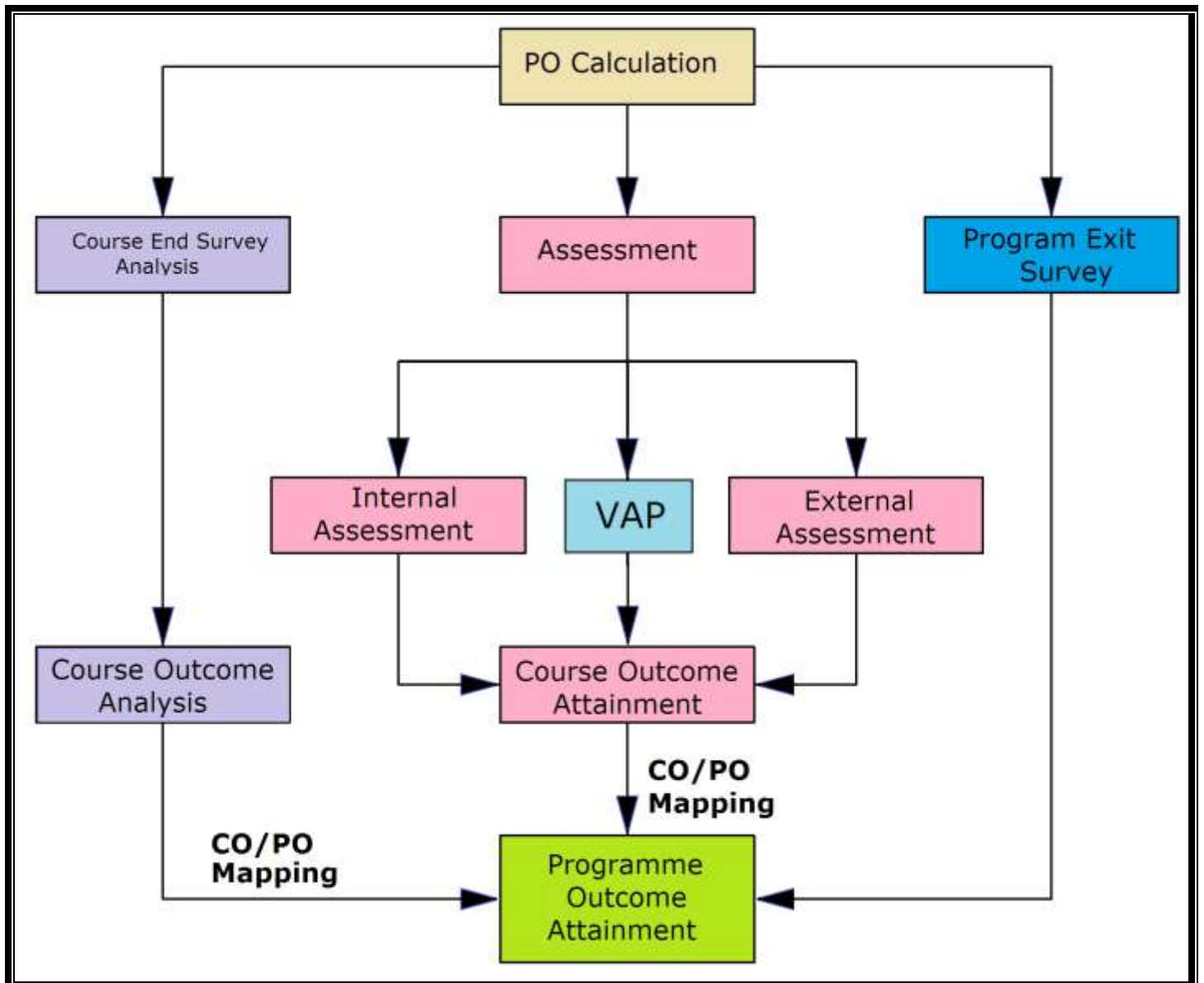


2.6.2 Attainment of program outcomes, program specific outcomes and course outcomes are evaluated by the institution

1. Course End Survey
2. Course End Survey Analysis
3. Course Outcome Analysis through Internal Assessments
4. Course Outcome Analysis through External Assessments
5. PO Statement
6. Programme Exit Survey

DGCT Programme Outcome (PO) attainment strategy



Sample Course End Survey (CES) for all departments

Civil Engineering

II yr
CIVIL - B

Dhirajlal Gandhi College of Technology
Department of Civil Engineering
COURSE END SURVEY

Name of the Student : E. NITHISH KUMAR
Register no : 610515103082
Semester : III
Section : CIVIL - B
Course Code and Course Name : CE 6303 & MECHANICS OF FLUIDS
Name of the Faculty Handled : M. SOWMIYA

1. Do you understand the concept of pressure measurement
 Cannot Try Some what Yes

2. Do you understand the concept of hydrostatic forces
 Cannot Try Some what Yes

3. Can you able to differentiate kinematics of fluids and dynamics of fluids
 Cannot Try Some what Yes

4. Can you able to solve the problems for series connection and parallel connection pipes
 Cannot Try Some what Yes

5. Do you understand the concept of boundary layer
 Cannot Try Some what Yes

6. Can you able to differentiate model and prototype
 Cannot Try Some what Yes

7. Do you benifited through activity based and cooperative learing methods ?
 Disagree No opinion Agree Strongly Agree

8. Assignments really tested your critical thinking?
 Disagree No opinion Agree Strongly Agree

9. The evaluation methods used in this course are fair and appropriate
 Disagree No opinion Agree Strongly Agree

10. There is close agreement between the course outcomes and what is actually covered
 Disagree No opinion Agree Strongly Agree

11. What changes can be made to improve the course content? Suggest:

Course Coordinator: *M. S.*
Module Coordinator: *S. S. S.*
HOD/Programme Coordinator: *S. S. S.*

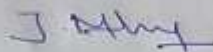
(155)

Computer Science and Engineering

Dhirajlal Gandhi College of Technology
Department of Computer Science and Engineering
COURSE END SURVEY

Name of the Student : MYAHILI - V
Register no : 610517104046
Semester : V
Section : B
Course Code and Course Name : CS8582 - Case Tools Laboratory
Name of the Faculty Handled : Ms.B.Narmada, AP/CSE & Ms.J.Maheswari, AP/CSE

1. Can create design using tools like Rational Rose, Argo UML?
 Cannot Try Some what Yes
2. Can you analyze the scenario and draft the statement to solve the problem?
 Cannot Try Some what Yes
3. Can you analyze the software requirement in order to design and implement the new ideas?
 Cannot Try Some what Yes
4. Can you develop the projects using OO concepts?
 Cannot Try Some what Yes
5. Can you draw diagrams like Class, sequence,activity,statechart?
 cannot Try Some what Yes
6. Can you generate a code from design?
 Cannot Try Some what Yes
7. Can you simplify the complicated scenario using UML design ?
 Cannot Try somewhat yes
8. Can you create the domain model to establish the relationships?
 Cannot Try somewhat yes
9. The evaluation methods used in this course are fair and appropriate
 Disagree No opinion Agree Strongly Agree
10. There is close agreement between the course outcomes and what is actually covered
 Disagree No opinion Agree Strongly Agree
11. What changes can be made to improve the course content? Suggest:


Course Coordinator


Module Coordinator


HOD/Programme Coordinator

Laboratory Course

COURSE END SURVEY

Name of the Student : S. Monisha, 610517104045
Course Code and Course Name : CS8591-Computer Networks
Semester : V
Name of the Faculty Handled : J.Vaijayanthimala, AP/CSE & Mr,Vijaykumar,AP/CSE

1. To what extent you are able to understand the protocols used in Computer Networks?

Cannot Try Some what Yes

2. Do you know how OSI Layer works?

Donot Try Some what Yes

3. Do you analyze various error detection and error correction techniques?

Donot Try Some what Yes

4. Can you design any one of the Topology for the networks?

Cannot Try Some what Yes

5. Do you understand various Flow control algorithms?

Cannot Try Some what Yes

6. Do you understand various Application Layer protocols?

Disagree No opinion Agree Strongly Agree

7. Can you understood the basics of IP addressing and its use for designing the network?

Cannot Try Some what Yes

8. Can you able to identify the networking devices used in computer networks??

Cannot Try Some what Yes

9. Can you able to know the configuration the Email server?

Do not Try Some what Yes

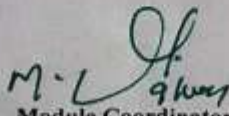
10. There is close agreement between the course outcomes and what is actually covered

