi	6	7	6	7	7	6	10	10
46	16NM1A0548	Jaggapu Swetha	8	9	6	7	6	6	10	9
47	16NM1A0549	Jaggina Divya	9	9	8	8	8	7	10	10
48	16NM1A0550	Jajula Poornima	6	7	7	6	7	5	10	10
49	16NM1A0551	Kakara Padmavathi	7	7	6	6	6	6	10	9
50	16NM1A0552	Kandregula Bhagya Sri	7	7	6	6	6	5	10	10
51	16NM1A0553	Kandula Sai Praneetha	8	7	8	5	7	5	10	10
52	16NM1A0554	K Mary Prathyusha	6	7	8	6	7	6	10	10
53	16NM1A0555	Kaza Prathyusha	5	8	6	6	6	5	9	9
54	16NM1A0556	Kesanakurthi Chinni	7	9	6	7	6	7	10	10
55	16NM1A0557	K Amrutha Sarvani	8	8	8	8	8	6	10	10
56	16NM1A0558	Koduru Santoshi	7	8	7	9	8	7	10	10
57	16NM1A0559	Kolluru Sai Sadhana	8	8	7	6	7	6	10	10
58	16NM1A0560	Konathala Chaturya	7	7	6	6	6	7	10	10
59	16NM1A0561	Konathala Yogitha	9	8	8	7	8	6	10	10
60	16NM1A0562	K Sri Lakshmi Prasanna	8	8	8	7	8	6	10	10
61	16NM1A0563	Koyya Bhavana	6	8	8	9	6	7	10	10
62	16NM1A0564	Kulla Sai Siri Sowjanya	6	7	6	7	5	6	9	9
63	16NM1A0565	Kurella Navya Sree	7	7	7	6	6	7	10	9
64	16NM1A0566	Lagudu Anusha	9	9	9	8	8	7	10	10
65	16NM1A0567	Lankada Vineetha	7	7	8	8	7	8	9	10
66	16NM1A0568	Madala Amulya	6	7	5	7	6	7	10	10
67	16NM1A0569	Mallidi Sindhu	9	8	7	7	8	7	10	10
68	16NM1A0570	Manasa Sagori	7	7	6	7	5	5	8	9
69	16NM1A0571	Manga Venkata Satya Bhavani	0	8	6	6	6	5	10	10
70	16NM1A0572	Manne Geethasri	7	7	6	6	6	7	10	9
71	16NM1A0573	Matta Roshini	6	0	5	5	6	5	9	9
72	16NM1A0574	Mattaparthi Samyuktha	8	8	7	7	8	6	10	10
73	16NM1A0575	Medisetty Joshna	6	7	7	6	6	6	9	10
74	16NM1A0576	Mummina Pravalika	6	7	7	9	7	6	9	10
75	16NM1A0577	Munagapaka Sailaja	7	9	6	7	6	8	9	9
76	16NM1A0578	Musudi Poorna Jyothsna	5	7	6	7	8	6	9	10
77	16NM1A0579	Narava Bhagya Lakshmi	7	7	6	7	7	7	9	9
78	16NM1A0581	Neelapu Sriranjini	6	6	5	8	6	6	9	10
79	16NM1A0582	Nisha Mary Vincent	6	7	6	7	7	6	9	9
80	16NM1A0583	Palakurthi Anusha	5	6	5	6	6	5	9	9
81	16NM1A0584	Palavayi Jyothi Priya	5	5	5	5	0	6	9	9
82	16NM1A0585	Parapati Neela Veni	6	6	6	7	6	6	10	10
83	16NM1A0586	Pasem Harshitha	6	6	6	8	8	8	10	10

84	16NM1A0587	Patro Yamini	6	7	7	7	7	6	10	9
85	16NM1A0588	Pediredla Vasudha	8	7	9	8	8	8	10	10
86	16NM1A0589	Pendyala Veenavaibhavi	7	7	8	9	8	6	10	10
87	16NM1A0590	Penmatsa Lavanya	7	7	7	7	6	6	10	10
88	16NM1A0591	Perumalla Manasa	6	7	6	6	7	6	10	10
89	16NM1A0592	Pilla Pooja	6	7	7	7	6	6	9	10
90	16NM1A0593	Pilla Praveena	7	7	8	8	6	6	10	10
91	16NM1A0594	Pola Manju	8	9	6	7	8	8	9	10
92	16NM1A0595	Polimera Guna Varshini	7	8	7	8	7	7	10	10
93	16NM1A0596	Polumahanti Sowmya	8	8	8	8	8	9	10	10
94	16NM1A0597	Potnuru Ankitha	6	6	7	8	7	6	9	9
95	16NM1A0598	Potnuru Anusha	8	6	6	7	6	7	9	9
96	16NM1A0599	Rajagiri Anu Radha	5	6	0	5	0	0	9	9
97	16NM1A05A0	Ravupalli Sai Priya	7	7	6	7	7	7	10	10
98	16NM1A05A1	Repaka Sravani Sandhya	6	6	7	7	6	5	9	9
99	16NM1A05A2	Sabbavarapu Suguna	8	8	6	6	7	6	9	10
100	16NM1A05A3	Sahukaru Snigtha	6	7	5	7	6	5	9	9
101	16NM1A05A4	Sakalabathula Jyothsna	7	7	6	7	8	7	9	10
102	16NM1A05A5	Sanapathi Kavitha	6	6	8	8	7	6	10	10
103	16NM1A05A7	Shabnam	7	9	6	7	5	7	9	9
104	16NM1A05A8	Shimi John	6	5	7	7	7	6	9	9
105	16NM1A05A9	Sravya S	7	7	7	8	7	8	10	10
106	16NM1A05B0	Surampudi Likhitha	7	7	5	8	7	6	9	9
107	16NM1A05B1	Thamira Pooja	8	7	5	7	6	7	9	9
108	16NM1A05B2	Totharamudi Sahithi	6	8	7	6	6	6	10	10
109	16NM1A05B3	Triveni Possarla	6	8	7	6	7	7	10	10
110	16NM1A05B4	Tummapala Jaya	8	8	7	9	7	7	10	10
111	16NM1A05B5	Tumpala Kusuma Sarika	9	8	7	8	6	7	10	10
112	16NM1A05B6	Uppati Gowrivenkatasaideepika	6	0	5	7	5	0	9	9
113	16NM1A05B7	Vanamoju Prathyusha	8	8	7	7	7	8	9	10
114	16NM1A05B8	Vegi Kavya Kanaka Mahalakshmi	8	7	6	8	6	6	10	10
115	16NM1A05B9	Velaga Joshna Kalyani	8	8	7	8	7	6	9	10
116	16NM1A05C0	Velaga Pratyusha	7	9	7	8	8	8	10	10
117	16NM1A05C1	Vurukuti Keerthi	7	8	7	6	7	6	10	10
118	16NM1A05C2	Y Prasanna Lakshmi	7	8	7	9	7	6	10	10
119	16NM1A05C3	Yegi Sriya	7	8	7	7	7	8	9	10
120	16NM1A05C4	Yellapu Manmita Sravya	6	10	8	7	7	6	10	10
121	16NM1A05C5	Yelleti Haritha	7	7	6	6	7	8	9	9
122	16NM1A05C6	Yerramsetty Vasantha	7	7	5	7	6	5	10	9
123	16NM1A05C7	A DRatnanjali Devi	8	8	6	7	8	7	10	10
124	16NM1A05C8	Adapa Anusha	6	7	5	6	6	5	9	9
125	16NM1A05C9	Adari Vindya Sree	7	8	7	6	7	7	9	10
126	16NM1A05D0	B Hyndavi	8	7	6	8	6	6	10	10
127	16NM1A05D1	B Shivani	7	7	6	7	8	7	9	9
128	16NM1A05D2	Bagi Sai Keerthi	7	6	5	8	7	5	9	10
129	16NM1A05D3	Bhavya Sri Vankadara	6	6	6	6	6	5	9	9
130	16NM1A05D4	Bitra Sai Sowmya	7	6	5	8	6	5	10	10

PRINCIPAL  
Vignam's Institute of  
Engineering for Women  
K. J. Peta, VSEZ (P.O.)  
Visakhapatnam-49

131	16NM1A05D5	Bodda Jhansi Lakshmi	9	8	9	8	9	8	10	10
132	16NM1A05D6	Borra V S S Madhuri	5	6	5	5	5	0	9	9
133	16NM1A05D7	Buddha Niharika	7	8	7	6	6	7	9	9
134	16NM1A05D8	Chekuri Divya Sri	6	7	6	9	6	6	9	10
135	16NM1A05D9	Ch Venkata Pravallika	9	7	7	8	7	6	9	9
136	16NM1A05E0	Ch Sai Rakshitha	5	6	5	6	5	5	9	9
137	16NM1A05E1	D Santhosh Haritha	8	8	7	6	7	7	10	9
138	16NM1A05E2	Devara Vandana	7	6	5	7	6	5	9	9
139	16NM1A05E3	Dharmala Jhansi Reddy	9	7	6	8	8	7	10	10
140	16NM1A05E4	Doki Meghana	0	5	6	6	5	0	10	9
141	16NM1A05E5	Gajjela Nithisha	5	7	6	6	6	6	9	9
142	16NM1A05E6	Galla Hyndavi	0	5	0	6	0	0	10	9
143	16NM1A05E7	Galla Mounika	8	8	6	8	7	7	9	10
144	16NM1A05E8	Gangupam Prashipta	0	0	5	0	0	0	9	9
145	16NM1A05E9	Guntureddy Kusuma	6	8	6	6	7	6	9	10
146	16NM1A05F0	Gunuru Devaharshini	6	8	5	7	6	6	10	9
147	16NM1A05F1	Guruvu Yasaswani	7	7	7	6	6	5	9	9
148	16NM1A05F2	Jangareddy Deekshita	7	9	6	6	7	7	10	9
149	16NM1A05F3	K Lahari	6	7	7	7	7	6	10	9
150	16NM1A05F4	K Monika	5	7	0	6	5	5	8	8
151	16NM1A05F5	Kalla Raga Deepika	5	7	6	7	6	6	9	9
152	16NM1A05F6	Kasamsetty Kavya Sree	8	9	7	7	8	7	9	9
153	16NM1A05F7	Kasu Anjali	7	8	7	7	7	7	10	10
154	16NM1A05F8	Keerthi Hima Bindu	6	7	5	7	5	5	10	9
155	16NM1A05F9	Kirthi Chowdhary Ch	6	6	6	6	6	5	10	9
156	16NM1A05G0	Kodali Sri Harsha	8	8	7	7	7	6	10	9
157	16NM1A05G1	Kommoju Katyayani	6	8	6	6	6	5	9	9
158	16NM1A05G2	Kukra Usha	7	8	6	7	6	6	10	10
159	16NM1A05G3	Kunisetty Divya Sri	6	8	6	8	7	7	9	9
160	16NM1A05G4	K Vijayalakshmi	6	7	6	6	7	5	10	10
161	16NM1A05G5	Mandava Nikitha	7	5	6	5	7	7	10	9
162	16NM1A05G6	Mudunuri Naga Santosha Roopa Sri	7	7	5	7	5	6	10	9
163	16NM1A05G7	Muntha Keerthi	6	8	7	7	8	7	10	10
164	16NM1A05G8	P Tanmay	8	8	7	7	8	7	10	10
165	16NM1A05G9	Pilla Harshika	6	6	7	6	7	8	10	9
166	16NM1A05H0	Pothina Bhargavi	6	6	5	6	5	5	9	9
167	16NM1A05H1	R Lochana Sai Mamba	6	7	6	7	7	7	9	10
168	16NM1A05H2	Salapu Divya	6	8	7	6	7	7	10	10
169	16NM1A05H3	Sathvika Ranguri	5	6	5	6	6	6	9	9
170	16NM1A05H4	Shaik Jasmine	5	5	5	7	5	0	9	10
171	16NM1A05H6	Tamarana Nishitha	6	6	6	7	6	5	9	9
172	16NM1A05H7	Tirumala Akanksha M	5	6	5	6	5	0	9	9
173	16NM1A05H8	Valleti Harshini Ch	7	8	6	7	7	8	9	9
174	16NM1A05H9	Vennala Satya Priyanka	6	6	5	7	5	5	9	9
175	17NM5A0501	A Rajeswari Laxmi	6	8	7	7	7	7	9	9
176	17NM5A0502	B Siva Sai Naga Lalitha	8	9	9	6	8	7	9	10
177	17NM5A0503	Dharmala Vasantha	5	7	5	6	7	6	9	10
178	17NM5A0504	Galla Sailaja	7	8	7	8	6	7	10	10
179	17NM5A0505	Ganagalla Anusha	7	9	6	9	6	9	9	9

180	17NM5A0506	Geddarn Durga Bhavani	5	7	6	6	6	6	9	9
181	17NM5A0507	Majji Kasturi	6	8	7	6	7	5	9	9
182	17NM5A0508	P Bala Rama Jyothi	6	6	6	8	5	6	9	9
183	17NM5A0510	Savalapu Girija	9	8	8	7	8	6	9	10
184	17NM5A0511	Surada Rajeswari	8	7	7	6	7	5	10	10
185	17NM5A0512	Ummidi Indhira	6	9	7	6	7	5	10	10
186	17NM5A0513	Vindula Manichandana	6	7	5	8	6	6	10	9
187	17NM5A0514	Vobbina Vani Venkata Saieswari	9	7	8	7	8	6	10	9
188	15NM1A05A7	Sri Pooja Tummala	6	7	7	5	6	6	10	10
189	14NM1A05D8	Kesuboyina Srilekha	6	7	#	6	6	5	8	7

Grade	%	POINTS	CNS	SADP	WT	MEFA	BDA	CC	SADP LAB	WT LAB
O	>=90	Outstanding(10 Points)	1	1	1	0	0	0	111	111
S	>=80 to <90	Excellent(9 Points)	17	21	4	11	3	2	74	75
A	>=70 to <80	Very Good(8 Points)	37	62	28	46	34	19	4	2
B	>=60 to <70	Good(7 Points)	55	72	62	68	67	58	0	1
C	>=50 to <60	Fair(6 Points)	58	24	61	56	61	68	0	0
D	>=40 to <50	Satisfactory(5 Points)	16	6	26	7	19	33	0	0
F	<40	Fail	5	3	6	1	5	9	0	0
ABSENTEES (#)			0	0	1	0	0	0	0	0
TOTAL APPEARED			189	189	188	189	189	189	189	189
PASS			184	186	182	188	184	180	189	189
PASS %			97	98	97	99	97	95	100	100

2400

PRINCIPAL  
Vignani's Institute of  
Engineering for Women  
K.J. Peta, VSEZ (P.O.)  
Visakhapatnam-49





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Kapujaggaraju Peta, VSEZ(post), Gajuwaka, Visakhapatnam-530049, AP

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

Course Name: Web Technologies Lab	Course Code: C408	Admitted Batch: 2018
Year/ Sem : IV B TECH I SEM	Regulation: R16	Academic Year: 2019-20
Course Coordinator : Mr. A. Maheswara Rao	Faculty: Mr. A. Maheswara Rao, Mrs. Ms. Afsheen Firdous, Mr. A. Maheswara Rao	