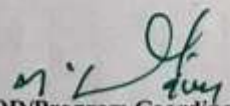
Disagree No opinion Agree Strongly Agree

11. What changes can be made to improve the course content? Suggest:

- i) need more programs in theory section
- ii)
- iii)


Course Coordinator
(J.Vaijayanthi Mala, AP/CSE)


Module Coordinator
(Dr.M.Rameshkumar,HOD/CSE)


HOD/Program Coordinator
(Dr.M.RameshKumar,HOD/CSE)

Electronics and Communication Engineering

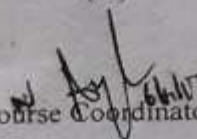
COURSE END SURVEY

Sec-A

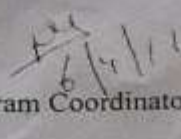
Name of the Student : Akshaya K Sec-A
Course Code and Course Name : EC6801 / Wireless Communication
Semester : VIII
Name of the Faculty Handled : N.Vetriselvan, N. Ayyanar

- Can you understand the concepts in link budget design?
 Cannot Try Some what Yes
- Do you know the various types of fading and its effect?
 Cannot Try Some what Yes
- Do you understand the theory of multiple access techniques?
 Cannot Try Some what Yes
- Can you calculate the frequency reuse factor and cluster size?
 Cannot Try Some what Yes
- Have you understood the concept of OFDM principles?
 Cannot Try Some what Yes
- Can you compare the various shift keying techniques used in wireless communication?
 Cannot Try Some what Yes
- Can you interpret the principle behind equalization and diversity?
 Cannot Try Some what Yes
- Use of power point presentation was useful for discussing the multiple antenna techniques?
 Disagree No opinion Agree Strongly Agree
- The evaluation methods used in this course are fair and appropriate
 Disagree No opinion Agree Strongly Agree
- There is close agreement between the course outcomes and what is actually covered
 Disagree No opinion Agree Strongly Agree

11. What changes can be made to improve the course content? Suggest:
(i) More examples can be given to relate with
(ii) the real time.
(iii)


Course Coordinator


Module Coordinator


Program Coordinator

Electrical and Electronics Engineering

Dhirajlal Gandhi College of Technology
Department of Electrical and Electronics Engineering

COURSE END SURVEY

Name of the Student : P. Vijaya Sri
Register no : 610511105070
Semester : III
Section : B
Course Code and Course Name : EE8351-Digital Logic Circuits
Name of the Faculty Handled : Mr. R. Aravindh

1. Can you understand the fundamentals of Digital Electronics?
 Cannot Try Some what Yes
2. Do you have a basic knowledge in Logical devices?
 Cannot Try Some what Yes
3. Do you understand the methods of reduction of Boolean expressions?
 Cannot Try Some what Yes
4. Can you able to design and analyze the combinational logic circuits like decoders, encoders, MUX and DEMUX?
 Cannot Try Some what Yes
5. Can you able to analyze the synchronous and asynchronous sequential circuits ?
 Cannot Try Some what Yes
6. Do you understand the structure of different memory elements?
 Cannot Try Some what Yes
7. Do you benifited through activity based and cooperative learing methods ?
 Disagree No opinion Agree Strongly Agree
8. Assignments really tested your critical thinking?
 Disagree No opinion Agree Strongly Agree
9. The evaluation methods used in this course are fair and appropriate
 Disagree No opinion Agree Strongly Agree
10. There is close agreement between the course outcomes and what is actually covered
 Disagree No opinion Agree Strongly Agree
11. What changes can be made to improve the course content? Suggest:

No changes, to be made to improve the course content
Course Coordinator *[Signature]* Module Coordinator *[Signature]* HOD/Programme Coordinator *[Signature]*

Mechanical Engineering

2nd year Mech - 'A' section.

COURSE END SURVEY

Name of the Student : M. Nagappan, 610514114314.
Course Code and Course Name : ME6402-Manufacturing Technology-II
Semester : IV
Name of the Faculty Handled : T. Jayachandran AP/Mech, B. Mohanaruban AP/Mech

- Can you analyse the various process in the field of manufacturing?
 Cannot Try Somewhat Yes
- Do you know the various types of machines and various mechanism followed in it?
 Do not Try Somewhat Yes
- Can you write a simple CNC program?
 Cannot Try Somewhat Yes
- Can you get an idea on variety of manufacturing process and mechanisms?
 Cannot Try Somewhat Yes
- Do you know the various milling machine and cutters used in machining process?
 Do not Try Somewhat Yes
- Conduction of classes related to practical oriented for various Processes.
 Disagree No opinion Agree Strongly Agree
- Use of power point / video presentation for discussing to conduct effective classes.
 Disagree No opinion Agree Strongly Agree
- Combined class helped to construct effective and appropriate CNC programme using G&M codes.
 Disagree No opinion Agree Strongly Agree
- The evaluation methods used in this course are fair and appropriate
 Disagree No opinion Agree Strongly Agree
- There is close agreement between the course outcomes and what is actually covered
 Disagree No opinion Agree Strongly Agree
- What changes can be made to improve the course content? Suggest:
(i)
(ii)
(iii)

T. Jayachandran
Course Co ordinator
29/11/16

B. Mohanaruban
Module Co ordinator
29/11/16

B. Mohanaruban
HOD/Programme Co ordinator

Sample Course End Survey Analysis

Sub Code & Name : ME6503-DESIGN OF MACHINE ELEMENTS
Name of the Staff : Mr.N.PANNEERSELVAM SAP/Mech
Year & Section : III Year/ A
Regilation : 2013