S.No	Reg. No.	INTERNAL																EXTERNAL		
		w1	w2	w3	w4	w5	w6	w7	w8	w9	w10	w11	w12	w13	w14	Day to Day evaluation (10)	Internal exam (CO1-CO6)	Record (CO1-CO6)	Total (CO1:CO6)	end exam (CO1:CO6)
		E1-E2	E3-E5	E6	E19	E20	E21	E22	E23	E24	E25	E7-E10	E11-E14	E15-E16	E17-E18					
		CO1	CO1	CO2	CO5	CO5	CO5	CO5	CO5	CO5	CO6	CO3	CO3	CO4	CO4				25 M	50M
1	17NMIA0501	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	7	5	22	48
2	17NMIA0502	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	25	45
3	17NMIA0503	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	5	24	46
4	17NMIA0504	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	7	5	22	48
5	17NMIA0505	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	6	5	21	39
6	17NMIA0506	8	8	6	10	6	9	9	9	10	10	6	6	8	7	8	5	5	18	37
7	17NMIA0507	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	8	5	23	47
8	17NMIA0508	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	8	5	23	47
9	17NMIA0509	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	5	24	46
10	17NMIA0510	10	7	6	10	10	9	9	9	10	8	10	8	10	10	9	9	5	23	47
11	17NMIA0511	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	5	20	40
12	17NMIA0512	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	5	24	46
13	17NMIA0513	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	8	5	23	47
14	17NMIA0514	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	8	5	23	47
15	17NMIA0515	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	7	5	22	38
16	17NMIA0516	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	6	5	21	39
17	17NMIA0517	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	5	20	40
18	17NMIA0518	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	7	5	22	48
19	17NMIA0519	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	8	5	23	47
20	17NMIA0520	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	7	5	22	48
21	17NMIA0521	10	6	10	10	9	10	10	9	9	10	10	5	9	9	9	4	5	18	42
22	17NMIA0522	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	25	45
23	17NMIA0523	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	A	5	15	45
24	17NMIA0524	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	5	24	46
25	17NMIA0525	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	7	5	22	48

PRINCIPAL  
Vignana Institute of Engineering for Women  
Peta, VSEZ (P.O.)  
Visakhapatnam-49

26	17NM1A0526	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	8	5	23	47
27	17NM1A0527	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	5	24	46
28	17NM1A0528	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	5	24	46
29	17NM1A0529	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	7	5	22	48
30	17NM1A0530	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	6	5	21	49
31	17NM1A0531	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	7	5	22	48
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34	17NM1A0534	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	5	20	40
35	17NM1A0535	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	5	24	46
36	17NM1A0536	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	5	24	46
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38	17NM1A0538	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	A	5	15	45
39	17NM1A0539	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	5	24	46
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42	17NM1A0542	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	5	24	46
43	17NM1A0543	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	5	24	46
44	17NM1A0544	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	7	5	22	48
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46	17NM1A0546	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	7	5	22	48
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48	17NM1A0549	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	25	45
49	17NM1A0550	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	5	20	40
50	17NM1A0551	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	5	24	46
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52	17NM1A0553	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	7	5	22	48
53	17NM1A0554	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	8	5	18	40
54	17NM1A0555	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	25	45
55	17NM1A0556	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	6	5	21	49
56	17NM1A0557	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	25	45
57	17NM1A0558	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	5	24	46
58	17NM1A0559	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	8	5	23	45
59	17NM1A0560	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	8	5	23	45
60	17NM1A0561	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	7	5	22	48
61	17NM1A0562	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	7	5	22	48

P. R. JAYAPAL  
 K. J. Senthil Kumar  
 Institute of  
 Engineering for Women  
 K. J. Somaiya, V. S. 67 (P. O.)  
 Anna Nagar, Chennai-600 088  
 48

62	16NM1A0580	10	10	10	10	10	10	10	10	10	10	10	10	10	10	7	5	22	48	
63	17A61A0507	10	10	10	10	10	10	10	10	10	10	10	10	10	10	3	5	18	42	
64	17NN1A05B5	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	5	24	46	
65	17NM1A0563	9	9	9	10	9	10	9	10	8	8	8	9	9	9	9	10	5	24	46
66	17NM1A0564	8	10	8	10	10	8	10	8	10	8	10	10	8	8	9	8	5	22	48
67	17NM1A0565	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	3	5	18	42
68	17NM1A0566	10	9	9	7	10	10	10	9	8	10	10	5	9	10	9	9	5	23	47
69	17NM1A0567	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	25	45
70	17NM1A0568	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	7	5	22	48
71	17NM1A0569	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	8	5	23	47
72	17NM1A0570	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	25	45
73	17NM1A0571	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	5	24	46
74	17NM1A0572	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	7	5	22	48
75	17NM1A0573	10	8	10	8	8	9	10	7	10	8	8	10	10	10	9	8	5	22	48
76	17NM1A0574	7	5	9	8	9	5	8	8	7	10	10	10	6	10	8	8	5	21	39
77	17NM1A0576	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	5	24	36
78	17NM1A0577	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	25	45
79	17NM1A0578	10	9	8	7	8	10	7	10	10	10	10	8	10	9	9	9	5	23	47
80	17NM1A0579	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	8	5	23	47
81	17NM1A0580	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	5	24	46
82	17NM1A0581	7	8	8	8	7	9	6	8	6	10	10	9	6	10	8	8	5	21	39
83	17NM1A0582	8	9	7	10	8	10	10	10	10	7	10	8	10	9	9	10	5	24	46
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85	17NM1A0584	5	6	8	9	5	10	10	10	5	5	10	5	5	5	7	9	5	21	39
86	17NM1A0585	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	25	45
87	17NM1A0586	10	9	9	9	9	10	10	10	8	7	10	10	6	9	9	9	5	23	47
88	17NM1A0587	5	9	7	7	10	10	9	7	10	5	10	8	7	8	8	8	5	21	49
89	17NM1A0588	10	8	5	8	10	7	5	8	5	6	8	5	7	6	7	9	5	21	39
90	17NM1A0589	10	8	9	9	6	10	8	10	7	8	5	6	10	6	8	9	5	22	48
91	17NM1A0590	8	10	6	10	8	8	6	6	9	10	7	6	9	9	8	9	5	22	38
92	17NM1A0591	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	8	5	23	47
93	17NM1A0592	10	8	9	8	9	10	9	10	9	9	10	8	9	8	9	8	5	22	38
94	17NM1A0593	10	10	8	10	8	6	6	7	9	8	6	9	5	10	8	8	5	23	47
95	17NM1A0594	5	5	7	5	8	9	10	7	5	7	7	6	9	8	7	9	5	23	47
96	17NM1A0595	8	9	8	10	10	10	9	8	9	9	10	9	8	9	9	10	5	24	46
97	17NM1A0596	10	10	10	9	10	10	9	10	8	8	8	8	10	6	9	9	5	23	47

2205  
**PRINCIPAL**  
 Viswan's Institute of  
 Engineering for Women  
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 Visakhapatnam-530019





134	17NM1A05C5	10	10	10	10	10	10	10	10	10	10	10	10	10	10	8	9	5	22	46
135	17NM1A05C6	7	9	9	9	6	5	10	8	6	10	9	7	7	10	8	9	5	22	38
136	17NM1A05C7	8	10	7	6	8	10	8	6	10	8	8	5	8	10	9	9	5	23	38
137	17NM1A05C8	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	5	24	46
138	17NM1A05C9	10	7	7	10	6	7	7	10	10	7	9	7	10	5	9	9	5	23	48
139	17NM1A05D0	7	9	7	9	9	10	10	9	6	9	6	6	5	10	9	8	5	22	39
140	17NM1A05D1	10	10	10	10	10	10	10	10	10	10	10	10	10	10	7	9	5	21	46
141	17NM1A05D2	10	10	10	7	10	7	10	10	9	10	7	10	9	7	9	9	5	23	47
142	17NM1A05D3	5	10	10	5	9	6	9	6	9	7	7	10	9	10	10	8	5	23	39
143	17NM1A05D4	9	10	6	5	10	7	10	10	6	7	7	8	8	9	10	9	5	24	48
144	17NM1A05D6	10	9	8	10	7	10	5	9	7	10	7	9	6	5	8	8	5	21	39
145	17NM1A05D7	10	9	9	10	5	8	8	6	6	9	5	10	9	8	8	9	5	22	48
146	17NM1A05D8	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	5	24	46
147	17NM1A05D9	10	8	6	7	7	8	10	9	8	8	7	8	8	8	8	8	5	21	39
148	17NM1A05E0	10	7	6	10	7	8	7	7	9	9	10	5	7	10	8	8	5	21	39
149	17NM1A05E1	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	5	24	46
150	17NM1A05E2	10	9	9	9	9	8	10	10	10	8	10	10	9	5	9	8	5	22	38
151	17NM1A05E3	8	7	6	5	10	10	5	8	5	6	10	7	5	6	7	10	5	22	38
152	17NM1A05E4	9	7	10	10	10	10	10	6	9	10	9	8	8	10	9	9	5	23	37
153	17NM1A05E5	7	9	8	9	10	10	9	6	7	9	6	5	7	10	8	9	5	22	38
154	17NM1A05E6	10	7	9	7	6	9	9	8	7	6	8	9	8	9	8	9	5	22	48
155	17NM1A05E7	10	5	7	9	10	10	8	9	8	5	8	7	6	10	8	8	5	21	39
156	17NM1A05E8	10	10	6	7	8	9	10	9	9	5	7	6	6	10	8	8	5	21	39
157	17NM1A05E9	5	9	9	10	9	7	10	6	9	10	6	9	6	7	8	9	5	22	38
158	17NM1A05F0	10	8	9	8	6	8	10	9	6	9	7	5	9	8	8	9	5	22	48
159	17NM1A05F1	10	10	10	8	9	8	10	7	9	10	10	8	10	7	9	9	5	23	37
160	17NM1A05F2	10	7	9	10	10	10	10	9	9	8	7	10	9	8	9	9	5	23	47
161	17NM1A05F3	6	8	9	10	10	10	7	10	10	8	9	9	10	10	9	8	5	22	38
162	17NM1A05F4	8	9	8	10	7	9	10	7	9	10	10	10	9	10	9	8	5	22	38
163	17NM1A05F5	8	7	7	9	7	8	9	10	7	8	10	9	7	6	8	8	5	21	39
164	17NM1A05F6	10	8	5	10	7	8	10	9	9	7	9	5	9	6	8	8	5	21	39
165	17NM1A05F7	9	10	8	10	9	7	10	9	9	7	10	10	9	9	9	0	5	21	39
166	17NM1A05F8	6	7	8	10	7	10	6	10	10	8	5	8	8	9	8	8	5	21	39
167	17NM1A05F9	5	9	10	8	8	7	8	10	8	7	7	6	9	10	8	8	5	21	39
168	17NM1A05G0	8	8	8	10	9	9	9	10	9	10	10	8	10	8	9	10	5	21	39
169	17NM1A05G2	9	6	10	10	8	10	5	10	7	5	9	9	5	9	8	8	5	21	39

PRINCIPAL  
 V. S. Srinivas Institute of  
 Engineering for Women  
 Y. S. Petalaj SEZ (P. O.)  
 Visakhapatnam-53



S.No	Regd.No.	INTERNAL						EXTERNAL
		MID 1						University
		CO1	CO2	CO3	CO4	CO5	CO6	end exam CO1:CO6
		10M	10M	10M	10M	10M	10M	50M
1	17NM1A0501	10.0	10.0	10.0	10.0	10.0	10.0	48
2	17NM1A0502	10.0	10.0	10.0	10.0	10.0	10.0	45
3	17NM1A0503	10.0	10.0	10.0	10.0	10.0	10.0	46
4	17NM1A0504	10.0	10.0	10.0	10.0	10.0	10.0	48
5	17NM1A0505	10.0	10.0	10.0	10.0	10.0	10.0	39
6	17NM1A0506	8.0	6.0	6.0	7.5	8.8	10.0	37
7	17NM1A0507	10.0	10.0	10.0	10.0	10.0	10.0	47
8	17NM1A0508	10.0	10.0	10.0	10.0	10.0	10.0	47
9	17NM1A0509	10.0	10.0	10.0	10.0	10.0	10.0	46
10	17NM1A0510	8.5	6.0	9.0	10.0	9.5	8.0	47
11	17NM1A0511	10.0	10.0	10.0	10.0	10.0	10.0	40
12	17NM1A0512	10.0	10.0	10.0	10.0	10.0	10.0	46
13	17NM1A0513	10.0	10.0	10.0	10.0	10.0	10.0	47
14	17NM1A0514	10.0	10.0	10.0	10.0	10.0	10.0	47
15	17NM1A0515	10.0	10.0	10.0	10.0	10.0	10.0	38
16	17NM1A0516	10.0	10.0	10.0	10.0	10.0	10.0	39
17	17NM1A0517	10.0	10.0	10.0	10.0	10.0	10.0	40
18	17NM1A0518	10.0	10.0	10.0	10.0	10.0	10.0	48
19	17NM1A0519	10.0	10.0	10.0	10.0	10.0	10.0	47
20	17NM1A0520	10.0	10.0	10.0	10.0	10.0	10.0	48
21	17NM1A0521	8.0	10.0	7.5	9.0	9.5	10.0	42
22	17NM1A0522	10.0	10.0	10.0	10.0	10.0	10.0	45
23	17NM1A0523	10.0	10.0	10.0	10.0	10.0	10.0	47
24	17NM1A0524	10.0	10.0	10.0	10.0	10.0	10.0	45
25	17NM1A0525	10.0	10.0	10.0	10.0	10.0	10.0	46
26	17NM1A0526	10.0	10.0	10.0	10.0	10.0	10.0	48
27	17NM1A0527	10.0	10.0	10.0	10.0	10.0	10.0	47
28	17NM1A0528	10.0	10.0	10.0	10.0	10.0	10.0	46
29	17NM1A0529	10.0	10.0	10.0	10.0	10.0	10.0	46
30	17NM1A0530	10.0	10.0	10.0	10.0	10.0	10.0	48
31	17NM1A0531	10.0	10.0	10.0	10.0	10.0	10.0	49
32	17NM1A0532	10.0	10.0	10.0	10.0	10.0	10.0	48
33	17NM1A0533	10.0	10.0	10.0	10.0	10.0	10.0	45
34	17NM1A0534	10.0	10.0	10.0	10.0	10.0	10.0	45
35	17NM1A0535	10.0	10.0	10.0	10.0	10.0	10.0	40
36	17NM1A0536	10.0	10.0	10.0	10.0	10.0	10.0	46
37	17NM1A0537	10.0	10.0	10.0	10.0	10.0	10.0	46
38	17NM1A0538	10.0	10.0	10.0	10.0	10.0	10.0	48
39	17NM1A0539	10.0	10.0	10.0	10.0	10.0	10.0	40

3202  
**PRINCIPAL**  
 Vignan's Institute of  
 Engineering for Women  
 K. J. Peta, VSEZ (P. O.)  
 Visakhapatnam-49

40	17NM1A0540	10.0	10.0	10.0	10.0	10.0	10.0	45
41	17NM1A0541	10.0	10.0	10.0	10.0	10.0	10.0	49
42	17NM1A0542	10.0	10.0	10.0	10.0	10.0	10.0	45
43	17NM1A0543	10.0	10.0	10.0	10.0	10.0	10.0	46
44	17NM1A0544	10.0	10.0	10.0	10.0	10.0	10.0	47
45	17NM1A0545	10.0	10.0	10.0	10.0	10.0	10.0	47
46	17NM1A0546	10.0	10.0	10.0	10.0	10.0	10.0	38
47	17NM1A0548	10.0	10.0	10.0	10.0	10.0	10.0	38
48	17NM1A0549	10.0	10.0	10.0	10.0	10.0	10.0	48
49	17NM1A0550	10.0	10.0	10.0	10.0	10.0	10.0	48
50	17NM1A0551	10.0	10.0	10.0	10.0	10.0	10.0	42
51	17NM1A0552	10.0	10.0	10.0	10.0	10.0	10.0	46
52	17NM1A0553	9.0	9.0	8.5	9.0	9.3	8.0	46
53	17NM1A0554	9.0	8.0	10.0	8.0	9.3	8.0	48
54	17NM1A0555	10.0	10.0	10.0	10.0	10.0	10.0	42
55	17NM1A0556	9.5	9.0	7.5	9.5	9.0	10.0	47
56	17NM1A0557	10.0	10.0	10.0	10.0	10.0	10.0	45
57	17NM1A0558	10.0	10.0	10.0	10.0	10.0	10.0	48
58	17NM1A0559	10.0	10.0	10.0	10.0	10.0	10.0	47
59	17NM1A0560	10.0	10.0	10.0	10.0	10.0	10.0	45
60	17NM1A0561	10.0	10.0	10.0	10.0	10.0	10.0	46
61	17NM1A0562	10.0	10.0	10.0	10.0	10.0	10.0	48
62	16NM1A0580	9.0	10.0	9.0	10.0	8.7	8.0	48
63	17A61A0507	6.0	9.0	10.0	8.0	7.5	10.0	39
64	17NN1A05B5	10.0	10.0	10.0	10.0	10.0	10.0	36
65	17NM1A0563	10.0	10.0	10.0	10.0	10.0	10.0	45
66	17NM1A0564	9.5	8.0	9.0	9.5	8.7	10.0	47
67	17NM1A0565	10.0	10.0	10.0	10.0	10.0	10.0	47
68	17NM1A0566	10.0	10.0	10.0	10.0	10.0	10.0	46
69	17NM1A0567	7.5	8.0	9.5	8.0	7.3	10.0	39
70	17NM1A0568	8.5	7.0	9.0	9.5	9.7	7.0	46
71	17NM1A0569	10.0	9.0	8.0	8.5	9.5	7.0	37
72	17NM1A0570	5.5	8.0	7.5	5.0	8.2	5.0	39
73	17NM1A0571	10.0	10.0	10.0	10.0	10.0	10.0	45
74	17NM1A0572	9.5	9.0	10.0	7.5	9.3	7.0	47
75	17NM1A0573	7.0	7.0	9.0	7.5	8.8	5.0	49
76	17NM1A0574	9.0	5.0	6.5	6.5	7.2	6.0	39
77	17NM1A0576	9.0	9.0	5.5	8.0	8.3	8.0	48
78	17NM1A0577	9.0	6.0	6.5	9.0	7.8	10.0	38
79	17NM1A0578	10.0	10.0	10.0	10.0	10.0	10.0	47
80	17NM1A0579	9.0	9.0	9.0	8.5	9.2	9.0	38
81	17NM1A0580	10.0	8.0	7.5	7.5	7.7	8.0	39
82	17NM1A0581	5.0	7.0	6.5	8.5	7.3	7.0	39
83	17NM1A0582	8.5	8.0	9.5	8.5	9.3	9.0	46

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 K.J. Peta, VSEZ (P.O.)  
 Visakhapatnam-49

84	17NM1A0583	10.0	10.0	8.0	8.0	9.3	8.0	47
85	17NM1A0584	9.5	10.0	9.0	9.5	8.3	10.0	37
86	17NM1A0585	10.0	10.0	10.0	10.0	10.0	10.0	45
87	17NM1A0586	10.0	10.0	10.0	10.0	10.0	10.0	45
88	17NM1A0587	9.5	9.0	9.0	9.0	9.2	7.0	47
89	17NM1A0588	10.0	10.0	10.0	9.5	8.3	7.0	47
90	17NM1A0589	9.5	9.0	6.5	7.0	8.2	8.0	49
91	17NM1A0590	8.0	8.0	7.5	9.5	10.0	8.0	47
92	17NM1A0591	10.0	10.0	10.0	10.0	10.0	10.0	46
93	17NM1A0592	10.0	10.0	10.0	10.0	10.0	10.0	45
94	17NM1A0593	10.0	10.0	10.0	10.0	10.0	10.0	46
95	17NM1A0594	9.0	5.0	9.0	8.0	8.0	7.0	39
96	17NM1A0595	7.5	10.0	8.0	8.0	8.0	7.0	39
97	17NM1A0596	8.0	8.0	7.5	7.5	8.3	8.0	39
98	17NM1A0597	8.5	9.0	9.0	9.0	9.0	10.0	47
99	17NM1A0598	8.0	10.0	9.0	9.5	9.3	7.0	36
100	17NM1A0599	6.0	10.0	5.0	8.0	7.0	8.0	48
101	17NM1A05A0	7.0	10.0	7.5	8.0	7.8	10.0	39
102	17NM1A05A1	10.0	10.0	10.0	10.0	10.0	10.0	45
103	17NM1A05A2	10.0	10.0	10.0	10.0	10.0	10.0	46
104	17NM1A05A3	5.5	9.0	7.0	10.0	8.2	9.0	39
105	17NM1A05A5	9.5	7.0	7.0	8.0	7.8	9.0	39
106	17NM1A05A6	10.0	10.0	10.0	10.0	10.0	10.0	46
107	17NM1A05A7	8.5	8.0	10.0	10.0	6.7	7.0	39
108	17NM1A05A8	9.0	7.0	8.0	7.0	7.8	10.0	39
109	17NM1A05A9	8.0	5.0	7.0	9.5	8.5	7.0	49
110	17NM1A05B0	9.5	10.0	8.5	9.5	8.8	8.0	48
111	17NM1A05B1	9.0	7.0	9.0	9.0	9.2	10.0	46
112	17NM1A05B2	8.5	9.0	7.5	9.5	9.7	8.0	47
113	17NM1A05B3	9.5	9.0	7.0	6.0	8.2	9.0	39
114	17NM1A05B4	10.0	10.0	10.0	10.0	10.0	10.0	46
115	17NM1A05B5	10.0	10.0	10.0	10.0	10.0	10.0	45
116	17NM1A05B6	10.0	10.0	10.0	10.0	10.0	10.0	47
117	17NM1A05B7	10.0	10.0	10.0	10.0	10.0	10.0	45
118	17NM1A05B8	9.0	10.0	8.5	8.5	9.2	9.0	47
119	17NM1A05B9	10.0	10.0	10.0	10.0	10.0	10.0	46
120	18NM5A0501	10.0	10.0	10.0	10.0	10.0	10.0	46
121	18NM5A0502	10.0	10.0	10.0	10.0	10.0	10.0	46
122	18NM5A0503	8.0	9.0	8.0	8.5	7.3	10.0	38
123	18NM5A0504	9.0	7.0	6.5	9.0	8.0	8.0	38
124	18NM5A0505	10.0	10.0	10.0	10.0	10.0	10.0	46
125	18NM5A0506	8.5	7.0	8.0	7.5	8.3	7.0	48
126	18NM5A0507	8.0	7.0	6.0	7.5	8.8	9.0	39
127	18NM5A0508	10.0	10.0	10.0	10.0	10.0	10.0	46

320

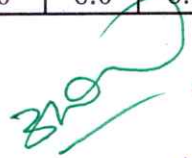
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Visakhapatnam-53

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129	17NM1A05C0	7.5	10.0	8.5	9.5	7.3	7.0	39
130	17NM1A05C1	9.5	6.0	7.5	8.5	8.0	7.0	48
131	17NM1A05C2	9.5	8.0	8.0	5.5	8.0	10.0	39
132	17NM1A05C3	9.5	9.0	7.5	8.5	7.2	9.0	48
133	17NM1A05C4	10.0	10.0	10.0	10.0	10.0	10.0	46
134	17NM1A05C5	9.0	6.0	7.5	8.0	8.2	8.0	39
135	17NM1A05C6	8.5	6.0	7.5	8.5	8.0	9.0	39
136	17NM1A05C7	10.0	10.0	10.0	10.0	10.0	10.0	46
137	17NM1A05C8	9.5	9.0	10.0	7.0	9.3	8.0	38
138	17NM1A05C9	7.5	6.0	8.5	5.5	7.2	6.0	38
139	17NM1A05D0	8.0	10.0	8.5	9.0	9.2	10.0	37
140	17NM1A05D1	8.0	8.0	5.5	8.5	8.5	9.0	38
141	17NM1A05D2	8.5	9.0	8.5	8.5	7.7	6.0	48
142	17NM1A05D3	7.5	7.0	7.5	8.0	9.0	5.0	39
143	17NM1A05D4	10.0	6.0	6.5	8.0	8.7	5.0	39
144	17NM1A05D6	7.0	9.0	7.5	6.5	8.5	10.0	38
145	17NM1A05D7	9.0	9.0	6.0	8.5	7.8	9.0	48
146	17NM1A05D8	10.0	10.0	9.0	8.5	8.5	10.0	37
147	17NM1A05D9	8.5	9.0	8.5	8.5	9.7	8.0	47
148	17NM1A05E0	7.0	9.0	9.0	10.0	9.5	8.0	38
149	17NM1A05E1	8.5	8.0	10.0	9.5	8.7	10.0	38
150	17NM1A05E2	7.5	7.0	9.5	6.5	8.3	8.0	39
151	17NM1A05E3	9.0	5.0	7.0	7.5	8.8	7.0	39
152	17NM1A05E4	9.5	8.0	10.0	9.0	9.0	7.0	41
153	17NM1A05E5	6.5	8.0	6.5	8.5	8.8	8.0	39
154	17NM1A05E6	7.0	10.0	6.5	9.5	8.2	7.0	39
155	17NM1A05E7	8.0	8.0	9.0	9.0	9.3	10.0	46
156	17NM1A05E8	7.5	10.0	9.0	7.0	8.3	5.0	39
157	17NM1A05E9	7.0	8.0	6.0	7.5	7.2	6.0	38
158	17NM1A05F0	8.5	10.0	8.5	7.5	7.8	6.0	38
159	17NM1A05F1	9.0	7.0	7.5	9.0	7.8	7.0	39
160	17NM1A05F2	10.0	10.0	8.5	7.0	9.2	10.0	39
161	17NM1A05F3	8.5	8.0	8.5	8.0	7.5	9.0	41
162	17NM1A05F4	8.5	9.0	8.5	10.0	8.8	10.0	39
163	17NM1A05F5	6.5	7.0	9.5	8.5	8.2	7.0	39
164	17NM1A05F6	7.5	10.0	7.5	6.5	8.3	7.0	39
165	17NM1A05F7	6.0	10.0	7.5	7.5	8.5	7.0	39
166	17NM1A05F8	7.0	8.0	6.0	7.5	7.2	6.0	39
167	17NM1A05F9	8.5	10.0	8.5	7.5	7.8	6.0	39
168	17NM1A05G0	9.0	7.0	7.5	9.0	7.8	7.0	39
169	17NM1A05G2	10.0	10.0	8.5	7.0	9.2	10.0	48
170	17NM1A05G3	8.5	8.0	8.5	8.0	7.5	9.0	37
171	17NM1A05G4	8.5	9.0	8.5	10.0	8.8	10.0	48

10/11/2019  
10:11:10 AM  
10/11/2019

10/11/2019  
10:11:10 AM  
10/11/2019

172	17NM1A05G5	6.5	7.0	9.5	8.5	8.2	7.0	39
173	17NM1A05G6	7.5	10.0	7.5	6.5	8.3	9.0	39
174	17NM1A05G7	6.0	10.0	7.5	7.5	8.5	9.0	49
175	17NM1A05G9	9.5	7.0	9.0	8.5	9.2	10.0	47
176	17NM1A05H0	8.0	8.0	6.5	8.0	8.5	8.0	38
177	17NM1A05H1	6.5	9.0	7.0	9.5	8.0	9.0	39
178	17NM1A05H2	9.5	10.0	9.0	9.5	8.3	10.0	47
179	17NM1A05H3	9.5	9.0	7.5	8.0	9.5	10.0	48
180	17NM1A05H4	8.5	10.0	7.0	10.0	9.2	10.0	38
181	17NM1A05H5	8.0	9.0	10.0	10.0	9.0	7.0	46
182	17NM1A05H6	9.0	10.0	8.5	7.5	7.0	10.0	39
183	17NM1A05H7	7.5	10.0	7.0	7.0	8.7	7.0	39
184	17NM1A05H8	10.0	8.0	7.0	9.5	9.5	8.0	38
185	18NM5A0511	9.5	9.0	7.0	9.5	7.5	6.0	39
186	18NM5A0512	10.0	10.0	10.0	10.0	10.0	10.0	35
187	18NM5A0513	7.0	10.0	9.0	8.5	7.2	10.0	48
188	18NM5A0514	9.0	10.0	8.0	8.0	9.3	10.0	46
189	18NM5A0515	9.5	9.0	8.0	9.0	9.3	8.0	47
190	18NM5A0516	9.0	5.0	7.5	8.0	8.3	8.0	38
191	18NM5A0517	8.0	9.0	8.5	10.0	9.3	8.0	38
Average of COs		9.1	9.1	8.9	9.1	9.1	9.0	
CO Wise Max Marks		10.0	10.0	10.0	10.0	10.0	10.0	
Competance of Target		6.0	6.0	6.0	6.0	6.0	6.0	

  
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 Visakhapatnam-49

Total No.of Students	191	
Target is	60%	
Class Average Marks of MID 1	15.00	
Bench Mark	Target Students	Target level
If 60 % students got more than Target	113	1
If 70 % students got more than Target	132	2
If 80 % students got more than Target	150	3

Attained for COs	Students attained	Attained level
Students attained CO1	188	3
Students attained CO2	186	3
Students attained CO3	188	3
Students attained CO4	188	3
Students attained CO5	191	3
Students attained CO6	186	3

University Exam Assessment	70	
Target is	45%	
Target Mark	31.5	
No of students attended	191	
No. of students attained	191	
Students above the Target	Target Students	Target level
University Exam	191	3

Indirect Assessment - Average for CO's					
CO1	CO2	CO3	CO4	CO5	CO6
2.75	2.93	2.90	2.89	2.92	2.81

349

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K.J. Peta, VSEZ (P.O.)  
Visakhapatnam-49

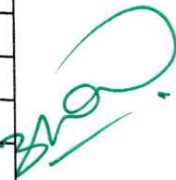




**Indirect Assessment - Feedback from students**

Course Name: Web Technologies Lab	Course Code: C408	Admitted B:
Year/ Sem : IV B TECH I SEM	Regulation: R16	Academic Yea