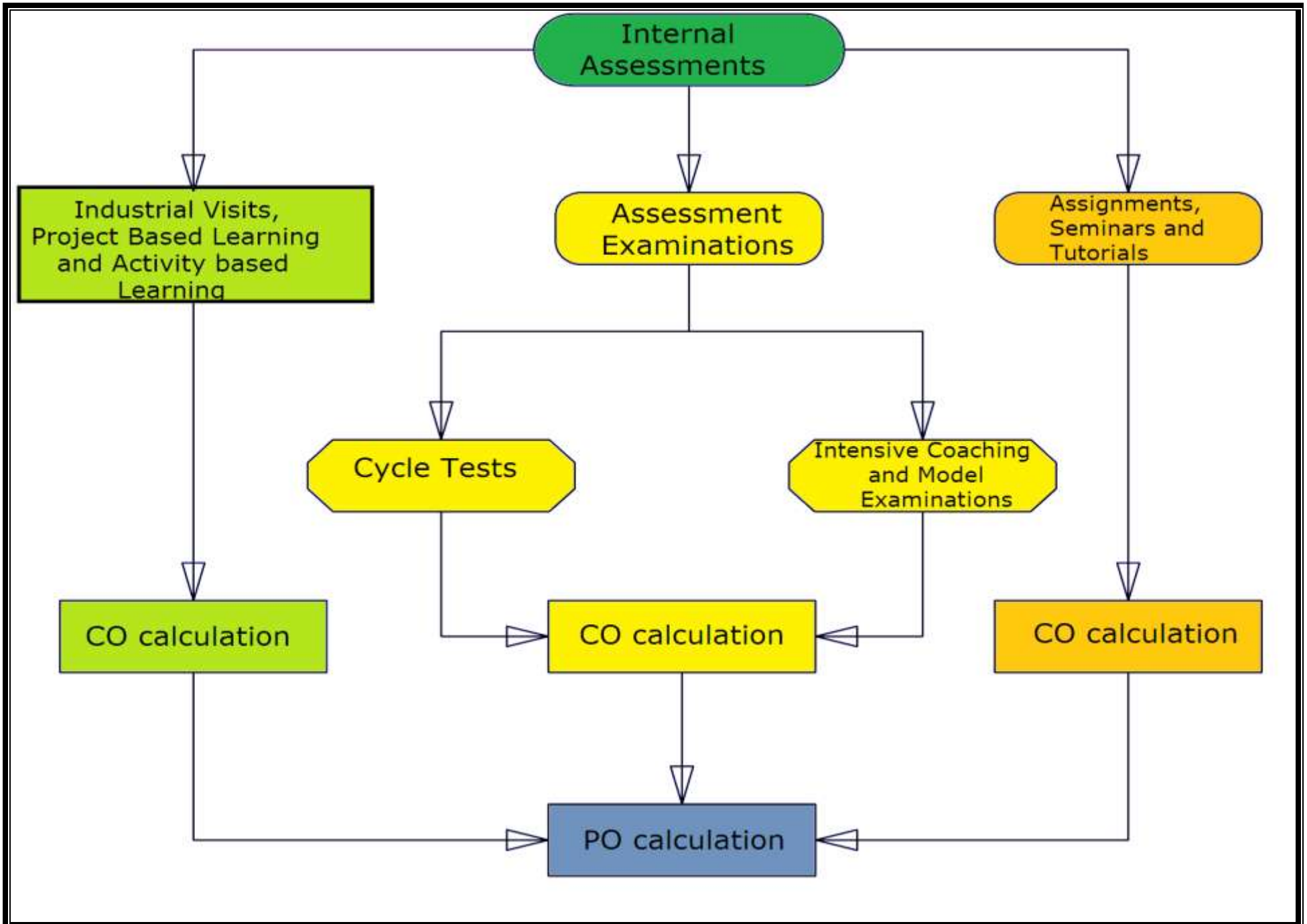
Consolidate Report

| Co s | Course End Survey question | Marks out of 4 | PO 1 | PO 2 | PO 3 | PO 4 | PO 5 | PO 6 | PO 7 | PO 8 | PO 9 | PO1 0 | PO1 1 | PO1 2 | PSO 1 | PSO 2 | PSO 3 |
|------|--|----------------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|
| CO1 | 1. Can you design the elements like hook? Crank shaft etc., | 3.3 | 3.3 | | | 3.3 | 3.3 | | 3.3 | | | | | | 3.3 | | 3.3 |
| | 2. Can you design a component is under varying load? | | | | | | | | | | | | | | | | |
| CO2 | 3. Can you design the power transmission elements like shaft, coupling etc., used in industries? | 3.0 | 3.0 | | | | | | 3.0 | 3.0 | | | | 3.0 | 3.0 | 3.0 | 3.0 |
| CO3 | 4. Will you perform the Design & analysis of | 3.0 | 3.0 | | | | | | 3.0 | | | | | | 3.0 | 3.0 | 3.0 |

| | | | | | | | | | | | | | | | | | |
|-----|--|-----|-----|-----|-----|--|--|-----|-----|-----|--|--|-----|-----|-----|-----|-----|
| | temporary and permanent joints ? | | | | | | | | | | | | | | | | |
| C04 | 5. Are you confident about design & development of Energy storing elements like springs, flywheel etc.,? | 2.7 | 2.7 | 2.7 | 2.7 | | | | 2.7 | | | | 2.7 | | 2.7 | 2.7 | 2.7 |
| C05 | 6. Will you Design & analyze of tribological elements like bearing etc.,? | 2.8 | 2.8 | | | | | 2.8 | 2.8 | 2.8 | | | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 |
| C06 | 7. Will you follow the proper standards of design principle? | 3.5 | | | | | | | | | | | | | | | |
| | 8. Use of Power Point Projector (PPT) is class room lecturing is effective and appropriate ? | 3.0 | | | | | | | | | | | | | | | |
| | 9. The evaluation methods used in this course are fair and | 3.2 | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | |
|--|---|-----|-----|-----|-----|---------|---------|-----|-----|-----|--|--|-----|-----|-----|-----|-----|
| | appropriate | | | | | | | | | | | | | | | | |
| | 10. There is close agreement between the course outcomes and what is actually covered | 2.5 | | | | | | | | | | | | | | | |
| | Average | 3.1 | 3.0 | 2.7 | 2.7 | 3.3 | 3.3 | 2.8 | 3.0 | 2.9 | | | 2.8 | 2.9 | 3.0 | 2.9 | 3.0 |
| | % of Attainment | 76 | 74 | 67 | 67 | 81 | 81 | 71 | 74 | 73 | | | 69 | 73 | 74 | 72 | 74 |
| | % of Target | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | | | 70 | 70 | 70 | 70 | 70 |
| | Justifiacation | +6 | +4 | -3 | -3 | +1 1 | +1 1 | +1 | +4 | +3 | | | -1 | +3 | +4 | +2 | +4 |

INTERNAL ASSESSMENT



Logbook

RC /



DHIRAJLAL GANDHI COLLEGE OF TECHNOLOGY

(Approved by AICTE | Affiliated to Anna University, Chennai | Accredited by NAAC)

Opposite Salem Airport, Sikanampatty (PO), Omalur (Tk), Salem, Tamil Nadu 636309
Phone: 04290 233 333 | e-mail : principal@dgct.ac.in | office@dgct.ac.in | www.dgct.ac.in

FACULTY PEDAGOGICAL AND STUDENT ASSESSMENT RECORD BOOK

FACULTY DETAILS

Name : **N. PANNEERSELVAM**
B. MOHANARUBAN
Designation : **Sr. AP / AP**
Department : **MECHANICAL**

COURSE DETAILS

Subject Code : **ME8351**
Subject Name : **Manufacturing Technology - I**
Semester & Sec : **III. A.**
Academic Year : **2019-20**
Department : **Mechanical**
Module Name : **Materials and Manufac turing**
Module Coordinator : **N. PANNEERSELVAM**

VISION

To improve the quality of human life through multidisciplinary programs in engineering, architecture and management that are internationally recognized and would facilitate research work to incorporate social, economical and environmental development.

MISSION

- To create a vibrant atmosphere that creates competent engineers, innovators, scientists, entrepreneurs, academicians and thinkers of tomorrow.
- To establish centre of excellence that provide sustainable solutions, to industry and society.
- To enhance capability through various value added programs, to meet the challenges of dynamically changing global needs.

STUDENTS DETAILS

| | BOYS | GIRLS | TOTAL |
|--------------------|------|-------|-------|
| NO. OF DAYSCHOLARS | 45 | 1 | 46 |
| NO. OF HOSTELLERS | 0 | 0 | 0 |
| TOTAL | 45 | 1 | 46 |

Syllabus

ME8351 MANUFACTURING TECHNOLOGY - I L T P C 3 0 0 3

OBJECTIVE:

- To introduce the concepts of basic manufacturing processes and fabrication techniques, such as metal casting, metal joining, metal forming and manufacture of plastic components.

UNIT I METAL CASTING PROCESSES 9

Sand Casting : Sand Mould - Type of patterns - Pattern Materials - Pattern allowances - Moulding sand Properties and testing - Cores - Types and applications - Moulding machines- Types and applications; Melting furnaces : Blast and Cupola Furnaces; Principle of special casting processes : Shell - investment - Ceramic mould - Pressure die casting - Centrifugal Casting - CO2 process - Stir casting; Defects in Sand casting

UNIT II JOINING PROCESSES 9

Operating principle, basic equipment, merits and applications of: Fusion welding processes: Gas welding - Types - Flame characteristics; Manual metal arc welding - Gas Tungsten arc welding - Gas metal arc welding - Submerged arc welding - Electro slag welding; Operating principle and applications of: Resistance welding - Plasma arc welding - Thermit welding - Electron beam welding - Friction welding and Friction Stir Welding; Brazing and soldering; Weld defects: types, causes and cure.

UNIT III METAL FORMING PROCESSES 9

Hot working and cold working of metals - Forging processes - Open, impression and closed die forging - forging operations. Rolling of metals- Types of Rolling - Flat strip rolling - shape rolling operations - Defects in rolled parts. Principle of rod and wire drawing - Tube drawing - Principles of Extrusion - Types - Hot and Cold extrusion.

UNIT IV SHEET METAL PROCESSES 9

Sheet metal characteristics - shearing, bending and drawing operations - Stretch forming operations - Formability of sheet metal - Test methods - special forming processes-Working principle and applications - Hydro forming - Rubber pad forming - Metal spinning- Introduction of Explosive forming, magnetic pulse forming, peen forming, Super plastic forming - Micro forming

UNIT V MANUFACTURE OF PLASTIC COMPONENTS 9

Types and characteristics of plastics - Moulding of thermoplastics - working principles and typical applications - injection moulding - Plunger and screw machines - Compression moulding, Transfer Moulding - Typical industrial applications - introduction to blow moulding -Rotational moulding - Film blowing - Extrusion - Thermoforming - Bonding of Thermoplastics.

TEXT BOOKS:

1. Hajra Choudhary S.K and Hajra Choudhury. AK., "Elements of workshop Technology", volume I & Media promoters and Publishers Private Limited, Mumbai, 2008
2. Kalpakjian, S, "Manufacturing Engineering and Technology", Pearson Education India Edition, 20

MAPPING OF COURSE OUTCOMES TO POs & PSOs

| S. No. | Course Outcome | PO 1 | PO 2 | PO 3 | PO 4 | PO 5 | PO 6 | PO 7 | PO 8 | PO 9 | PO 10 | PO 11 | PO 12 | PSO 1 | PSO 2 | PSO 3 |
|--------|---|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|
| 1 | Expert to do metal casting process associated defects, merits & demerits. | 2 | 2 | 1 | 3 | 3 | 1 | 2 | 2 | | | | | 1 | 3 | 1 |
| 2 | Compare different metal joining process. | 2 | 2 | 1 | 3 | 3 | 1 | 2 | 2 | | | | | 1 | 3 | 1 |
| 3 | Summarize various hot working & cold working | 2 | 2 | 1 | 3 | 3 | 1 | 2 | 2 | | | | | 1 | 3 | 1 |
| 4 | Apply the method sheet metal making process. | 2 | 2 | 1 | 3 | 3 | 1 | 2 | 2 | | | | | 1 | 3 | 1 |
| 5 | Apply the new technologies to manufacturing of plastic components. | 2 | 2 | 1 | 3 | 3 | 1 | 2 | 2 | | | | | 1 | 3 | 1 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |

MAPPING OF COURSE TO POs & PSOs

| S. No. | Course | PO 1 | PO 2 | PO 3 | PO 4 | PO 5 | PO 6 | PO 7 | PO 8 | PO 9 | PO 10 | PO 11 | PO 12 | PSO 1 | PSO 2 | PSO 3 |
|--------|------------------------------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|
| | Manufacturing Technology - 1 | 2 | 2 | 1 | 3 | 3 | 1 | 2 | 2 | | | | | 1 | 3 | 1 |

Program Outcomes (POs)

| Program Outcomes(POs) | |
|-----------------------|---|
| PO1 | a) Apply the knowledge of mathematics, science, engineering fundamentals to the solution of complex problems in Mechanical Engineering. |
| PO2 | b) Identify, formulate, research literature, and analyze complex Mechanical Engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences. |
| PO3 | c) Design solutions for complex Mechanical 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. |
| PO4 | d) 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 related to Mechanical Engineering. |
| PO5 | e) Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex Mechanical engineering activities with an understanding of the limitations |
| PO6 | f) 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. |
| PO7 | g) Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development. |
| PO8 | h) Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice. |
| PO9 | i) Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings. |
| PO10 | j) 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. |
| PO11 | k) 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. |
| PO12 | l) 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. |

Program Specific Outcomes (PSOs)

| Program Specific Outcomes(PSOs) | |
|---------------------------------|---|
| PSO1 | p) Ability of the graduates to perform in advanced machining by out-trial of schooling thro'u internship between institutes - industry. |
| PSO2 | q) Graduates will demonstrate the ability to design a mechanical system using complex modeling and analysis software thro'u continuing education. |
| PSO3 | r) Graduates will be exposed to industrial practices and acquire the ability to serve in core industry. |

Course Assessment Plan

| | | | | |
|----|---|-----|----------|---|
| 1 | CT - 1 | ... | 23.07.19 | 1 |
| 2 | CT - 2 | ... | 21.08.19 | 1 |
| 3 | ICT - 1 | ... | 21.09.19 | 1 |
| 4 | ICT - 2 | ... | 03.10.19 | 1 |
| 5 | Model Exam | ... | 12.10.19 | 1 |
| 6 | Assignment | ... | 3 | |
| 7 | Tutorial | ... | X | |
| 8 | Project Based Learning (Mini - Project) | ... | Yes | |
| 9 | Industrial Visit | ... | Yes | |
| 10 | Guest Lecturer | ... | No | |
| 11 | Seminar | ... | Yes | |
| 12 | Activity Based Learning - I | ... | 30.07.19 | |
| 13 | Activity Based Learning - I | ... | NIL | X |
| 14 | Other Activities | ... | NIL | X |

Assignment / Tutorial

| S.No | Units | Topics | Tentative Date | Exact Date |
|------|-------|---------------------|----------------|------------|
| 1 | 1 | CASTING AND WELDING | 23.07.19 | 26.07.19 |
| 2 | 2 | Welding | 28.08.19 | 28.08.19 |
| 3 | 3 | Alloys | 29.09.19 | 04.10.19 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Industrial Visit / Guest Lecture

Visit to Sonal Vyapar Ltd., Sakm.

TIME TABLE

Revision : 0 with effect from (Date) : 20.06.19

| Day | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Remarks |
|-----------|---------------------|----------------------|----------------------|----------------------|--------------------|--------------------|--------------------|--------------------|---------|
| TIMINGS | 9:30-10:50 10:10 | 11:00-11:50 10:10 | 11:00-11:50 10:10 | 11:55-12:45 10:10 | 1:30-2:15 10:10 | 2:15-3:00 10:10 | 3:30-4:00 10:10 | 4:00-4:45 10:10 | |
| Monday | | | Tea Break | | Lunch Break | | Tea Break | | |
| Tuesday | | | | | MT-1 | | | | |
| Wednesday | | | | | MT-1 | | | | |
| Thursday | | | | MT-1 | | | | | |
| Friday | | | MT-1 | | | | MT-1 | | |
| Saturday | | MT-1 | | | | | | | |

Revision : 1 with effect from (Date) : 08.07.19

| Day | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Remarks |
|-----------|---------------------|----------------------|----------------------|----------------------|--------------------|--------------------|--------------------|--------------------|---------|
| TIMINGS | 9:30-10:50 10:10 | 11:00-11:50 10:10 | 11:00-11:50 10:10 | 11:55-12:45 10:10 | 1:30-2:15 10:10 | 2:15-3:00 10:10 | 3:30-4:00 10:10 | 4:00-4:45 10:10 | |
| Monday | | | Tea Break | | Lunch Break | | Tea Break | | |
| Tuesday | | | | | MT-1 | | | | |
| Wednesday | MT-1 | | | | MT-1 | | | | |
| Thursday | | | | MT-1 | | | | MT-1 | |
| Friday | | | MT-1 | | | | | | |
| Saturday | | MT-1 | | | | | | | |

Revision : 2 with effect from (Date) :

| Day | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Remarks |
|-----------|---|---|-----------|---|-------------|---|-----------|---|---------|
| TIMINGS | | | | | | | | | |
| Monday | | | | | | | | | |
| Tuesday | | | Tea Break | | Lunch Break | | Tea Break | | |
| Wednesday | | | | | | | | | |
| Thursday | | | | | | | | | |
| Friday | | | | | | | | | |
| Saturday | | | | | | | | | |

1

Syllabus

ME8351 MANUFACTURING TECHNOLOGY - I L T P C 3 0 0 3

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Sheet metal characteristics - shearing, bending and drawing operations - Stretch forming operations - Formability of sheet metal - Test methods - special forming processes - Working principle and applications - Hydro forming - Rubber pad forming - Metal spinning - Introduction of Explosive forming, magnetic pulse forming, peen forming, Super plastic forming - Micro forming

UNIT V MANUFACTURE OF PLASTIC COMPONENTS 9

Types and characteristics of plastics - Moulding of thermoplastics - working principles and typical applications - injection moulding - Plunger and screw machines - Compression moulding, Transfer Moulding - Typical industrial applications - introduction to blow moulding - Rotational moulding - Film blowing - Extrusion - Thermoforming - Bonding of Thermoplastics.