S.No.	Reg.No.	CO1	CO2	CO3	CO4	CO5	CO6
1	17NM1A0501	3	3	3	3	3	3
2	17NM1A0502	3	3	3	3	3	2
3	17NM1A0503	3	3	2	3	2	3
4	17NM1A0505	3	3	3	3	3	3
5	17NM1A0506	3	3	3	3	3	3
6	17NM1A0508	3	3	3	3	3	3
7	17NM1A0509	3	3	3	3	3	3
8	17NM1A0510	3	3	3	3	3	3
9	17NM1A0511	3	3	2	3	2	3
10	17NM1A0512	2	3	3	3	3	3
11	17NM1A0514	3	3	3	3	3	2
12	17NM1A0515	3	3	3	3	3	3
13	17NM1A0516	3	3	3	3	3	3
14	17NM1A0518	3	3	3	3	3	3
15	17NM1A0520	3	3	3	3	3	3
16	17NM1A0521	3	3	3	3	3	3
17	17NM1A0522	3	3	3	3	3	3
18	17NM1A0524	3	3	3	2	3	3
19	17NM1A0525	3	3	3	3	3	2
20	17NM1A0526	3	3	3	3	3	3
21	17NM1A0528	3	3	3	2	3	3
22	17NM1A0529	2	3	3	3	3	3
23	17NM1A0531	2	3	3	3	3	2
24	17NM1A0532	3	3	3	3	3	3
25	17NM1A0534	3	3	3	3	3	3
26	17NM1A0536	3	3	3	3	3	3
27	17NM1A0537	3	3	3	3	3	2
28	17NM1A0539	3	3	3	3	3	3
29	17NM1A0540	3	2	3	3	3	2
30	17NM1A0541	3	3	3	2	3	3
31	17NM1A0543	3	3	3	3	3	3
32	17NM1A0544	3	3	3	3	3	3
33	17NM1A0546	2	3	3	3	3	3
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35	17NM1A0550	3	3	3	3	3	3
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38	17NM1A0554	3	3	3	3	3	3
39	17NM1A0555	3	3	3	3	3	3

  
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 Vignana Institute of  
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 V. J. Peta, VSEZ (P.O.)  
 Visakhapatnam-49

40	17NM1A0556	3	3	2	3	3	3
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42	17NM1A0558	3	3	3	3	3	2
43	17NM1A0559	2	3	3	2	3	3
44	17NM1A0560	3	3	3	3	3	2
45	17NM1A0562	2	3	3	3	3	3
46	16NM1A0580	3	3	3	3	3	3
47	17507	3	3	2	3	3	2
48	17NN1A05B5	3	3	3	3	3	3
49	17NM1A0563	3	3	3	3	3	3
50	17NM1A0564	3	3	3	3	3	3
51	17NM1A0565	3	3	3	3	3	3
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53	17NM1A0567	3	3	3	3	3	3
54	17NM1A0568	3	3	2	3	3	3
55	17NM1A0569	3	3	3	3	3	3
56	17NM1A0570	3	3	3	3	3	3
57	17NM1A0572	3	3	3	3	3	2
58	17NM1A0573	3	2	3	2	2	3
59	17NM1A0576	3	3	3	3	3	2
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61	17NM1A0578	3	3	3	3	3	2
62	17NM1A0579	2	2	2	3	3	3
63	17NM1A0581	3	3	3	3	3	3
64	17NM1A0582	2	3	3	3	3	3
65	17NM1A0583	3	3	3	3	3	3
66	17NM1A0584	3	3	3	2	3	3
67	17NM1A0586	3	3	2	3	3	3
68	17NM1A0587	3	3	3	3	3	3
69	17NM1A0588	3	3	3	3	3	2
70	17NM1A0589	3	3	3	2	3	3
71	17NM1A0591	3	3	3	2	3	3
72	17NM1A0592	3	3	3	3	3	3
73	17NM1A0593	3	3	3	3	3	3
74	17NM1A0594	3	3	3	3	3	3
75	17NM1A0596	3	3	3	3	2	3
76	17NM1A0597	3	3	3	3	3	3
77	17NM1A0598	3	2	2	3	3	3
78	17NM1A0599	3	3	3	3	2	3
79	17NM1A05A1	2	3	2	3	2	3
80	17NM1A05A2	3	3	3	3	3	3
81	17NM1A05A3	2	2	3	3	3	2
82	17NM1A05A5	3	3	3	3	3	3
83	17NM1A05A7	3	3	3	3	3	3
84	17NM1A05A8	3	3	3	3	3	3

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85	17NM1A05A9	3	3	2	3	3	2
86	17NM1A05B0	3	3	3	3	3	3
87	17NM1A05B2	3	3	3	3	3	2
88	17NM1A05B3	3	3	3	3	3	3
89	17NM1A05B4	3	3	3	3	2	3
90	17NM1A05B6	2	3	3	3	3	3
91	17NM1A05B7	3	3	2	3	3	3
92	18NM5A0501	3	3	3	3	3	3
93	18NM5A0502	3	3	3	2	3	3
94	18NM5A0503	3	3	3	3	3	3
95	18NM5A0504	3	3	3	3	2	3
96	18NM5A0505	3	3	3	3	3	3
97	18NM5A0506	2	3	2	3	3	3
98	18NM5A0507	3	2	3	3	3	3
99	18NM5A0509	2	3	3	3	3	2
100	17NM1A05C0	2	3	3	3	3	3
101	17NM1A05C2	2	3	3	3	3	3
102	17NM1A05C3	3	3	3	2	3	3
103	17NM1A05C5	2	3	3	3	3	3
104	17NM1A05C6	3	3	3	2	3	3
105	17NM1A05C8	2	3	3	3	3	3
106	17NM1A05C9	2	3	3	3	3	3
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108	17NM1A05D3	2	3	3	3	3	3
109	17NM1A05D4	3	3	3	3	3	2
110	17NM1A05D6	3	3	3	3	3	3
111	17NM1A05D7	3	3	3	3	3	2
112	17NM1A05D8	2	3	3	3	3	3
113	17NM1A05E0	2	2	3	3	3	3
114	17NM1A05E2	2	3	3	3	3	3
115	17NM1A05E3	2	3	3	3	3	3
116	17NM1A05E4	3	3	3	3	3	3
117	17NM1A05E5	3	3	3	3	2	3
118	17NM1A05E6	2	3	2	3	3	3
119	17NM1A05E7	3	3	3	3	3	3
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122	17NM1A05F2	2	3	3	3	3	3
123	17NM1A05F3	3	3	3	3	3	3
124	17NM1A05F4	3	3	3	3	3	3
125	17NM1A05F6	3	3	3	3	3	3
126	17NM1A05F7	2	3	3	3	3	3
127	17NM1A05F8	2	3	3	3	3	3
128	17NM1A05G0	2	3	3	3	2	3
129	17NM1A05G2	3	3	3	3	3	3

  
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 Institute of Women  
 Engineering for Women  
 K.J. Pet, VSEZ (P.O.)  
 Visakhapatnam-49

130	17NM1A05G4	3	3	3	3	3	3
131	17NM1A05G5	3	3	3	3	3	2
132	17NM1A05G6	2	3	3	3	3	3
133	17NM1A05G7	2	3	3	2	3	2
134	17NM1A05G8	3	3	3	3	3	3
135	17NM1A05G9	3	3	3	3	3	3
136	17NM1A05H0	3	2	3	3	3	3
137	17NM1A05H1	2	3	3	3	3	3
138	17NM1A05H2	2	3	3	2	3	2
139	17NM1A05H3	2	3	3	3	3	3
140	17NM1A05H4	2	2	3	3	3	3
141	17NM1A05H6	3	3	2	3	3	3
142	17NM1A05H7	3	3	3	2	2	3
143	18NM5A0512	3	3	3	3	3	2
144	18NM5A0513	3	3	3	2	3	2
145	18NM5A0514	3	3	3	3	3	3
146	18NM5A0515	3	2	3	3	3	3
147	18NM5A0517	3	3	2	3	3	3
148	18NM5A0519	3	3	3	3	3	2
149	18NM5A0521	3	3	3	3	3	2
	<b>Average</b>	<b>2.75</b>	<b>2.93</b>	<b>2.90</b>	<b>2.89</b>	<b>2.92</b>	<b>2.81</b>

Strongly Agree	3
Agree	2
Neutral	1
Disagree	0

3/19/20

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 Visakhapatnam-49



## Course Attainment Calculation

Course Name: Web Technologies Lab	Course Code: C408	Admitted Batch: 2016
Year/ Sem : IV B TECH I SEM	Regulation: R16	Academic Year: 2019-20
Course Coordinator : Mr. A. Maheswara Rao	Faculty: Mr. A. Maheswara Rao, Mrs. Ms. Afsheen Firdous, Mr. A. Maheswara Rao	

Direct Attainment			Indirect Attainment	
	Internal	University	Feedback	
CO1	3	3	CO1	2.75
CO2	3	3	CO2	2.93
CO3	3	3	CO3	2.90
CO4	3	3	CO4	2.89
CO5	3	3	CO5	2.92
CO6	3	3	CO6	2.81
Average	3.00	3.00	Final Indirect Attainment	2.87
Weightage	30%	70%		
Attainment	0.9	2.1		
<b>Final Direct Attainment</b>	<b>3</b>			
Weightage	80%		20%	
Attainment	2.40		0.57	
<b>Course Attainment</b>	<b>2.97</b>			

CO PO MAPPING & ATTAINMENT														
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	-	3	-	3	3	-	2	2	-	-	3	3	2
CO2	3	-	-	3	3	-	-	3	3	-	-	-	3	2
CO3	3	3	-	3	3	-	2	3	-	-	-	-	-	2
CO4	3	3	3	-	3	2	-	3	-	2	-	2	3	2
CO5	3	3	3	-	3	2	3	3	2	2	-	2	3	2
CO6	3	3	3	3	3	3	-	3	3	3	-	3	3	2
Average	3.00	3.00	3.00	3.00	3.00	2.50	2.50	2.83	2.50	2.33	-	2.50	3.00	2.00
Course PO Attainment	2.97	2.97	2.97	2.97	2.97	2.48	2.48	2.81	2.48	2.31	-	2.48	2.97	1.98

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Bastinam - 49

$$\text{Course PO Attainment} = \frac{\text{Course Attainment} * \text{Average of PO}}{3}$$



VIGNANS INSTITUTE OF ENGINEERING FOR WOMEN

Approved by AICTE, New Delhi, Affiliated to JNTU Kakinada

Kapujaggaraju Peta, VSEZ(post), Gajuwaka, Visakhapatnam-530049, AP

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

Admitted Batch: 2016

Academic Year: 2019-20

Course Name: Web Technologies Lab	Course Code: C408	
Year/ Sem : IV B TECH I SEM	Regulation: R16	
Course Coordinator : Mrs.P.Vijaya Bharati	Faculty: Mrs.P.Vijaya Bharati, Dr.B.Prasad, Mr.A.Maheswararao	

S.No	Reg. No.	INTERNAL																EXTERNAL			
		w1	w2	w3	w4	w5	w6	w7	w8	w9	w10	w11	w12	w13	w14	Day to Day evaluation (10)	Internal exam (CO1-CO6)	Record (CO1: CO6)	Total (CO1: CO6)	end exam (CO1:CO6)	
		E1-E2	E3-E5	E6	E19	E20	E21	E22	E23	E24	E25	E7-E10	E11-E14	E15-E16	E17-E18						
		CO1	CO1	CO2	CO5	CO5	CO5	CO5	CO5	CO5	CO6	CO3	CO3	CO4	CO4						
		10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	25 M	50M
1	16NM1A0501	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	7	5	22	48
2	16NM1A0502	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	25	45
3	16NM1A0503	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	5	24	46
4	16NM1A0504	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	7	5	22	48
5	16NM1A0505	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	6	5	21	39
6	16NM1A0506	8	8	6	10	6	9	9	9	10	10	6	6	8	7	8	5	5	18	37	
7	16NM1A0507	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	8	5	23	47	
8	16NM1A0508	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	8	5	23	47	
9	16NM1A0509	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	5	24	46	
10	16NM1A0510	10	7	6	10	10	9	9	9	10	8	10	8	10	10	9	9	5	23	47	
11	16NM1A0511	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	5	20	40	
12	16NM1A0512	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	5	24	46	
13	16NM1A0513	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	8	5	23	47	
14	16NM1A0514	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	8	5	23	47	
15	16NM1A0515	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	7	5	22	38	
16	16NM1A0516	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	6	5	21	39	
17	16NM1A0517	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	5	20	40	
18	16NM1A0518	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	7	5	22	48	
19	16NM1A0519	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	8	5	23	47	
20	16NM1A0520	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	7	5	22	48	
21	16NM1A0521	10	6	10	10	9	10	10	9	9	10	5	9	9	9	9	4	5	18	42	
22	16NM1A0522	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	25	45	
23	16NM1A0523	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	8	5	23	47	

Principal  
 Engineering for Women  
 K. I. Peta, VSEZ (P.O.)  
 Visakhapatnam-49

24	16NM1A0524	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	A	5	15	45
25	16NM1A0525	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	5	24	46
26	16NM1A0526	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	7	5	22	48
27	16NM1A0527	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	8	5	23	47
28	16NM1A0528	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	5	24	46
29	16NM1A0529	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	5	24	46
30	16NM1A0530	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	7	5	22	48
31	16NM1A0531	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	6	5	21	49
32	16NM1A0533	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	7	5	22	48
33	16NM1A0534	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	25	45
34	16NM1A0535	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	25	45
35	16NM1A0536	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	5	20	40
36	16NM1A0537	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	5	24	46
37	16NM1A0538	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	5	24	46
38	16NM1A0539	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	7	5	22	48
39	16NM1A0541	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	8	5	5	18	40
40	16NM1A0542	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	25	45
41	16NM1A0543	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	25	45
42	16NM1A0544	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	5	24	46
43	16NM1A0545	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	8	5	23	47
44	16NM1A0546	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	8	5	23	47
45	16NM1A0547	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	7	5	22	38
46	16NM1A0548	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	7	5	22	48
47	16NM1A0549	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	7	5	22	48
48	16NM1A0550	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	3	5	18	42
49	16NM1A0551	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	5	24	46
50	16NM1A0552	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	5	24	46
51	16NM1A0553	9	9	9	10	9	10	9	10	8	8	8	9	9	9	9	10	5	24	46	
52	16NM1A0554	8	10	8	10	10	8	10	8	10	8	10	10	8	8	9	8	5	22	48	
53	16NM1A0555	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	3	5	18	42
54	16NM1A0556	10	9	9	7	10	10	10	9	8	10	10	5	9	10	9	9	5	23	47	
55	16NM1A0557	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	25	45
56	16NM1A0558	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	7	5	22	48

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Peta, VSEZ (P.O.)  
Isanahapatnam-49