TEXT BOOKS:

- Hajra Choudhary S.K and Hajra Choudhury, AK., "Elements of workshop Technology", volume I & II, Media promoters and Publishers Private Limited, Mumbai, 2008
- Kalpajian, S, "Manufacturing Engineering and Technology", Pearson Education India Edition, 2008

Record of Attendance

| DATE: | | | Period: | | | | | | | | | | | | | | |
|-------------------------|--------------|---------------------|---------|-----|------------------------|----|----|----|----|----|----|----|----|----|----|----|----|
| R.No. | AU Regd. No. | Name | M/F | H/D | No. of Attends | | | | | | | | | | | | |
| | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 18 | 4001 | Ajithkumar . S | M | H | / | / | / | / | / | / | / | / | / | / | / | / | / |
| 002 | 4002 | Amanmath . M | M | H | / | / | / | / | / | / | / | / | / | / | / | / | / |
| 003 | 4003 | Anbarasu . S | M | H | / | / | / | / | / | / | / | / | / | / | / | / | / |
| 004 | 4004 | Azulmani . E | M | H | a | a | a | / | / | / | / | / | / | / | / | / | / |
| 005 | 4005 | Arunkumar . S | M | H | / | / | / | / | / | / | a | / | / | / | / | / | / |
| 006 | 4006 | Bharath . R | M | H | a | a | a | / | / | a | a | / | / | / | / | / | / |
| 007 | 4007 | Bharathkumar . C | M | H | / | / | / | / | / | / | a | / | / | / | / | / | / |
| 008 | 4008 | Bhuvanesh . M | M | H | / | / | / | / | / | / | a | / | / | / | / | / | / |
| 009 | 4009 | Boopalan . S | M | H | a | a | a | a | a | a | a | / | / | / | / | / | a |
| 010 | 4010 | Deenadhayalan . P | M | H | a | a | a | a | a | a | a | a | a | a | a | a | a |
| 011 | 4011 | Deepthi sree . S | F | H | / | / | / | / | / | / | / | v | / | / | / | / | / |
| 012 | 4012 | Dikesh . M | M | H | a | a | / | / | / | / | / | / | / | / | / | / | / |
| 013 | 4012 | Dheenadhayalan . M | M | H | a | a | a | / | a | / | a | / | a | / | / | / | a |
| 014 | 4014 | Dinesh . G | M | H | a | a | a | / | / | / | a | / | / | / | / | / | a |
| 015 | 4015 | Dinesh . K | M | H | a | a | a | / | / | / | / | / | / | / | / | / | / |
| 016 | 4016 | Frank Jeevaraj . J | M | H | / | / | / | a | / | / | / | / | / | / | / | a | / |
| 017 | 4017 | Ganeshkumar . M | M | H | / | / | / | / | / | / | / | / | / | / | / | / | / |
| 018 | 4018 | Gokul . M | M | H | / | / | / | / | / | / | / | / | / | / | / | / | / |
| 019 | 4019 | Gokula krishnan . M | M | H | / | / | / | / | / | / | / | / | / | / | / | / | / |
| 021 | 4021 | Gokulnath . M | M | H | / | / | / | / | a | / | / | / | / | / | / | / | / |
| 022 | 4022 | Gopmath . S | M | H | a | a | a | a | a | a | a | / | / | / | / | / | / |
| 023 | 4023 | Hari Gokul . V | M | H | / | / | / | a | / | / | / | / | / | / | / | a | / |
| 024 | 4024 | Jagadeeswaran . S | M | H | / | / | / | / | / | / | / | / | / | / | / | / | / |
| 025 | 4025 | Jajananth . S | M | H | / | / | / | / | a | / | / | / | / | / | / | / | / |
| 026 | 4026 | Jayaprakash . C | M | H | / | / | / | a | a | / | / | / | / | / | / | a | a |
| No. of Students Present | | | | | 16 | 16 | 23 | 18 | 17 | 16 | 24 | 23 | 24 | 21 | 29 | | |
| No. of Students Absent | | | | | 9 | 9 | 2 | 7 | 8 | 4 | 9 | 1 | 2 | 1 | 4 | 5 | |
| Faculty Initial | | | | | [Handwritten initials] | | | | | | | | | | | | |

Internal Assessment

| Test Marks | | | | Assignment / Tutorial | | | | | | | | PBL | IV Sem | ABL I | ABL II | Attendance | Internal Mark | Univ Mark | |
|------------|------|-------|-------|-----------------------|----|----|----|---|---|---|---|-----|--------|-------|--------|------------|---------------|-----------|----|
| out of 100 | | | | | | | | | | | | 10 | | | | | | | |
| CT 1 | CT 2 | ICT 1 | ICT 2 | M | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | | | | |
| 23 | 30 | 00 | AB | AB | 3 | 4 | 6 | | | | | | 4 | 10 | 4 | 4 | 94 | 14 | B |
| 40 | 73 | 50 | 66 | 50 | 7 | 8 | 8 | | | | | | 4 | 10 | 3 | 3 | 100 | 15 | B+ |
| 50 | 62 | 00 | 27 | AB | 7 | 8 | 8 | | | | | | 5 | 10 | 4 | 4 | 97 | 14 | B |
| 32 | 50 | 00 | 24 | 02 | 6 | 7 | 7 | | | | | | 4 | 10 | 9 | 5 | 100 | 14 | UA |
| 73 | 92 | 71 | AB | 50 | 10 | 10 | 10 | | | | | | 10 | 10 | 9 | 8 | 82 | 19 | B+ |
| 68 | 65 | 64 | 65 | AB | 9 | 8 | 9 | | | | | | 3 | 10 | 9 | 7 | 100 | 16 | B+ |
| 58 | 72 | 52 | 51 | 24 | 9 | 10 | 10 | | | | | | 2 | 10 | 9 | 8 | 86 | 15 | B |
| 50 | AB | 50 | 50 | 08 | 8 | 10 | 10 | | | | | | 4 | 10 | 6 | 7 | 94 | 14 | U |
| 15 | 37 | 50 | 21 | 15 | 6 | 6 | 6 | | | | | | 1 | 10 | 4 | 5 | 80 | 14 | U |
| AB | AB | AB | AB | AB | 0 | 0 | 0 | | | | | | 0 | 100 | 0 | 0 | 00 | 0 | B |
| 38 | 58 | 00 | 36 | AB | 6 | 6 | 6 | | | | | | 2 | 10 | 2 | 2 | 94 | 14 | B |
| 72 | 62 | 56 | 55 | 33 | 8 | 7 | 7 | | | | | | 4 | 10 | 4 | 1 | 89 | 16 | U |
| 17 | 50 | 50 | 50 | 00 | 8 | 8 | 8 | | | | | | 2 | 10 | 3 | 2 | 80 | 14 | U |
| 50 | 77 | AB | 54 | AB | 8 | 9 | 9 | | | | | | 2 | 10 | 4 | 2 | 86 | 14 | B |
| 58 | 50 | 26 | 27 | AB | 6 | 7 | 6 | | | | | | 2 | 10 | 5 | 2 | 91 | 14 | U |
| 50 | 67 | 50 | 22 | 00 | 7 | 8 | 8 | | | | | | 10 | 10 | 6 | 1 | 94 | 14 | U |
| 63 | 60 | AB | 27 | 23 | 8 | 7 | 8 | | | | | | 2 | 10 | 4 | 2 | 100 | 15 | B |
| 65 | 67 | 52 | AB | 23 | 8 | 8 | 8 | | | | | | 3 | 10 | 3 | 2 | 94 | 15 | B+ |
| 32 | 73 | 66 | AB | 50 | 10 | 10 | 10 | | | | | | 5 | 10 | 9 | 10 | 99 | 17 | U |
| 08 | 58 | 00 | AB | 02 | 6 | 6 | 7 | | | | | | 4 | 10 | 4 | 2 | 93 | 14 | UA |
| 40 | 50 | 00 | 28 | AB | 6 | 7 | 6 | | | | | | 2 | 10 | 3 | 3 | 87 | 14 | U |
| 55 | 95 | 00 | AB | AB | 6 | 5 | 4 | | | | | | 2 | 10 | 2 | 4 | 91 | 14 | U |
| 58 | 67 | 00 | 23 | AB | 4 | 6 | 6 | | | | | | 2 | 10 | 4 | 0 | 92 | 14 | U |
| 35 | AB | 00 | AB | 00 | 0 | 0 | 0 | | | | | | 2 | 10 | 0 | 0 | 82 | 14 | UA |
| 58 | 10 | 00 | AB | 00 | 0 | 0 | 0 | | | | | | 9 | 10 | 0 | 0 | 83 | 14 | UA |

Record of Attendance

| DATE : | | | M/T/F | H/D | No. of Absence | 20.06.17 | | | | | | | | | | | | |
|-------------------------|--------------|-----------------------------|-------|-----|----------------|----------|----|----|---|----|----|----|----|----|----|----|----|----|
| Period : | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| R.No. | AU Regd. No. | Name | | | | | | | | | | | | | | | | |
| 028 | 4028 | Karthikayan S | a | a | a | a | a | a | a | a | a | a | a | a | a | a | | |
| 029 | 4029 | Karthikayan R.R | a | a | a | a | a | a | a | a | a | a | a | a | a | a | | |
| 030 | 4030 | Kishore B | a | a | a | a | a | a | a | a | a | a | a | a | a | a | | |
| 031 | 4031 | Komagan M.U | a | a | a | a | a | a | a | a | a | a | a | a | a | a | | |
| 032 | 4032 | Lakshminarayana | a | a | a | a | a | a | a | a | a | a | a | a | a | a | | |
| 033 | 4033 | Madhavan S.G ^{R.R} | a | a | a | a | a | a | a | a | a | a | a | a | a | a | | |
| 034 | 4034 | Mali. Abhijith Rajaran | a | a | a | a | a | a | a | a | a | a | a | a | a | a | | |
| 035 | 4035 | Manoj V.M | a | a | a | a | a | a | a | a | a | a | a | a | a | a | | |
| 036 | 4036 | Manoj kumar S | a | a | a | a | a | a | a | a | a | a | a | a | a | a | | |
| 037 | 4037 | Manj prabhakar k | a | a | a | a | a | a | a | a | a | a | a | a | a | a | | |
| 038 | 4038 | Mohamed Asraf J. | a | a | a | a | a | a | a | a | a | a | a | a | a | a | | |
| 039 | 4039 | Mohd. Salaman H | a | a | a | a | a | a | a | a | a | a | a | a | a | a | | |
| 040 | 4040 | Mohanaprasad M. | a | a | a | a | a | a | a | a | a | a | a | a | a | a | | |
| 041 | 4041 | Mohanraj S | a | a | a | a | a | a | a | a | a | a | a | a | a | a | | |
| 042 | 4042 | Miwali M.P. | a | a | a | a | a | a | a | a | a | a | a | a | a | a | | |
| | | Bharathraj k | | | | | | | | | | | | | | | | |
| | | A.S.DHANRAJ | | | | | | | | | | | | | | | | |
| | | A.KAMALESHKUMAR | | | | | | | | | | | | | | | | |
| | | MOHAMED AJMAL M | | | | | | | | | | | | | | | | |
| | | SANKAYI PREETHA D.P. | | | | | | | | | | | | | | | | |
| | | VISHNUBALA S. | | | | | | | | | | | | | | | | |
| | | INTHIYAS C | | | | | | | | | | | | | | | | |
| | | S.NOORUL HUDA | | | | | | | | | | | | | | | | |
| No. of Students Present | | | 7 | 8 | 8 | 11 | 11 | 12 | 7 | 13 | 11 | 14 | 13 | 17 | | | | |
| No. of Students Absent | | | 9 | 8 | 8 | 5 | 5 | 4 | 4 | 9 | 3 | 5 | 2 | 3 | 9 | | | |
| Faculty Initial | | | h | h | h | h | h | h | h | h | h | h | h | h | h | h | | |

Internal Assessment

| Test Marks | | Assignment / Tutorial | | | | | | | | PBL | IV | Sem | ABL I | ABL II | Attendance | Internal Mark | Univ Mark | | |
|------------|------|-----------------------|-------|----|----|----|----|---|---|-----|----|-----|-------|--------|------------|---------------|-----------|----|----|
| CT 1 | CT 2 | ICT 1 | ICT 2 | M | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | | | | |
| 72 | 60 | 50 | 18 | 9 | 8 | 7 | | | | | | | 9 | 9 | 10 | 10 | 87 | 14 | B |
| 50 | 10 | AB | AB | AB | 0 | 0 | 0 | | | | | | 0 | 0 | 0 | 10 | 100 | 18 | U |
| 72 | 75 | 72 | 77 | 60 | 10 | 10 | 10 | | | | | | 10 | 10 | 10 | 10 | 100 | 14 | O |
| 58 | 31 | 54 | 26 | 2 | 2 | 2 | | | | | | | 3 | 4 | 4 | 10 | 92 | 14 | UA |
| 50 | 50 | 58 | 51 | 31 | 2 | 5 | 2 | | | | | | 4 | 5 | 3 | 10 | 82 | 12 | B |
| 32 | 32 | 17 | 19 | 4 | 5 | 6 | | | | | | | 4 | 5 | 2 | 10 | 00 | 00 | U |
| AB | AB | AB | AB | 0 | 0 | 0 | | | | | | | 0 | 0 | 0 | 10 | 83 | 14 | UA |
| 37 | 66 | 77 | 50 | 4 | 3 | 4 | | | | | | | 4 | 4 | 4 | 10 | 100 | 14 | B |
| 30 | 50 | 52 | 24 | 6 | 7 | 6 | | | | | | | 6 | 7 | 7 | 10 | 77 | 14 | U |
| 20 | 00 | AB | 00 | 0 | 0 | 0 | | | | | | | 0 | 0 | 0 | 10 | 96 | 14 | UA |
| 58 | 50 | 50 | AB | 0 | 6 | 6 | | | | | | | 7 | 9 | 8 | 10 | 93 | 14 | U |
| AB | AB | AB | AB | 0 | 0 | 0 | | | | | | | 0 | 0 | 0 | 10 | 00 | 00 | UA |
| 68 | 60 | 50 | AB | 7 | 8 | 7 | | | | | | | 7 | 7 | 6 | 10 | 99 | 16 | B |
| 67 | 50 | 51 | 0 | 0 | 0 | | | | | | | | 0 | 0 | 0 | 10 | 73 | 15 | B |
| 50 | AB | AB | 00 | 5 | 5 | 4 | | | | | | | 5 | 5 | 6 | 10 | 85 | 14 | UA |
| 68 | 53 | 50 | 17 | 5 | 6 | 7 | | | | | | | 6 | 5 | 4 | 10 | 72 | 15 | B |
| 50 | AB | 51 | 7 | 10 | 10 | | | | | | | | 10 | 10 | 10 | 10 | 69 | 14 | B |
| 90 | AB | 55 | 27 | 6 | 5 | 5 | | | | | | | 5 | 5 | 4 | 10 | 67 | 19 | B |
| 50 | AB | 51 | AB | 5 | 5 | 5 | | | | | | | 5 | 5 | 3 | 10 | 68 | 14 | B |
| 10 | 19 | AB | AB | 2 | 4 | 2 | | | | | | | 5 | 6 | 6 | 10 | 72 | 14 | U |
| 30 | AB | 38 | 22 | 5 | 4 | 3 | | | | | | | 5 | 3 | 4 | 10 | 63 | 14 | B+ |
| 52 | 77 | 50 | 30 | 5 | 4 | 3 | | | | | | | 5 | 4 | 3 | 10 | 62 | 15 | B+ |
| 55 | AB | 51 | AB | 4 | 3 | 4 | | | | | | | 5 | 2 | 4 | 10 | 69 | 14 | U |
| AB | AB | AB | AB | 0 | 0 | 0 | | | | | | | 0 | 0 | 0 | 10 | 63 | 04 | UA |