57	16NM1A0559	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	8	5	23	47		
58	16NM1A0560	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	25	45		
59	16NM1A0561	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	5	24	46		
60	16NM1A0562	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	7	5	22	48		
61	16NM1A0563	10	8	10	8	8	9	10	7	10	8	8	10	10	10	9	8	5	22	48		
62	16NM1A0564	7	5	9	8	9	5	8	8	7	10	10	10	10	6	10	8	8	5	21	39	
63	16NM1A0565	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	25	45	
64	16NM1A0566	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	9	9	5	23	47	
65	16NM1A0567	10	9	8	7	8	10	7	10	10	10	10	10	8	10	9	9	9	5	23	47	
66	16NM1A0568	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	5	24	46
67	16NM1A0569	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	5	24	46
68	16NM1A0570	7	8	8	8	7	9	6	8	6	10	10	10	9	6	10	8	8	5	21	39	
69	16NM1A0571	8	9	7	10	8	10	10	10	10	7	10	10	8	10	9	9	10	5	24	46	
70	16NM1A0572	10	10	9	10	10	9	9	9	10	7	9	7	10	7	9	9	9	5	23	37	
71	16NM1A0573	10	10	9	10	10	9	9	9	10	7	9	7	10	7	9	9	9	5	23	37	
72	16NM1A0574	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	25	45
73	16NM1A0575	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	25	45
74	16NM1A0576	10	9	9	9	9	10	10	10	8	7	10	10	10	10	10	10	10	10	5	23	47
75	16NM1A0577	10	9	9	9	9	10	10	10	8	7	10	10	10	10	10	10	10	10	5	23	47
76	16NM1A0578	5	9	7	7	10	10	9	7	10	5	10	8	7	8	8	8	8	5	21	49	
77	16NM1A0579	10	8	5	8	10	7	5	8	5	6	8	5	7	6	7	9	5	21	39		
78	16NM1A0581	10	8	9	9	6	10	8	10	7	8	5	6	10	6	8	9	5	22	48		
79	16NM1A0582	10	8	9	9	6	10	8	10	7	8	5	6	10	6	8	9	5	22	38		
80	16NM1A0583	10	8	9	9	6	10	8	10	7	8	5	6	10	6	8	9	5	22	38		
81	16NM1A0584	8	10	6	10	8	8	6	6	9	10	7	6	9	9	8	9	8	5	23	47	
82	16NM1A0585	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	8	5	23	47
83	16NM1A0588	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	25	45
84	16NM1A0587	10	9	10	9	8	10	10	6	7	10	9	9	10	9	9	9	9	5	23	37	
85	16NM1A0588	10	9	10	9	8	10	10	6	7	10	9	9	10	9	9	9	9	5	23	37	
86	16NM1A0589	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	25	45
87	16NM1A0590	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	25	45
88	16NM1A0591	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	25	45
89	16NM1A0592	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	25	45
90	16NM1A0593	9	10	9	10	8	7	10	10	10	7	9	9	10	8	9	9	9	5	23	47	
90	16NM1A0593	8	8	8	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	23	47

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 Empowering the Women  
 K. Hebal, VSEZ (P.O.)  
 Visakhapatnam-49



91	16NM1A0594	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	5	24	46	
92	16NM1A0595	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	25	45	
93	16NM1A0596	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	5	24	46	
94	16NM1A0597	9	9	5	9	5	10	9	6	9	7	9	9	7	9	8	8	5	21	39	
95	16NM1A0598	8	7	10	8	10	9	5	10	6	7	7	9	9	7	8	8	5	21	39	
96	16NM1A0599	8	8	8	10	9	8	7	6	10	8	9	6	10	5	8	8	5	21	39	
97	16NM1A05A0	9	8	9	9	8	8	10	9	10	10	10	8	10	8	9	9	5	23	47	
98	16NM1A05A1	10	6	10	10	9	10	10	10	7	7	8	10	10	9	9	10	5	24	36	
99	16NM1A05A2	7	5	10	7	7	9	8	5	6	8	5	5	9	7	7	10	5	22	48	
100	16NM1A05A3	9	5	10	9	5	9	8	7	9	10	7	8	6	10	8	8	5	21	39	
101	16NM1A05A4	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	25	45	
102	16NM1A05A5	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	5	24	46	
103	16NM1A05A7	6	5	9	7	10	7	7	9	9	9	6	8	10	10	8	8	5	21	39	
104	16NM1A05A8	10	9	7	9	8	5	7	10	8	9	6	8	7	9	8	8	5	21	39	
105	16NM1A05A9	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	5	24	46	
106	16NM1A05B0	8	9	8	5	8	5	6	10	6	7	10	10	10	10	8	8	5	21	39	
107	16NM1A05B1	8	10	7	10	9	7	9	6	6	10	10	6	9	5	8	8	5	21	39	
108	16NM1A05B2	7	9	5	9	8	10	9	8	7	7	8	6	9	10	8	8	5	21	49	
109	16NM1A05B3	9	10	10	10	8	6	9	10	10	8	10	7	10	9	9	8	5	22	48	
110	16NM1A05B4	9	9	7	10	9	10	9	9	8	10	9	9	10	8	9	10	5	24	46	
111	16NM1A05B5	8	9	9	9	10	10	10	9	10	8	10	5	10	9	9	9	5	23	47	
112	16NM1A05B6	9	10	9	5	10	5	9	10	10	9	8	6	6	6	7	8	5	20	39	
113	16NM1A05B7	10	10	10	10	10	10	10	10	10	10	10	10	10	10	8	9	5	22	46	
114	16NM1A05B8	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	10	5	24	45	
115	16NM1A05B9	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	7	10	5	22	45
116	16NM1A05C0	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	7	10	5	22	47
117	16NM1A05C1	9	9	10	9	10	8	10	8	10	9	10	7	10	7	8	9	5	22	47	
118	16NM1A05C2	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	7	9	5	21	46
119	16NM1A05C3	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	8	9	5	22	46
120	16NM1A05C4	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	8	9	5	22	46
121	16NM1A05C5	7	9	9	9	6	5	10	8	6	10	9	7	7	10	8	9	5	22	38	
122	16NM1A05C6	8	10	7	6	8	10	8	6	10	8	8	5	8	10	9	9	5	23	38	
123	15NM1A05A7	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	5	24	46	
124	16NM1A05C7	10	7	7	10	6	7	7	10	10	7	9	10	10	10	5	9	9	5	23	48
125	16NM1A05C8	7	9	7	9	9	10	10	9	6	9	10	6	10	10	9	8	5	22	39	
126	16NM1A05C9	10	10	10	10	10	10	10	10	10	10	10	10	10	10	7	9	5	21	46	

Principal  
 M. J. P. Institute of  
 Engineering for Women  
 P. Peta, VSEZ (P.O.)  
 Akhapattanam

127	16NM1A05D0	10	10	10	7	10	10	10	9	10	7	10	9	7	9	9	5	23	47	
128	16NM1A05D1	5	10	10	5	9	6	9	6	9	7	7	10	9	10	10	8	5	23	39
129	16NM1A05D2	9	10	6	5	10	7	10	10	6	7	7	8	8	9	10	9	5	24	48
130	16NM1A05D3	10	9	8	10	7	10	5	9	7	10	7	9	6	5	8	8	5	21	39
131	16NM1A05D4	10	9	9	10	5	8	8	6	6	9	5	10	9	8	8	9	5	22	48
132	16NM1A05D5	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	5	24	46
133	16NM1A05D6	10	8	6	7	7	8	10	9	8	8	7	8	8	8	8	8	5	21	39
134	16NM1A05D7	10	7	6	10	7	8	7	7	9	9	10	5	7	10	8	8	5	21	39
135	16NM1A05D8	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	5	24	46
136	16NM1A05D9	10	9	9	9	9	8	10	10	10	8	10	10	9	5	9	8	5	22	38
137	16NM1A05E0	8	7	6	5	10	10	5	8	5	6	10	7	5	6	7	10	5	22	38
138	16NM1A05E1	9	7	10	10	10	10	10	6	9	10	9	8	8	10	9	9	5	23	37
139	16NM1A05E2	7	9	8	9	10	10	9	6	7	9	6	5	7	10	8	9	5	22	38
140	16NM1A05E3	10	7	9	7	6	9	9	8	7	6	8	9	8	9	8	9	5	22	48
141	16NM1A05E4	10	5	7	9	10	10	8	9	8	5	8	7	6	10	8	8	5	21	39
142	16NM1A05E5	10	10	6	7	8	9	10	9	9	5	7	6	6	10	8	8	5	21	39
143	16NM1A05E6	5	9	9	10	9	7	10	6	9	10	6	9	6	7	8	9	5	22	38
144	16NM1A05E7	10	8	9	8	6	8	10	9	6	9	7	5	9	8	8	9	5	22	48
145	16NM1A05E8	10	10	10	8	9	8	10	7	9	10	10	8	10	7	9	9	5	23	37
146	16NM1A05E9	10	7	9	10	10	10	10	9	9	8	7	10	9	8	9	9	5	23	47
147	16NM1A05F0	6	8	9	10	10	10	7	10	10	8	9	9	10	10	9	8	5	22	38
148	16NM1A05F1	8	9	8	10	7	9	10	7	9	10	10	10	9	10	9	8	5	22	38
149	16NM1A05F2	8	7	7	9	7	8	9	10	7	8	10	9	7	6	8	8	5	21	39
150	16NM1A05F3	10	8	5	10	7	8	10	9	9	7	9	5	9	6	8	8	5	21	39
151	16NM1A05F4	9	10	8	10	9	7	10	9	9	7	10	10	9	9	9	0	5	14	41
152	16NM1A05F5	6	7	8	10	7	10	6	10	10	8	5	8	8	9	8	8	5	21	39
153	16NM1A05F6	5	9	10	8	8	7	8	10	8	7	7	6	9	10	8	8	5	21	39
154	16NM1A05F7	8	8	8	10	9	9	9	10	9	10	10	8	10	8	9	10	5	24	46
155	16NM1A05F8	9	6	10	10	8	10	5	10	7	5	9	9	5	9	8	8	5	21	39
156	16NM1A05F9	6	8	8	5	9	9	6	5	9	6	7	5	8	7	7	9	5	21	39
157	16NM1A05G0	9	8	10	5	6	10	10	8	8	6	10	7	10	5	8	8	5	21	39
158	16NM1A05G1	9	9	7	9	8	7	6	7	10	7	5	10	8	10	8	8	5	21	39
159	16NM1A05G2	10	10	10	9	9	9	9	9	10	10	7	10	9	5	9	8	5	22	48
160	16NM1A05G3	10	7	8	8	7	8	10	6	6	6	6	6	7	9	8	10	5	23	37

PRINCIPAL  
Vignana Institute of  
Engineering for Women  
V. I. Peta, VSEZ (P.O.)  
Visakhapatnam-49

161	16NM1A05G4	9	8	9	10	10	10	8	9	6	10	8	9	10	10	9	8	5	22	48			
162	16NM1A05G5	6	7	7	9	8	9	9	8	6	7	9	10	9	8	8	8	5	21	39			
163	16NM1A05G6	9	6	10	9	6	7	10	8	10	9	5	10	6	7	8	8	5	21	39			
164	16NM1A05G7	5	7	10	9	10	7	7	10	8	9	9	6	8	7	8	8	5	21	49			
165	16NM1A05G8	9	10	7	9	9	9	10	10	8	10	8	10	7	10	9	9	5	23	47			
166	16NM1A05G9	7	9	8	8	8	10	5	10	10	8	6	7	6	10	8	9	5	22	38			
167	16NM1A05H0	6	7	9	9	8	6	9	9	7	9	5	9	10	9	8	8	5	21	39			
168	16NM1A05H1	10	9	10	10	8	9	6	10	7	10	9	9	10	9	9	9	5	23	47			
169	16NM1A05H2	9	10	9	10	8	9	10	10	10	10	8	7	8	8	9	8	5	22	48			
170	16NM1A05H3	7	10	10	9	8	9	9	10	10	10	8	6	10	10	9	8	5	22	38			
171	16NM1A05H4	9	7	9	10	8	9	8	10	9	7	10	10	10	10	9	10	5	24	46			
172	16NM1A05H6	10	8	10	10	6	7	7	5	7	10	8	9	9	6	8	8	5	21	39			
173	16NM1A05H7	9	6	10	9	10	9	10	5	9	7	6	8	8	6	8	8	5	21	39			
174	16NM1A05H8	10	10	8	10	9	8	10	10	10	8	7	7	10	9	9	8	5	22	38			
175	16NM1A05H9	9	10	9	5	7	9	9	7	8	6	9	5	10	9	8	8	5	21	39			
176	17NM5A0501	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	25	35			
177	17NM5A0502	7	7	10	8	8	5	8	8	6	10	8	10	9	8	8	9	5	22	48			
178	17NM5A0503	8	10	10	10	9	8	10	10	9	10	7	9	6	10	9	10	5	24	46			
179	17NM5A0504	10	9	9	10	10	9	9	9	9	8	7	9	10	8	9	9	5	23	47			
180	17NM5A0505	8	10	5	9	7	10	9	10	5	8	7	8	6	10	8	9	5	22	38			
181	17NM5A0506	7	9	9	8	10	10	9	9	10	8	9	8	10	10	9	8	5	22	38			
182	17NM5A0507	8	10	10	8	10	10	10	9	9	9	10	7	7	9	9	9	5	23	37			
183	17NM5A0508	8	10	8	8	10	10	10	8	10	10	9	8	8	9	9	9	5	23	37			
184	17NM5A0510	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	25	45			
185	17NM5A0511	8	7	7	8	10	6	5	9	9	6	8	10	10	9	8	9	5	22	48			
186	17NM5A0512	10	10	10	10	10	9	10	5	10	10	8	9	7	8	9	10	5	24	46			
187	17NM5A0513	7	6	9	8	7	8	8	8	10	10	7	8	9	7	8	8	5	21	39			
188	17NM5A0514	10	6	9	7	5	7	10	8	10	6	9	8	9	8	8	9	5	22	38			
												Class Target Marks		12.50							University end average marks is		25.00
												Target		50%									

Knowledge Levels					
P	P	P	A	P	A
CO1	CO2	CO3	CO4	CO5	CO6

320  
**PRINCIPAL**  
 Vignan's Institute of  
 Engineering for Women  
 K.J. Peta, VSE (P)  
 Visakhapatnam-531149

S.No	Regd.No.	INTERNAL						EXTERNAL
		MID 1						University
		CO1	CO2	CO3	CO4	CO5	CO6	end exam CO1:CO6
		10M	10M	10M	10M	10M	10M	50M
1	16NM1A0501	10.0	10.0	10.0	10.0	10.0	10.0	48
2	16NM1A0502	10.0	10.0	10.0	10.0	10.0	10.0	45
3	16NM1A0503	10.0	10.0	10.0	10.0	10.0	10.0	46
4	16NM1A0504	10.0	10.0	10.0	10.0	10.0	10.0	48
5	16NM1A0505	10.0	10.0	10.0	10.0	10.0	10.0	39
6	16NM1A0506	8.0	6.0	6.0	7.5	8.8	10.0	37
7	16NM1A0507	10.0	10.0	10.0	10.0	10.0	10.0	47
8	16NM1A0508	10.0	10.0	10.0	10.0	10.0	10.0	47
9	16NM1A0509	10.0	10.0	10.0	10.0	10.0	10.0	46
10	16NM1A0510	8.5	6.0	9.0	10.0	9.5	8.0	47
11	16NM1A0511	10.0	10.0	10.0	10.0	10.0	10.0	40
12	16NM1A0512	10.0	10.0	10.0	10.0	10.0	10.0	46
13	16NM1A0513	10.0	10.0	10.0	10.0	10.0	10.0	47
14	16NM1A0514	10.0	10.0	10.0	10.0	10.0	10.0	47
15	16NM1A0515	10.0	10.0	10.0	10.0	10.0	10.0	38
16	16NM1A0516	10.0	10.0	10.0	10.0	10.0	10.0	39
17	16NM1A0517	10.0	10.0	10.0	10.0	10.0	10.0	40
18	16NM1A0518	10.0	10.0	10.0	10.0	10.0	10.0	48
19	16NM1A0519	10.0	10.0	10.0	10.0	10.0	10.0	47
20	16NM1A0520	10.0	10.0	10.0	10.0	10.0	10.0	48
21	16NM1A0521	8.0	10.0	7.5	9.0	9.5	10.0	42
22	16NM1A0522	10.0	10.0	10.0	10.0	10.0	10.0	45
23	16NM1A0523	10.0	10.0	10.0	10.0	10.0	10.0	47
24	16NM1A0524	10.0	10.0	10.0	10.0	10.0	10.0	45
25	16NM1A0525	10.0	10.0	10.0	10.0	10.0	10.0	46
26	16NM1A0526	10.0	10.0	10.0	10.0	10.0	10.0	48
27	16NM1A0527	10.0	10.0	10.0	10.0	10.0	10.0	47
28	16NM1A0528	10.0	10.0	10.0	10.0	10.0	10.0	46
29	16NM1A0529	10.0	10.0	10.0	10.0	10.0	10.0	46
30	16NM1A0530	10.0	10.0	10.0	10.0	10.0	10.0	48
31	16NM1A0531	10.0	10.0	10.0	10.0	10.0	10.0	49
32	16NM1A0533	10.0	10.0	10.0	10.0	10.0	10.0	48
33	16NM1A0534	10.0	10.0	10.0	10.0	10.0	10.0	45
34	16NM1A0535	10.0	10.0	10.0	10.0	10.0	10.0	45
35	16NM1A0536	10.0	10.0	10.0	10.0	10.0	10.0	40
36	16NM1A0537	10.0	10.0	10.0	10.0	10.0	10.0	46
37	16NM1A0538	10.0	10.0	10.0	10.0	10.0	10.0	46
38	16NM1A0539	10.0	10.0	10.0	10.0	10.0	10.0	48