IINTERNAL ASSESSMENT - COURSE OUTCOME ANALYSIS

COURSE OUTCOME ANALYSIS
ACADEMIC YEAR 2019-20

Subject Code & Name: ME 8351 - Manufacturing Technology - I
Faculty Incharge: N.PANNEERSELVAM, SAP/MECH
Class: II year / III Semester - A sec

| Sl. No | Register Number | Name of the Student | Assessment | | ICT -1 | | ICT -2 | PO1 | PO2 | PO3 | PO4 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 | Status(>70- A 50-70- B <50 - C) | |
|--------|-----------------|----------------------|------------|-------|--------|------|--------|-----|-----|-----|-----|-----|-----|-----|------|------|------|---------------------------------------|---------|
| | | | CT -1 | CT -2 | CO 3 | CO 4 | CO 5 | | | | | | | | | | | | |
| 1 | 610518114001 | AJITHKUMAR .S | 63 | 65 | 62 | 62 | 50 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | Grade B |
| 2 | 610518114002 | AMARNATH.M | 72 | 73 | 50 | 50 | 66 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | Grade B |
| 3 | 610518114003 | ANBARASU .S | 62 | 62 | 57 | 57 | 53 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | Grade B |
| 4 | 610518114004 | ARULMANI.E | 63 | 50 | 59 | 59 | 52 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | Grade B |
| 5 | 610518114005 | ARUNKUMAR.S | 73 | 92 | 71 | 71 | 50 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | Grade A |
| 6 | 610518114006 | BARATH.R | 68 | 65 | 64 | 64 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | Grade B |
| 7 | 610518114007 | BHARATHKUMAR.C.S. | 58 | 72 | 52 | 52 | 51 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | Grade B |
| 8 | 610518114008 | BHUVANESH.M | 50 | 53 | 50 | 50 | 50 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | Grade B |
| 9 | 610518114009 | BOOBALAN .S | 50 | 70 | 50 | 50 | 51 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | Grade B |
| 10 | 610518114011 | DEEPTHISHRIE.S | 53 | 55 | 52 | 52 | 54 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | Grade B |
| 11 | 610518114012 | DHANESH.M | 63 | 58 | 59 | 59 | 55 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | Grade B |
| 12 | 610518114013 | DHEENADHAYALAN.M | 72 | 62 | 56 | 56 | 50 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | Grade B |
| 13 | 610518114014 | DINESH.G | 59 | 77 | 50 | 50 | 54 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | Grade B |
| 14 | 610518114015 | DINESH.K | 62 | 50 | 52 | 52 | 52 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | Grade B |
| 15 | 610518114016 | FRANK JEEVARAJ.J | 53 | 67 | 62 | 62 | 56 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | Grade B |
| 16 | 610518114017 | GANESHKUMAR.M | 50 | 60 | 50 | 50 | 58 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | Grade B |
| 17 | 610518114018 | GOKUL.M | 63 | 67 | 52 | 52 | 50 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | Grade B |
| 18 | 610518114019 | GOKULAKRISHNAN.M | 65 | 73 | 52 | 52 | 50 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | Grade B |
| 19 | 610518114021 | GOKULNATH.M | 63 | 53 | 66 | 66 | 50 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | Grade B |
| 20 | 610518114022 | GOPINATH.S | 52 | 50 | 59 | 59 | 53 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | Grade B |
| 21 | 610518114023 | HARIGOKUL.V | 53 | 62 | 59 | 59 | 50 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | Grade B |
| 22 | 610518114024 | JAGATHEESHWARAN.S | 55 | 67 | 56 | 56 | 56 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | Grade B |
| 23 | 610518114025 | JAYANANTH.S | 53 | 53 | 59 | 59 | 50 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | Grade B |
| 24 | 610518114026 | JAYAPRAKASH.C | 56 | 56 | 56 | 56 | 50 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | Grade B |
| 25 | 610518114027 | KARTHIKEYAN .S | 53 | 72 | 59 | 59 | 50 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | Grade B |
| 26 | 610518114028 | KARTHIKEYAN.R | 50 | 54 | 60 | 60 | 50 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | Grade B |
| 27 | 610518114029 | KARUN.M | 51 | 75 | 52 | 52 | 77 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | Grade B |
| 28 | 610518114030 | KISHORE.B | 72 | 58 | 72 | 72 | 54 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | Grade B |
| 29 | 610518114031 | KOMAGAN.M.U | 62 | 50 | 64 | 64 | 51 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | Grade B |
| 30 | 610518114032 | LAKSHMINARAYANAN R.R | 50 | 62 | 58 | 58 | 58 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | Grade B |
| 31 | 610518114034 | MALI ABHIJIT RAJARAM | 56 | 63 | 62 | 62 | 59 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | Grade B |
| 32 | 610518114035 | MANOJ V.M | 0 | 65 | 52 | 52 | 52 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | Grade C |
| 33 | 610518114036 | MANOJ KUMAR.S | 65 | 56 | 66 | 66 | 50 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | Grade B |

| | | | | | | | | | | | | | | | | | | |
|-----------------------|--------------|--------------------------|----|----|-----|-----|----|-------------------------|----|----|----|----|----|----|----|----|----|---------|
| 34 | 610518114037 | IMANOJ PRABAKAR.K | 57 | 58 | 50 | 50 | 50 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | Grade B |
| 35 | 610518114039 | MOHAMMED SALMAAN .H | 51 | 68 | 59 | 59 | 50 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | Grade B |
| 36 | 610518114040 | MOHANAPRIYAN.M | 57 | 67 | 59 | 59 | 51 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | Grade B |
| 37 | 610518114041 | MOHANRAJ.S | 0 | 50 | 52 | 52 | 50 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | Grade C |
| 38 | 610518114042 | MOHAMMED K.M | 53 | 60 | 60 | 60 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | Grade B |
| 39 | 610518114301 | BHARATHRAJ. K (LE) | 52 | 50 | 50 | 50 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | Grade B |
| 40 | 610518114302 | DHANRAJ.A.S (LE) | 54 | 90 | 53 | 53 | 55 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | Grade B |
| 41 | 610518114303 | INTHIYAS.C (LE) | 60 | 55 | 53 | 53 | 51 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | Grade B |
| 42 | 610518114305 | KAMALESH KUMAR .A (LE) | | 50 | 52 | 52 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | Grade B |
| 43 | 610518114306 | MOHAMED AJMAL.M (LE) | | 56 | 55 | 55 | 50 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | Grade B |
| 44 | 610518114308 | NOORUL HUQ. M (LE) | | 0 | 52 | 52 | 50 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | Grade C |
| 45 | 610518114311 | SANKAVI PREETHA.D.P (LE) | | 50 | 63 | 63 | 56 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | Grade B |
| 46 | 610518114313 | VISHNU BALA. S (LE) | | 52 | 52 | 52 | 50 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | Grade B |
| Total no of Presents | | | 51 | 51 | 52 | 52 | 51 | No of A Grade(>70) | | | | | | | | | | 1 |
| Total no of absentees | | | 0 | 0 | 52 | 52 | 0 | No of B Grade(50 - 70) | | | | | | | | | | 41 |
| Total no of Pass | | | 39 | 45 | 71 | 71 | 46 | No of C Grade (<50) | | | | | | | | | | 3 |
| Total No of Fail | | | 12 | 6 | -19 | -19 | 5 | % of A Grade | | | | | | | | | | 8 |
| Percentage of Pass | | | 76 | 88 | 137 | 137 | 90 | % of B Grade | | | | | | | | | | 89 |
| | | | | | | | | % of C Grade | | | | | | | | | | 6 |
| | | | | | | | | Target | | | | | | | | | | 70% |
| | | | | | | | | PO Attainment (A+B) | | | | | | | | | | 97% |

H. Subramanian
HOD

UNIVERSITY QUESTION

Reg. No. :

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Question Paper Code : 53301

B.E./B.Tech. DEGREE EXAMINATIONS, APRIL/MAY 2019.

Third/Fifth Semester

Mechanical Engineering

ME 6302 — MANUFACTURING TECHNOLOGY — I

(Common to Mechanical Engineering (Sandwich), Industrial Engineering, Industrial Engineering and Management, Mechanical and Automation Engineering)

(Regulation 2013)

(Also Common to PTME 6302 Manufacturing Technology - I for B.E. (Part Time) - Second Semester - Mechanical Engineering - Regulation 2014)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What are the characteristics of a core?
2. Name the alloys which are generally die cast. Why are aluminium alloys preferably cast in cold chamber die casting machines?
3. Why is spot welding commonly used in automotive bodies and in large appliances?
4. What is the role of flux in welding operation?
5. How can you reduce the 'roll force' in a rolling process?
6. Differentiate between hot and cold forging.
7. How are sheet metal operations classified and what are they?
8. What is flanging?