3202  
**PRINCIPAL**  
 Vignana's Institute of  
 Engineering for Women  
 Peta, VSEZ (P.O.)  
 Visakhapatnam-49

39	16NM1A0541	10.0	10.0	10.0	10.0	10.0	10.0	40
40	16NM1A0542	10.0	10.0	10.0	10.0	10.0	10.0	45
41	16NM1A0543	10.0	10.0	10.0	10.0	10.0	10.0	49
42	16NM1A0544	10.0	10.0	10.0	10.0	10.0	10.0	45
43	16NM1A0545	10.0	10.0	10.0	10.0	10.0	10.0	46
44	16NM1A0546	10.0	10.0	10.0	10.0	10.0	10.0	47
45	16NM1A0547	10.0	10.0	10.0	10.0	10.0	10.0	47
46	16NM1A0548	10.0	10.0	10.0	10.0	10.0	10.0	38
47	16NM1A0549	10.0	10.0	10.0	10.0	10.0	10.0	48
48	16NM1A0550	10.0	10.0	10.0	10.0	10.0	10.0	48
49	16NM1A0551	10.0	10.0	10.0	10.0	10.0	10.0	42
50	16NM1A0552	10.0	10.0	10.0	10.0	10.0	10.0	46
51	16NM1A0553	9.0	9.0	8.5	9.0	9.3	8.0	46
52	16NM1A0554	9.0	8.0	10.0	8.0	9.3	8.0	48
53	16NM1A0555	10.0	10.0	10.0	10.0	10.0	10.0	42
54	16NM1A0556	9.5	9.0	7.5	9.5	9.0	10.0	47
55	16NM1A0557	10.0	10.0	10.0	10.0	10.0	10.0	45
56	16NM1A0558	10.0	10.0	10.0	10.0	10.0	10.0	48
57	16NM1A0559	10.0	10.0	10.0	10.0	10.0	10.0	47
58	16NM1A0560	10.0	10.0	10.0	10.0	10.0	10.0	45
59	16NM1A0561	10.0	10.0	10.0	10.0	10.0	10.0	46
60	16NM1A0562	10.0	10.0	10.0	10.0	10.0	10.0	48
61	16NM1A0563	9.0	10.0	9.0	10.0	8.7	8.0	48
62	16NM1A0564	6.0	9.0	10.0	8.0	7.5	10.0	39
63	16NM1A0565	10.0	10.0	10.0	10.0	10.0	10.0	36
64	16NM1A0566	10.0	10.0	10.0	10.0	10.0	10.0	45
65	16NM1A0567	9.5	8.0	9.0	9.5	8.7	10.0	47
66	16NM1A0568	10.0	10.0	10.0	10.0	10.0	10.0	47
67	16NM1A0569	10.0	10.0	10.0	10.0	10.0	10.0	46
68	16NM1A0570	7.5	8.0	9.5	8.0	7.3	10.0	39
69	16NM1A0571	8.5	7.0	9.0	9.5	9.7	7.0	46
70	16NM1A0572	10.0	9.0	8.0	8.5	9.5	7.0	37
71	16NM1A0573	5.5	8.0	7.5	5.0	8.2	5.0	39
72	16NM1A0574	10.0	10.0	10.0	10.0	10.0	10.0	45
73	16NM1A0575	9.5	9.0	10.0	7.5	9.3	7.0	47
74	16NM1A0576	7.0	7.0	9.0	7.5	8.8	5.0	49
75	16NM1A0577	9.0	5.0	6.5	6.5	7.2	6.0	39
76	16NM1A0578	9.0	9.0	5.5	8.0	8.3	8.0	48
77	16NM1A0579	9.0	6.0	6.5	9.0	7.8	10.0	38
78	16NM1A0581	10.0	10.0	10.0	10.0	10.0	10.0	47
79	16NM1A0582	9.0	9.0	9.0	8.5	9.2	9.0	38
80	16NM1A0583	10.0	8.0	7.5	7.5	7.7	8.0	39

81	16NM1A0584	5.0	7.0	6.5	8.5	7.3	7.0	39
82	16NM1A0585	8.5	8.0	9.5	8.5	9.3	9.0	46
83	16NM1A0586	10.0	10.0	8.0	8.0	9.3	8.0	47
84	16NM1A0587	9.5	10.0	9.0	9.5	8.3	10.0	37
85	16NM1A0588	10.0	10.0	10.0	10.0	10.0	10.0	45
86	16NM1A0589	10.0	10.0	10.0	10.0	10.0	10.0	45
87	16NM1A0590	9.5	9.0	9.0	9.0	9.2	7.0	47
88	16NM1A0591	10.0	10.0	10.0	9.5	8.3	7.0	47
89	16NM1A0592	9.5	9.0	6.5	7.0	8.2	8.0	49
90	16NM1A0593	8.0	8.0	7.5	9.5	10.0	8.0	47
91	16NM1A0594	10.0	10.0	10.0	10.0	10.0	10.0	46
92	16NM1A0595	10.0	10.0	10.0	10.0	10.0	10.0	45
93	16NM1A0596	10.0	10.0	10.0	10.0	10.0	10.0	46
94	16NM1A0597	9.0	5.0	9.0	8.0	8.0	7.0	39
95	16NM1A0598	7.5	10.0	8.0	8.0	8.0	7.0	39
96	16NM1A0599	8.0	8.0	7.5	7.5	8.3	8.0	39
97	16NM1A05A0	8.5	9.0	9.0	9.0	9.0	10.0	47
98	16NM1A05A1	8.0	10.0	9.0	9.5	9.3	7.0	36
99	16NM1A05A2	6.0	10.0	5.0	8.0	7.0	8.0	48
100	16NM1A05A3	7.0	10.0	7.5	8.0	7.8	10.0	39
101	16NM1A05A4	10.0	10.0	10.0	10.0	10.0	10.0	45
102	16NM1A05A5	10.0	10.0	10.0	10.0	10.0	10.0	46
103	16NM1A05A7	5.5	9.0	7.0	10.0	8.2	9.0	39
104	16NM1A05A8	9.5	7.0	7.0	8.0	7.8	9.0	39
105	16NM1A05A9	10.0	10.0	10.0	10.0	10.0	10.0	46
106	16NM1A05B0	8.5	8.0	10.0	10.0	6.7	7.0	39
107	16NM1A05B1	9.0	7.0	8.0	7.0	7.8	10.0	39
108	16NM1A05B2	8.0	5.0	7.0	9.5	8.5	7.0	49
109	16NM1A05B3	9.5	10.0	8.5	9.5	8.8	8.0	48
110	16NM1A05B4	9.0	7.0	9.0	9.0	9.2	10.0	46
111	16NM1A05B5	8.5	9.0	7.5	9.5	9.7	8.0	47
112	16NM1A05B6	9.5	9.0	7.0	6.0	8.2	9.0	39
113	16NM1A05B7	10.0	10.0	10.0	10.0	10.0	10.0	46
114	16NM1A05B8	10.0	10.0	10.0	10.0	10.0	10.0	45
115	16NM1A05B9	10.0	10.0	10.0	10.0	10.0	10.0	47
116	16NM1A05C0	10.0	10.0	10.0	10.0	10.0	10.0	45
117	16NM1A05C1	9.0	10.0	8.5	8.5	9.2	9.0	47
118	16NM1A05C2	10.0	10.0	10.0	10.0	10.0	10.0	46
119	16NM1A05C3	10.0	10.0	10.0	10.0	10.0	10.0	46
120	16NM1A05C4	10.0	10.0	10.0	10.0	10.0	10.0	46
121	16NM1A05C5	8.0	9.0	8.0	8.5	7.3	10.0	38
122	16NM1A05C6	9.0	7.0	6.5	9.0	8.0	8.0	38

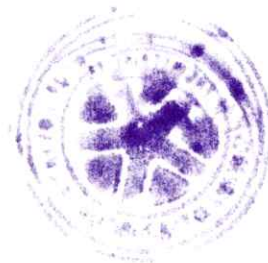
320

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123	15NM1A05A7	10.0	10.0	10.0	10.0	10.0	10.0	46
124	16NM1A05C7	8.5	7.0	8.0	7.5	8.3	7.0	48
125	16NM1A05C8	8.0	7.0	6.0	7.5	8.8	9.0	39
126	16NM1A05C9	10.0	10.0	10.0	10.0	10.0	10.0	46
127	16NM1A05D0	10.0	10.0	8.5	8.0	8.8	10.0	47
128	16NM1A05D1	7.5	10.0	8.5	9.5	7.3	7.0	39
129	16NM1A05D2	9.5	6.0	7.5	8.5	8.0	7.0	48
130	16NM1A05D3	9.5	8.0	8.0	5.5	8.0	10.0	39
131	16NM1A05D4	9.5	9.0	7.5	8.5	7.2	9.0	48
132	16NM1A05D5	10.0	10.0	10.0	10.0	10.0	10.0	46
133	16NM1A05D6	9.0	6.0	7.5	8.0	8.2	8.0	39
134	16NM1A05D7	8.5	6.0	7.5	8.5	8.0	9.0	39
135	16NM1A05D8	10.0	10.0	10.0	10.0	10.0	10.0	46
136	16NM1A05D9	9.5	9.0	10.0	7.0	9.3	8.0	38
137	16NM1A05E0	7.5	6.0	8.5	5.5	7.2	6.0	38
138	16NM1A05E1	8.0	10.0	8.5	9.0	9.2	10.0	37
139	16NM1A05E2	8.0	8.0	5.5	8.5	8.5	9.0	38
140	16NM1A05E3	8.5	9.0	8.5	8.5	7.7	6.0	48
141	16NM1A05E4	7.5	7.0	7.5	8.0	9.0	5.0	39
142	16NM1A05E5	10.0	6.0	6.5	8.0	8.7	5.0	39
143	16NM1A05E6	7.0	9.0	7.5	6.5	8.5	10.0	38
144	16NM1A05E7	9.0	9.0	6.0	8.5	7.8	9.0	48
145	16NM1A05E8	10.0	10.0	9.0	8.5	8.5	10.0	37
146	16NM1A05E9	8.5	9.0	8.5	8.5	9.7	8.0	47
147	16NM1A05F0	7.0	9.0	9.0	10.0	9.5	8.0	38
148	16NM1A05F1	8.5	8.0	10.0	9.5	8.7	10.0	38
149	16NM1A05F2	7.5	7.0	9.5	6.5	8.3	8.0	39
150	16NM1A05F3	9.0	5.0	7.0	7.5	8.8	7.0	39
151	16NM1A05F4	9.5	8.0	10.0	9.0	9.0	7.0	41
152	16NM1A05F5	6.5	8.0	6.5	8.5	8.8	8.0	39
153	16NM1A05F6	7.0	10.0	6.5	9.5	8.2	7.0	39
154	16NM1A05F7	8.0	8.0	9.0	9.0	9.3	10.0	46
155	16NM1A05F8	7.5	10.0	9.0	7.0	8.3	5.0	39
156	16NM1A05F9	7.0	8.0	6.0	7.5	7.2	6.0	39
157	16NM1A05G0	8.5	10.0	8.5	7.5	7.8	6.0	39
158	16NM1A05G1	9.0	7.0	7.5	9.0	7.8	7.0	39
159	16NM1A05G2	10.0	10.0	8.5	7.0	9.2	10.0	48
160	16NM1A05G3	8.5	8.0	8.5	8.0	7.5	9.0	37
161	16NM1A05G4	8.5	9.0	8.5	10.0	8.8	10.0	48
162	16NM1A05G5	6.5	7.0	9.5	8.5	8.2	7.0	39
163	16NM1A05G6	7.5	10.0	7.5	6.5	8.3	9.0	39
164	16NM1A05G7	6.0	10.0	7.5	7.5	8.5	9.0	49

329  
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165	16NM1A05G8	9.5	7.0	9.0	8.5	9.2	10.0	47
166	16NM1A05G9	8.0	8.0	6.5	8.0	8.5	8.0	38
167	16NM1A05H0	6.5	9.0	7.0	9.5	8.0	9.0	39
168	16NM1A05H1	9.5	10.0	9.0	9.5	8.3	10.0	47
169	16NM1A05H2	9.5	9.0	7.5	8.0	9.5	10.0	48
170	16NM1A05H3	8.5	10.0	7.0	10.0	9.2	10.0	38
171	16NM1A05H4	8.0	9.0	10.0	10.0	9.0	7.0	46
172	16NM1A05H6	9.0	10.0	8.5	7.5	7.0	10.0	39
173	16NM1A05H7	7.5	10.0	7.0	7.0	8.7	7.0	39
174	16NM1A05H8	10.0	8.0	7.0	9.5	9.5	8.0	38
175	16NM1A05H9	9.5	9.0	7.0	9.5	7.5	6.0	39
176	17NM5A0501	10.0	10.0	10.0	10.0	10.0	10.0	35
177	17NM5A0502	7.0	10.0	9.0	8.5	7.2	10.0	48
178	17NM5A0503	9.0	10.0	8.0	8.0	9.3	10.0	46
179	17NM5A0504	9.5	9.0	8.0	9.0	9.3	8.0	47
180	17NM5A0505	9.0	5.0	7.5	8.0	8.3	8.0	38
181	17NM5A0506	8.0	9.0	8.5	10.0	9.3	8.0	38
182	17NM5A0507	9.0	10.0	8.5	8.0	9.3	9.0	37
183	17NM5A0508	9.0	8.0	8.5	8.5	9.3	10.0	37
184	17NM5A0510	10.0	10.0	10.0	10.0	10.0	10.0	45
185	17NM5A0511	7.5	7.0	9.0	9.5	7.8	6.0	48
186	17NM5A0512	10.0	10.0	8.5	7.5	9.0	10.0	46
187	17NM5A0513	6.5	9.0	7.5	8.0	8.2	10.0	39
188	17NM5A0514	8.0	9.0	8.5	8.5	7.8	6.0	38
Average of COs		9.1	9.1	8.9	9.1	9.2	9.1	
CO Wise Max Marks		10.0	10.0	10.0	10.0	10.0	10.0	
Competance of Target		5.0	5.0	5.0	5.0	5.0	5.0	



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Total No.of Students	188	
Target is	50%	
Class Average Marks of MID 1	12.50	
Bench Mark	Target Students	Target level
If 60 % students got more than Target	104	1
If 70 % students got more than Target	122	2
If 80 % students got more than Target	139	3

Attained for COs	Students attained	Attained level
Students attained CO1	188	3
Students attained CO2	188	3
Students attained CO3	188	3
Students attained CO4	188	3
Students attained CO5	188	3
Students attained CO6	188	3

University Exam Assessment	70	
Target is	45%	
Target Mark	31.5	
No of students attended	188	
No. of students attained	188	
Students above the Target	Target Students	Target level
University Exam	188	3

Indirect Assessment - Average for CO's					
CO1	CO2	CO3	CO4	CO5	CO6
2.82	2.96	2.88	2.76	2.91	2.91


3702  
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### Indirect Assessment - Feedback from students

Course Name: Web Technologies Lab	Course Code: C408	Admitted Batch: 2016
Year/ Sem : IV B TECH I SEM	Regulation: R16	Academic Year: 2019-20

S.No.	Reg.No.	CO1	CO2	CO3	CO4	CO5	CO6
1	16NM1A0501	3	3	3	2	2	3
2	16NM1A0502	2	3	3	3	3	3
3	16NM1A0504	3	3	2	3	3	3
4	16NM1A0505	3	3	3	3	3	3
5	16NM1A0507	3	3	3	3	3	3
6	16NM1A0508	3	3	3	3	2	3
7	16NM1A0510	2	3	2	3	3	3
8	16NM1A0511	3	3	3	3	3	3
9	16NM1A0512	3	3	3	3	3	2
10	16NM1A0514	3	3	3	3	3	3
11	16NM1A0515	3	3	3	3	3	3
12	16NM1A0516	3	3	2	3	2	3
13	16NM1A0517	3	3	3	3	3	2
14	16NM1A0519	3	3	3	3	3	3
15	16NM1A0520	3	3	3	3	3	3
16	16NM1A0521	3	3	2	2	2	3
17	16NM1A0523	3	3	3	2	3	3
18	16NM1A0524	3	2	3	2	2	3
19	16NM1A0525	3	3	3	2	3	3
20	16NM1A0527	3	3	3	2	3	3
21	16NM1A0528	3	3	3	2	3	3
22	16NM1A0529	3	3	3	2	3	3
23	16NM1A0530	3	3	2	2	3	3
24	16NM1A0531	3	3	3	2	3	3
25	16NM1A0533	3	3	3	2	3	3
26	16NM1A0534	3	3	3	2	3	3
27	16NM1A0536	3	3	3	2	3	3
28	16NM1A0537	3	3	3	2	2	3
29	16NM1A0538	3	2	3	2	3	3
30	16NM1A0539	3	3	3	2	3	3
31	16NM1A0542	3	3	3	2	3	3
32	16NM1A0543	3	3	3	2	2	3
33	16NM1A0545	3	3	2	2	3	3
34	16NM1A0546	2	3	3	2	3	3
35	16NM1A0547	3	3	3	2	3	3
36	16NM1A0549	3	3	2	2	3	3
37	16NM1A0550	2	3	3	2	3	3
38	16NM1A0551	3	2	3	2	3	3

  
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39	16NM1A0553	3	2	2	2	2	3
40	16NM1A0554	3	3	3	2	3	3
41	16NM1A0555	3	3	3	2	3	2
42	16NM1A0557	2	3	3	2	3	3
43	16NM1A0558	3	3	3	3	3	3
44	16NM1A0559	3	3	3	3	3	3
45	16NM1A0560	3	3	3	3	3	3
46	16NM1A0561	3	3	2	3	3	3
47	16NM1A0563	3	3	3	3	3	3
48	16NM1A0564	3	3	3	3	3	3
49	16NM1A0565	2	3	3	3	3	3
50	16NM1A0566	3	3	3	3	3	3
51	16NM1A0567	3	3	3	3	3	3
52	16NM1A0569	3	3	2	3	3	3
53	16NM1A0570	3	3	3	3	3	3
54	16NM1A0571	3	3	3	3	3	3
55	16NM1A0572	3	3	3	3	3	3
56	16NM1A0574	3	3	3	3	3	3
57	16NM1A0575	3	3	3	3	3	3
58	16NM1A0576	3	3	3	3	3	3
59	16NM1A0577	3	3	3	3	3	3
60	16NM1A0579	3	3	3	3	3	3
61	16NM1A0581	2	3	3	3	3	3
62	16NM1A0583	3	3	3	3	3	3
63	16NM1A0584	2	3	3	3	3	2
64	16NM1A0585	3	3	3	2	3	3
65	16NM1A0586	3	3	2	3	3	3
66	16NM1A0588	3	3	3	3	3	3
67	16NM1A0589	3	3	3	3	3	3
68	16NM1A0591	3	3	3	3	3	3
69	16NM1A0592	3	3	3	3	3	3
70	16NM1A0593	3	3	3	3	3	3
71	16NM1A0595	3	3	3	3	3	3
72	16NM1A0596	2	3	3	3	2	3
73	16NM1A0597	3	3	3	3	3	3
74	16NM1A0599	3	3	2	3	3	3
75	16NM1A05A0	2	3	3	3	3	2
76	16NM1A05A1	3	3	3	3	3	3
77	16NM1A05A2	3	3	3	3	3	3
78	16NM1A05A4	3	3	3	3	3	3
79	16NM1A05A5	3	3	3	3	3	3
80	16NM1A05A7	3	3	3	3	3	3
81	16NM1A05A9	2	3	3	3	3	3
82	16NM1A05B0	3	3	3	3	3	3
83	16NM1A05B1	3	3	3	2	3	2
84	16NM1A05B2	2	3	3	3	3	3

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85	16NM1A05B4	2	3	3	3	3	3
86	16NM1A05B5	3	3	3	3	3	3
87	16NM1A05B6	3	3	3	3	2	3
88	16NM1A05C0	3	3	3	3	3	3
89	16NM1A05C2	3	3	3	3	3	3
90	16NM1A05C3	3	3	3	3	3	2
91	16NM1A05C5	3	3	3	3	2	3
92	16NM1A05C6	3	3	3	3	3	3
93	15NM1A05A7	2	3	3	3	3	3
94	16NM1A05C7	3	3	3	2	3	3
95	16NM1A05C9	3	3	3	3	3	3
96	16NM1A05D2	3	3	3	3	3	3
97	16NM1A05D3	3	3	2	3	3	3
98	16NM1A05D5	3	3	3	3	3	3
99	16NM1A05D6	3	3	3	3	3	3
100	16NM1A05D8	3	3	3	3	3	3
101	16NM1A05D9	3	3	3	3	3	3
102	16NM1A05E0	3	3	2	3	3	3
103	16NM1A05E2	3	3	3	3	3	3
104	16NM1A05E3	3	3	3	3	2	3
105	16NM1A05E5	3	3	3	3	3	3
106	16NM1A05E6	2	3	3	3	3	3
107	16NM1A05E7	3	3	2	3	3	3
108	16NM1A05F1	3	3	3	3	3	3
109	16NM1A05F2	3	3	3	3	3	3
110	16NM1A05F3	3	3	3	3	3	3
111	16NM1A05F4	3	3	3	3	3	3
112	16NM1A05F6	3	3	3	3	3	3
113	16NM1A05F7	3	3	3	3	3	3
114	16NM1A05F9	3	3	3	3	3	3
115	16NM1A05G0	3	3	3	3	3	3
116	16NM1A05G1	2	3	2	3	3	3
117	16NM1A05G2	3	3	3	3	3	2
118	16NM1A05G3	2	3	3	3	3	3
119	16NM1A05G4	3	3	3	3	3	2
120	16NM1A05G5	3	3	3	3	3	3
121	16NM1A05G6	3	3	3	3	3	3
122	16NM1A05G7	3	3	2	3	3	3
123	16NM1A05G9	3	3	3	3	3	3
124	16NM1A05H0	3	3	3	3	3	3
125	16NM1A05H1	2	3	3	3	3	2
126	16NM1A05H2	3	3	3	3	3	3
127	16NM1A05H4	3	3	3	3	3	2
128	16NM1A05H7	3	3	3	3	3	3
129	16NM1A05H8	2	3	3	2	3	3
130	16NM1A05H9	2	3	3	3	3	3
131	17NM5A0501	3	3	3	3	3	3

3290  
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 Visakhapatnam-49

132	17NM5A0502	3	2	3	3	3	2
133	17NM5A0504	2	3	3	2	3	3
134	17NM5A0505	2	3	3	3	3	3
135	17NM5A0506	3	3	3	3	3	3
136	17NM5A0508	2	2	3	3	3	3
137	17NM5A0510	2	3	3	3	3	3
138	17NM5A0511	3	3	3	3	3	3
139	17NM5A0513	3	3	3	3	3	3
140	14NM1A05D8	2	3	3	2	3	3
	<b>Average</b>	<b>2.82</b>	<b>2.96</b>	<b>2.88</b>	<b>2.76</b>	<b>2.91</b>	<b>2.91</b>

Strongly Agree	3
Agree	2
Partially Agree	1

*2023*

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## Course Attainment Calculation

Course Name: Web Technologies Lab	Course Code: C408	Admitted Batch: 2016
Year/ Sem : IV B TECH I SEM	Regulation: R16	Academic Year: 2019-20
Course Coordinator : Mrs.P.Vijaya Bharati	Faculty: Mrs.P.Vijaya Bharati, Dr.B.Prasad, Mr.A.Maheswararao	

Direct Attainment			Indirect Attainment	
	Internal	University	Feedback	
CO1	3	3	CO1	2.82
CO2	3	3	CO2	2.96
CO3	3	3	CO3	2.88
CO4	3	3	CO4	2.76
CO5	3	3	CO5	2.91
CO6	3	3	CO6	2.91
Average	3.00	3.00	Final Indirect Attainment	2.87
Weightage	30%	70%		
Attainment	0.9	2.1		
<b>Final Direct Attainment</b>	<b>3</b>			
Weightage	80%		20%	
Attainment	2.40		0.57	
<b>Course Attainment</b>	<b>2.97</b>			

CO PO MAPPING & ATTAINMENT														
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	2	-	3	3	3	3	-	2	2	-	-	3	3	2
CO2	2	-	-	3	3	-	-	3	3	-	-	-	3	2
CO3	3	3	-	2	3	-	2	3	-	-	-	-	-	2
CO4	3	3	3	3	3	2	-	3	-	2	-	2	3	2
CO5	3	3	3	3	3	2	3	3	2	2	-	2	3	2
CO6	3	3	3	3	3	3	-	3	3	3	-	3	3	2
Average	2.67	3.00	3.00	2.83	3.00	2.50	2.50	2.83	2.50	2.33	-	2.50	3.00	2.00
Course PO Attainment	2.64	2.97	2.97	2.81	2.97	2.48	2.48	2.81	2.48	2.31	-	2.48	2.97	1.98

$$\text{Course PO Attainment} = \frac{\text{Course Attainment} * \text{Average of PO}}{3}$$



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# VIGNANS INSTITUTE OF ENGINEERING FOR WOMEN

Approved by AICTE, New Delhi. Affiliated to JNTU Kakinada

Kapujangaraju Peta, VSEZ(post), Gajuwaka, Visakhapatnam-530049, AP

## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Course Name: Web Technologies Lab	Course Code: C408	Admitted Batch: 2018
Year/ Sem : IV B TECH I SEM	Regulation: RI16	Academic Year: 2021-22
Course Coordinator : Dr.P. VijayaBharati	Faculty: Dr.P. VijayaBharati/Mr A Maheswararao/Mrs N SowjanyaKumari	

S.No	Reg. No.	INTERNAL																		EXTERNAL				
		w1	w2	w3	w4	w5	w6	w7	w8	w9	w10	w11	w12	w13	w14	Day to Day evaluation (10)	Internal exam (CO1-CO6)	Record (CO1-CO6)	Total (CO1-CO6)					
		E1-E2 CO1	E3-E5 CO1	E6 CO2	E19 CO5	E20 CO5	E21 CO5	E22 CO5	E23 CO5	E24 CO5	E25 CO6	E7-E10 CO3	E11-E14 CO3	E15-E16 CO4	E17-E18 CO4									
1	18NMI1A0501	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	25 M	50M
2	18NMI1A0502	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	24	49
3	18NMI1A0503	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	22	49
4	18NMI1A0504	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	23	49
5	18NMI1A0505	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	23	48
6	18NMI1A0506	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	25	50
7	18NMI1A0507	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	23	46
8	18NMI1A0508	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	22	45
9	18NMI1A0509	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	22	41
10	18NMI1A0510	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	23	46
11	18NMI1A0511	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	24	50
12	18NMI1A0512	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	22	42
13	18NMI1A0513	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	22	45
14	18NMI1A0514	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	23	49
15	18NMI1A0515	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	21	43
16	18NMI1A0516	10	10	9	10	9	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	24	48
17	18NMI1A0517	10	10	9	10	9	10	9	9	9	9	9	9	9	9	9	9	9	9	9	9	5	21	43
18	18NMI1A0518	10	10	9	10	9	10	9	9	9	9	9	9	9	9	9	9	9	9	9	9	5	21	42
19	18NMI1A0519	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	22	43
20	18NMI1A0520	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	25	50
21	18NMI1A0521	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	20	44
22	18NMI1A0522	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	23	50
23	18NMI1A0523	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	22	44
24	18NMI1A0524	10	10	9	10	9	10	9	9	9	9	9	9	9	9	9	9	9	9	9	9	5	22	42
25	18NMI1A0525	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	23	50
26	18NMI1A0526	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	22	44
27	18NMI1A0527	10	10	9	10	9	10	9	8	8	8	8	8	8	8	8	8	8	8	8	8	5	22	42

23

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S.No	Regd.No.	INTERNAL										EXTERNAL
		MID I										University end exam CO1:CO6 50M
		CO1 10M	CO2 10M	CO3 10M	CO4 10M	CO5 10M	CO6 10M					
1	18NM1A0501	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	49	
2	18NM1A0502	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	49	
3	18NM1A0503	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	49	
4	18NM1A0504	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	48	
5	18NM1A0505	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	50	
6	18NM1A0506	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	46	
7	18NM1A0507	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	45	
8	18NM1A0508	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	41	
9	18NM1A0509	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	46	
10	18NM1A0510	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	50	
11	18NM1A0511	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	42	
12	18NM1A0512	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	45	
13	18NM1A0513	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	49	
14	18NM1A0514	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	43	
15	18NM1A0515	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	48	
16	18NM1A0516	10.0	9.0	9.5	10.0	9.2	9.0	9.0	9.0	9.0	43	
17	18NM1A0517	10.0	9.0	9.5	10.0	9.2	9.0	9.0	9.0	9.0	42	
18	18NM1A0518	10.0	9.0	9.5	10.0	9.2	9.0	9.0	9.0	9.0	43	
19	18NM1A0519	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	50	
20	18NM1A0520	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	44	
21	18NM1A0521	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	50	
22	18NM1A0522	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	44	
23	18NM1A0523	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	42	
24	18NM1A0524	10.0	9.0	9.5	10.0	9.2	9.0	9.0	9.0	9.0	41	
25	18NM1A0525	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	45	
26	18NM1A0526	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	44	
27	18NM1A0527	10.0	9.0	8.0	9.0	8.7	8.0	8.0	8.0	8.0	41	
28	18NM1A0528	10.0	9.0	9.5	10.0	9.2	9.0	9.0	9.0	9.0	43	
29	18NM1A0529	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	47	
30	18NM1A0530	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	50	
31	18NM1A0531	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	50	
32	18NM1A0532	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	47	
33	18NM1A0533	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	43	
34	18NM1A0534	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	44	
35	18NM1A0535	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	47	