9. What is the need for Rotational moulding in manufacturing plastic components?

10. Make a note on Polymerization.

PART B — (5 × 13 = 65 marks)

11. (a) With neat sketches, explain the sand casting process.

Or

(b) With a neat sketch, explain the Principle of the Investment casting process.

12. (a) (i) Explain the equipment of an Oxy-Acetylene gas welding.

(ii) Explain about the equipment and operation of GTAW process.

Or

(b) (i) Explain the variants of Thermit welding process.

(ii) Explain the Resistance spot Welding process with a neat sketch.

13. (a) With neat diagram explain the process of forward extrusion. Explain also how hollow sections can be produced in this process.

Or

(b) A 300 mm wide strip 25 mm thick is fed through a rolling mill with two Powered rolls each of radius 250 mm. The work thickness is to be reduced to 22 mm in one pass at a roll Speed of 50 rev/min. The Work material has a flow curve defined by $K = 275 \text{ MPa}$ and $n = 0.15$ and the coefficient of friction between the rolls and the work is assumed to be 0.12. Determine if the friction is sufficient to permit the rolling operation to be accomplished. If so, calculate the roll force, torque and horsepower.

14. (a) (i) Explain the various sheet metal forming operations with neat sketches.

(ii) Discuss with neat sketch the working of metal spinning process.

Or

(b) With neat sketches explain the following (i) Hydro forming and (ii) Super plastic forming.

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15. (a) (i) Write the difference between thermoplastics and thermosetting plastics.
 (ii) Explain the blow moulding process.

Or

- (b) (i) Explain the calendaring process.
 (ii) Describe any two types of thermoforming process.

PART C — (1 × 15 = 15 marks)

16. (a) Derive the mathematical expression for the Flat strip metal process to calculate the rolling load. (15)

Or

- (b) A casting is required to have the following composition : C-3.25%, Si-1.8%, Mn-0.6%, P-0.5% and S-0.1%. Determine the weight of pig iron from pile A and Pile B to be Picked up in each metal charge if the charge (200 kg) is to contain pig iron -50% foundry return -40% and Purchased scrap - 10%. Analysis of these metals is as follows : (15)

| Metal | Si% | Mn% | S% | P% |
|-------------------|-----|------|------|------|
| Pig iron (pile A) | 2.4 | 0.9 | 0.05 | 0.4 |
| Pig iron (pile B) | 1.4 | 0.95 | 0.05 | 0.35 |
| Foundry returns | 1.7 | 0.6 | 0.06 | 0.3 |
| Purchased scrap | 2.2 | 0.7 | 0.07 | 0.25 |

EXTERNAL ASSESSMENT (AS PER UNIVERSITY RESULTS)

C/O/PO MAPPING OUTCOME ANALYSIS
ACADEMIC YEAR 2019-20
UNIVERSITY EXAMINATION RESULT

Subject Code & Name: ME 8351 – Manufacturing Technology - I
 Faculty Incharge: N.PANNEERSELVAM , SAP/MECH
 Class: II year / III Semester - A sec

| Sl. No | Register Number | Name of the Student | Grade | Equivalent Points | PO1 | PO2 | PO3 | PO4 | PO6 | PO7 | PSO1 | PSO3 | Status(> 70 - A 50-70- B <50 - C) |
|--------|-----------------|---------------------|-------|-------------------|-----|-----|-----|-----|-----|-----|------|------|---|
| 1 | 610518114001 | AJITHKUMAR .S | B | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | Grade B |
| 2 | 610518114002 | AMARNATH.M | B+ | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | Grade B |
| 3 | 610518114003 | ANBARASU .S | B | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | Grade B |
| 4 | 610518114004 | ARULMANI.E | UA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Grade B |
| 5 | 610518114005 | ARUNKUMAR.S | B+ | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | Grade B |
| 6 | 610518114006 | BARATH.R | B+ | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | Grade B |
| 7 | 610518114007 | BHARATHKUMAR.C.S. | B | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | Grade B |
| 8 | 610518114008 | BHUVANESH.M | U | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Grade B |
| 9 | 610518114009 | BOOBALAN.S | U | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Grade B |
| 10 | 610518114011 | DEEPTHISHRIE.S | B | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | Grade B |
| 11 | 610518114012 | DHANESH.M | B | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | Grade B |
| 12 | 610518114013 | DHEENADHAYALAN.M | U | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Grade B |
| 13 | 610518114014 | DINESH.G | U | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Grade B |
| 14 | 610518114015 | DINESH.K | B | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | Grade B |
| 15 | 610518114016 | FRANK JEEVARAJ.J | U | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Grade B |
| 16 | 610518114017 | GANESHKUMAR.M | U | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Grade B |
| 17 | 610518114018 | GOKUL.M | B | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | Grade B |
| 18 | 610518114019 | GOKULAKRISHNAN.M | B+ | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | Grade B |
| 19 | 610518114021 | GOKULNATH.M. | U | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Grade B |
| 20 | 610518114022 | GOPINATH.S | UA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Grade B |
| 21 | 610518114023 | HARIGOKUL.V | U | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Grade B |
| 22 | 610518114024 | JAGATHEESHWARAN.S | U | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Grade B |
| 23 | 610518114025 | JAYANANTH.S | UA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Grade B |
| 24 | 610518114026 | JAYAPRAKASH.C | UA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Grade B |
| 25 | 610518114027 | KARTHIKEYAN .S | B | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | Grade B |
| 26 | 610518114028 | KARTHIKEYAN.R | U | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Grade B |

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|--------------------|--------------|--------------------------|----|------|----|----|----|----|----|----|----|---------------|--------|---------|
| 27 | 610518114029 | KARUN.M | B | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | Grade B |
| 28 | 610518114030 | KISHORE.B | UA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Grade B |
| 29 | 610518114031 | KOMAGAN.M.U | B | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | Grade B |
| 30 | 610518114032 | LAKSHMINARAYANAN R.R | U | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Grade B |
| 31 | 610518114034 | MALI ABHIJIT RAJARAM | B | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | Grade B |
| 32 | 610518114035 | MANOJ V.M | U | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Grade B |
| 33 | 610518114036 | MANOJ KUMAR.S | UA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Grade B |
| 34 | 610518114037 | MANOJ PRABAKAR.K | U | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Grade B |
| 35 | 610518114039 | MOHAMMED SALMAAN .H | B | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | Grade B |
| 36 | 610518114040 | MOHANAPRIYAN.M | B | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | Grade B |
| 37 | 610518114041 | MOHANRAJ.S | UA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Grade B |
| 38 | 610518114042 | MURALI .M.P | B | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | Grade B |
| 39 | 610518114301 | BHARATHRAJ. K(LE) | B | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | Grade B |
| 40 | 610518114302 | DHANRAJ.A.S (LE) | B | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | Grade B |
| 41 | 610518114303 | INTHIYAS.C (LE) | U | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Grade B |
| 42 | 610518114305 | KAMALESH KUMAR .A (LE) | B | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | Grade B |
| 43 | 610518114306 | MOHAMED AJMAL.M (LE) | U | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Grade B |
| 44 | 610518114311 | SANKAVI PREETHA.D.P (LE) | B+ | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | Grade B |
| 45 | 610518114313 | VISHNU BALA. S (LE) | B+ | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | Grade B |
| Total no of Pass | | | | 32 | | | | | | | | PO attainment | 65.3 | |
| Total No of Fail | | | | 19 | | | | | | | | Target | 70 | |
| Percentage of Pass | | | | 65.3 | | | | | | | | Justification | -4.70% | |

H. Sub G

HoD

| S.No | Department | Link |
|-------------|--|---|
| 1 | Civil Engineering | http://www.dgct.ac.in/naac/c2/2.6.2_survey.pdf |
| 2 | Computer Science and Engineering | |
| 3 | Electronics and Communication Engineering | |
| 4 | Electrical and Electronics Engineering | |
| 5 | Mechanical Engineering | |