Total No. of Students	192
Target is	50%
Class Average Marks of MID I	12.50
Bench Mark	Target Students
If 60 % students got more than Target	104
If 70 % students got more than Target	122
If 80 % students got more than Target	139
Target level	1
	2
	3

Attained for COs	Students attained	Attained level
Students attained CO1	192	3
Students attained CO2	192	3
Students attained CO3	192	3
Students attained CO4	192	3
Students attained CO5	192	3
Students attained CO6	192	3

University Exam Assessment	70
Target is	45%
Target Mark	31.5
No of students attended	192
No. of students attained	188
Students above the Target	Target Students
University Exam	188
Target level	3

Indirect Assessment - Average for CO's					
CO1	CO2	CO3	CO4	CO5	CO6
2.82	2.96	2.88	2.76	2.91	2.91



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72	18NM1A0572	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	48
73	18NM1A0573	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	50
74	18NM1A0574	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	49
75	18NM1A0575	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	49
76	18NM1A0576	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	50
77	18NM1A0577	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	46
78	18NM1A0578	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	48
79	18NM1A0579	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	47
80	18NM1A0580	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	49
81	18NM1A0581	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	49
82	18NM1A0582	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	47
83	18NM1A0583	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	48
84	18NM1A0584	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	42
85	18NM1A0585	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	41
86	18NM1A0586	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	44
87	18NM1A0587	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	48
88	18NM1A0588	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	48
89	18NM1A0589	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	49
90	18NM1A0590	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	46
91	18NM1A0591	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	48
92	18NM1A0592	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	47
93	18NM1A0593	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	49
94	18NM1A0594	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	49
95	18NM1A0595	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	50
96	18NM1A0596	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	49
97	18NM1A0597	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	43
98	18NM1A0598	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	45
99	18NM1A0599	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	47
100	18NM1A05A0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	49
101	18NM1A05A1	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	46
102	18NM1A05A2	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	49
103	18NM1A05A3	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	48

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104	18NMI A05A4	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	50
105	18NMI A05A5	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	44
106	18NMI A05A6	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	47
107	18NMI A05A7	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	48
108	18NMI A05A8	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	46
109	18NMI A05A9	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	49
110	18NMI A05B0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	47
111	18NMI A05B1	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	50
112	18NMI A05B2	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	41
113	18NMI A05B3	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	48
114	18NMI A05B4	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	46
115	18NMI A05B5	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	46
116	18NMI A05B6	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	45
117	18NMI A05B7	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	49
118	18NMI A05B8	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	44
119	18NMI A05B9	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	50
120	18NMI A05C0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	43
121	18NMI A05C1	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	43
122	18NMI A05C2	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	47
123	18NMI A05C3	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	46
124	18NMI A05C4	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	48



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125	18NM1A05C5	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	43
126	18NM1A05C6	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	47
127	18NM1A05C7	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	42
128	18NM1A05C8	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	43
129	18NM1A05C9	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	45
130	18NM1A05D0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	45
131	18NM1A05D1	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	44
132	18NM1A05D2	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	42
133	18NM1A05D3	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	42
134	18NM1A05D4	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	46
135	18NM1A05D5	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	45
136	18NM1A05D6	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	48
137	18NM1A05D7	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	46
138	18NM1A05D8	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	45
139	18NM1A05D9	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	48
140	18NM1A05E1	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	41
141	18NM1A05E2	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	43
142	18NM1A05E3	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	48
143	18NM1A05E4	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	43
144	18NM1A05E5	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	49
145	18NM1A05E6	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	41



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146	18NMIA05E7	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	49
147	18NMIA05E8	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	47
148	18NMIA05E9	10.0	10.0	9.0	9.0	9.0	9.3	9.0	9.0	9.0	41
149	18NMIA05F0	10.0	10.0	9.0	9.0	9.0	9.3	9.0	9.0	9.0	44
150	18NMIA05F1	10.0	10.0	9.0	9.0	9.0	9.3	9.0	9.0	9.0	46
151	18NMIA05F2	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	43
152	18NMIA05F3	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	45
153	18NMIA05F4	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	45
154	18NMIA05F5	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	43
155	18NMIA05F6	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	45
156	18NMIA05F7	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	49
157	18NMIA05F8	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	41
158	18NMIA05F9	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	47
159	18NMIA05G0	10.0	10.0	9.0	9.0	9.0	9.3	9.0	9.0	9.0	41
160	18NMIA05G1	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	49
161	18NMIA05G2	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	41
162	18NMIA05G3	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	42
163	18NMIA05G4	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	41
164	18NMIA05G5	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	46
165	18NMIA05G6	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	48
166	18NMIA05G7	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	50



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### Indirect Assessment - Feedback from students

Course Name: Web Technologies Lab	Course Code: C408	A
Year/ Sem : IV-B-TECH-I-SEM	Regulation: R16	Acc

S.No.	Reg.No.	CO1	CO2	CO3	CO4	CO5
1	18NM1A0502	3	3	3	2	2
2	18NM1A0503	2	3	3	3	3
3	18NM1A0504	3	3	2	3	3
4	18NM1A0505	3	3	3	3	3
5	18NM1A0506	3	3	3	3	3
6	18NM1A0507	3	3	3	3	2
7	18NM1A0508	2	3	2	3	3
8	18NM1A0509	3	3	3	3	3
9	18NM1A0510	3	3	3	3	3
10	18NM1A0512	3	3	3	3	3
11	18NM1A0513	3	3	3	3	3
12	18NM1A0514	3	3	2	3	2
13	18NM1A0515	3	3	3	3	3
14	18NM1A0519	3	3	3	3	3
15	18NM1A0520	3	3	3	3	3
16	18NM1A0521	3	3	2	2	2
17	18NM1A0522	3	3	3	2	3
18	18NM1A0523	3	2	3	2	2
19	18NM1A0524	3	3	3	2	3
20	18NM1A0525	3	3	3	2	3
21	18NM1A0526	3	3	3	2	3
22	18NM1A0527	3	3	3	2	3
23	18NM1A0528	3	3	2	2	3
24	18NM1A0529	3	3	3	2	3
25	18NM1A0530	3	3	3	2	3
26	18NM1A0531	3	3	3	2	3
27	18NM1A0532	3	3	3	2	3
28	18NM1A0533	3	3	3	2	2
29	18NM1A0534	3	2	3	2	3
30	18NM1A0535	3	3	3	2	3
31	18NM1A0536	3	3	3	2	3



  
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32	18NM1A0537	3	3	3	2	2
33	18NM1A0540	3	3	2	2	3
34	18NM1A0541	2	3	3	2	3
35	18NM1A0542	3	3	3	2	3
36	18NM1A0543	3	3	2	2	3
37	18NM1A0544	2	3	3	2	3
38	18NM1A0545	3	2	3	2	3
39	18NM1A0546	3	2	2	2	2
40	18NM1A0547	3	3	3	2	3
41	18NM1A0548	3	3	3	2	3
42	18NM1A0549	2	3	3	2	3
43	18NM1A0550	3	3	3	3	3
44	18NM1A0551	3	3	3	3	3
45	18NM1A0552	3	3	3	3	3
46	18NM1A0559	3	3	2	3	3
47	18NM1A0560	3	3	3	3	3
48	18NM1A0561	3	3	3	3	3
49	18NM1A0562	2	3	3	3	3
50	18NM1A0563	3	3	3	3	3
51	18NM1A0564	3	3	3	3	3
52	18NM1A0565	3	3	2	3	3
53	18NM1A0566	3	3	3	3	3
54	18NM1A0567	3	3	3	3	3
55	18NM1A0568	3	3	3	3	3
56	18NM1A0569	3	3	3	3	3
57	18NM1A0570	3	3	3	3	3
58	18NM1A0571	3	3	3	3	3
59	18NM1A0572	3	3	3	3	3
60	18NM1A0573	3	3	3	3	3
61	18NM1A0574	2	3	3	3	3
62	18NM1A0584	3	3	3	3	3
63	18NM1A0585	2	3	3	3	3
64	18NM1A0586	3	3	3	2	3
65	18NM1A0587	3	3	2	3	3
66	18NM1A0588	3	3	3	3	3
67	18NM1A0589	3	3	3	3	3
68	18NM1A0590	3	3	3	3	3



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69	18NM1A0591	3	3	3	3	3
70	18NM1A0592	3	3	3	3	3
71	18NM1A0593	3	3	3	3	3
72	<del>18NM1A0594</del>	<del>2</del>	<del>3</del>	<del>3</del>	<del>3</del>	<del>2</del>
73	18NM1A0595	3	3	3	3	3
74	18NM1A0596	3	3	2	3	3
75	18NM1A0597	2	3	3	3	3
76	18NM1A0598	3	3	3	3	3
77	18NM1A0599	3	3	3	3	3
78	18NM1A05A0	3	3	3	3	3
79	18NM1A05A1	3	3	3	3	3
80	18NM1A05A2	3	3	3	3	3
81	18NM1A05A3	2	3	3	3	3
82	18NM1A05A4	3	3	3	3	3
83	18NM1A05A5	3	3	3	2	3
84	18NM1A05A6	2	3	3	3	3
85	18NM1A05A7	2	3	3	3	3
86	18NM1A05A8	3	3	3	3	3
87	18NM1A05A9	3	3	3	3	2
88	18NM1A05B0	3	3	3	3	3
89	18NM1A05B1	3	3	3	3	3
90	18NM1A05B2	3	3	3	3	3
91	18NM1A05B3	3	3	3	3	2
92	18NM1A05B4	3	3	3	3	3
93	18NM1A05B5	2	3	3	3	3
94	18NM1A05B6	3	3	3	2	3
95	18NM1A05B7	3	3	3	3	3
96	18NM1A05B8	3	3	3	3	3
97	18NM1A05B9	3	3	2	3	3
98	18NM1A05C0	3	3	3	3	3
99	18NM1A05C1	3	3	3	3	3
100	18NM1A05C2	3	3	3	3	3
101	18NM1A05C5	3	3	3	3	3
102	18NM1A05C6	3	3	2	3	3
103	18NM1A05C7	3	3	3	3	3
104	18NM1A05C8	3	3	3	3	2
105	18NM1A05C9	3	3	3	3	3



320  
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106	18NM1A05D0	2	3	3	3	3
107	18NM1A05D1	3	3	2	3	3
108	18NM1A05D2	3	3	3	3	3
109	18NM1A05D3	3	3	3	3	3
110	18NM1A05D4	3	3	3	3	3
111	18NM1A05D5	3	3	3	3	3
112	18NM1A05D6	3	3	3	3	3
113	18NM1A05D7	3	3	3	3	3
114	18NM1A05D8	3	3	3	3	3
115	18NM1A05D9	3	3	3	3	3
116	18NM1A05E1	2	3	2	3	3
117	18NM1A05E2	3	3	3	3	3
118	18NM1A05E3	2	3	3	3	3
119	18NM1A05E4	3	3	3	3	3
120	18NM1A05E5	3	3	3	3	3
121	18NM1A05E6	3	3	3	3	3
122	18NM1A05E7	3	3	2	3	3
123	18NM1A05E8	3	3	3	3	3
124	18NM1A05E9	3	3	3	3	3
125	18NM1A05F0	2	3	3	3	3
126	18NM1A05F1	3	3	3	3	3
127	18NM1A05F2	3	3	3	3	3
128	18NM1A05F3	3	3	3	3	3
129	18NM1A05F4	2	3	3	2	3
130	18NM1A05F5	2	3	3	3	3
131	18NM1A05F6	3	3	3	3	3
132	18NM1A05F7	3	2	3	3	3
133	18NM1A05F8	2	3	3	2	3
134	18NM1A05F9	2	3	3	3	3
135	18NM1A05G0	3	3	3	3	3
136	18NM1A05G1	2	2	3	3	3
137	18NM1A05G2	2	3	3	3	3
138	18NM1A05G3	3	3	3	3	3
139	18NM1A05G4	3	3	3	3	3
140	18NM1A05G5	2	3	3	2	3
	<b>Average</b>	<b>2.82</b>	<b>2.96</b>	<b>2.88</b>	<b>2.76</b>	<b>2.91</b>



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Strongly Agree	3
Agree	2
Neutral	1
Disagree	0



*[Handwritten signature in green ink]*

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### Course Attainment Calculation

Course Name Web Technologies Lab	Course Code C408	Admitted Batch, 2018
Year/ Sem IV B TECH I SEM	Regulation. R16	Academic Year 2021-22
Course Coordinator Dr. P. VijayaBharati	Faculty: Dr. P. VijayaBharati/Mr. A. Maheswararao/Mrs. N. SowjanyaKumari	

Direct Attainment		Indirect Attainment	
	Internal	University	Feedback
CO1	3	3	CO1 2.82
CO2	3	3	CO2 2.96
CO3	3	3	CO3 2.88
CO4	3	3	CO4 2.76
CO5	3	3	CO5 2.91
CO6	3	3	CO6 2.91
Average	3.00	3.00	
Weightage	30%	70%	Final Indirect Attainment 2.87
Attainment	0.9	2.1	
Final Direct Attainment	3		
Weightage	80%		20%
Attainment	2.40		0.57
<b>Course Attainment</b>	<b>2.97</b>		

CO PO MAPPING & ATTAINMENT												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	-	3	3	3	3	-	2	2	-	-	3
CO2	2	-	-	3	3	-	-	3	3	-	-	-
CO3	3	3	-	2	3	-	2	3	-	-	-	-
CO4	3	3	3	3	3	2	-	3	-	2	-	2
CO5	3	3	3	3	3	2	3	3	2	2	-	2
CO6	3	3	3	3	3	3	-	3	3	3	-	3
<b>Average</b>	<b>2.67</b>	<b>3.00</b>	<b>3.00</b>	<b>2.83</b>	<b>3.00</b>	<b>2.50</b>	<b>2.50</b>	<b>2.83</b>	<b>2.50</b>	<b>2.33</b>	<b>-</b>	<b>2.50</b>
<b>Course - PO Attainment</b>	<b>2.64</b>	<b>2.97</b>	<b>2.97</b>	<b>2.81</b>	<b>2.97</b>	<b>2.48</b>	<b>2.48</b>	<b>2.81</b>	<b>2.48</b>	<b>2.31</b>	<b>-</b>	<b>2.48</b>

Course PO Attainment =  $\frac{\text{Course Attainment} \cdot \text{Average of PO}}{3}$

  
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