

7.

**STUDY AND EVALUATION SCHEME FOR DIPLOMA PROGRAMME IN
MECHANICAL ENGINEERING (CAD, CAM)**

FIRST SEMESTER

| Sr. No | Subject | STUDY SCHEME | | | EVALUATION SCHEME | | | | | | Total Marks |
|------------------------------|----------------------------------|--------------|---|----|---------------------|------------|-----------------------------------|-----|------------|-----|-------------|
| | | | | | Internal Assessment | | External Assessment (Examination) | | | | |
| | | Hrs/week | | | Theory | Practical | Written Paper | | Practical | | |
| | | L | T | P | Max. Marks | Max. Marks | Max. Marks | Hrs | Max. Marks | Hrs | |
| 1.1* | Communication Skills - I | 3 | - | 2 | 25 | 25 | 100 | 3 | 50 | 2 | 200 |
| 1.2* | Applied Mathematics - I | 5 | - | - | 50 | - | 100 | 3 | - | - | 150 |
| 1.3* | Applied Physics – I | 4 | - | 2 | 25 | 25 | 100 | 3 | 50 | 3 | 200 |
| 1.4* | Applied Chemistry – I | 3 | - | 2 | 25 | 25 | 100 | 3 | 50 | 3 | 200 |
| 1.5* | Basics of Information Technology | - | - | 4 | - | 50 | - | - | 100 | 3 | 150 |
| 1.6* | Engineering Drawing - I | - | - | 6 | - | 50 | 100 | 3 | 25 (Viva) | 2 | 175 |
| 1.7* | General Workshop Practice - I | - | - | 6 | - | 50 | - | - | +100 | 3 | 150 |
| # Student Centred Activities | | - | - | 3 | - | 25 | - | - | - | - | 25 |
| Total | | 15 | - | 25 | 125 | 250 | 500 | - | 375 | - | 1250 |

* Common with other diploma programmes

+ Includes 25 marks for Viva-voce

Student Centred Activities will comprise of co-curricular activities like extension lectures, library studies, games, hobby clubs e.g. photography, painting, singing, seminars, declamation contests, educational field visits, N.C.C., NSS, Cultural Activities, Civil Defence/Disaster Management activities etc.

SECOND SEMESTER - MECHANICAL ENGINEERING (CAD, CAM)

| Sr. No | Subject | STUDY SCHEME | | | EVALUATION SCHEME | | | | | | Total Marks |
|------------------------------|--------------------------------|--------------|---|----|---------------------|------------|-----------------------------------|-----|--------------|-----|-------------|
| | | | | | Internal Assessment | | External Assessment (Examination) | | | | |
| | | Hrs/week | | | Theory | Practical | Written Paper | | Practical | | |
| | | L | T | P | Max. Marks | Max. Marks | Max. Marks | Hrs | Max. Marks | Hrs | |
| 2.1* | Communication Skills – II | 3 | - | 2 | 25 | 25 | 100 | 3 | 50 | 2 | 200 |
| 2.2* | Applied Mathematics - II | 5 | - | - | 50 | - | 100 | 3 | - | - | 150 |
| 2.3* | Applied Physics – II | 4 | - | 2 | 25 | 25 | 100 | 3 | 50 | 3 | 200 |
| 2.4* | Applied Chemistry – II | 3 | - | 2 | 25 | 25 | 100 | 3 | 50 | 3 | 200 |
| 2.5** | Applied Mechanics | 3 | - | 2 | 25 | 25 | 100 | 3 | 50 | 3 | 200 |
| 2.6* | Engineering Drawing - II | - | - | 6 | - | 50 | 100 | 3 | 25 (Viva) | 2 | 175 |
| 2.7* | General Workshop Practice - II | - | - | 6 | - | 50 | - | - | +100 | 3 | 150 |
| # Student Centred Activities | | - | - | 2 | - | 25 | - | - | - | - | 25 |
| Total | | 18 | - | 22 | 150 | 225 | 600 | - | 325 | - | 1300 |

* Common with other diploma programmes

** Common with diploma programmes in Mechanical Engineering and Civil Engineering

+ Includes 25 marks for Viva-voce

Student Centred Activities will comprise of co-curricular activities like extension lectures, library studies, games, hobby clubs e.g. photography, painting, singing, seminars, declamation contests, educational field visits, N.C.C., NSS, Cultural Activities, Civil Defence/Disaster Management activities etc.

THIRD SEMESTER - MECHANICAL ENGINEERING (CAD, CAM)

| Sr. No | Subject | STUDY SCHEME | | | EVALUATION SCHEME | | | | | | Total Marks |
|-----------------------------|--|--------------|-----------------------|-----------|---------------------|------------|-----------------------------------|----------|------------|----------|-------------|
| | | | | | Internal Assessment | | External Assessment (Examination) | | | | |
| | | Hrs/week | | | Theory | Practical | Written Paper | | Practical | | |
| | | L | T | P | Max. Marks | Max. Marks | Max. Marks | Hrs | Max. Marks | Hrs | |
| | | 3.1** | Strength of Materials | 4 | - | 2 | 25 | 25 | 100 | 3 | |
| 3.2** | Thermodynamics | 4 | - | 2 | 25 | 25 | 100 | 3 | 50 | 3 | 200 |
| 3.3** | Basics of Electrical and Electronics Engineering | 3 | - | 2 | 25 | 25 | 100 | 3 | 50 | 3 | 200 |
| 3.4** | Workshop Technology – I | 3 | - | - | 50 | - | 100 | 3 | - | - | 150 |
| 3.5** | Machine Drawing | - | - | 6 | - | 50 | 100 | 3 | 25 (Viva) | 2 | 175 |
| 3.6** | Workshop Practice – I | - | - | 9 | - | 100 | - | - | 100 | 3 | 200 |
| Student Centred Activities# | | - | - | 5 | - | 25 | - | - | - | - | 25 |
| Total | | 14 | - | 26 | 125 | 250 | 500 | - | 275 | - | 1150 |

** Common with diploma programmes in Mechanical Engineering/Production Engineering

Student Centred Activities will comprise of co-curricular activities like extension lectures, library studies, games, hobby clubs e.g. photography, painting, singing, seminars, declamation contests, educational field visits, N.C.C., NSS, Cultural Activities, Civil Defence/Disaster Management activities etc.

FOURTH SEMESTER - MECHANICAL ENGINEERING (CAD, CAM)

| Sr. No | Subject | STUDY SCHEME | | | EVALUATION SCHEME | | | | | | Total Marks |
|------------------------------|----------------------------------|--------------|----------|-----------|---------------------|------------|-----------------------------------|----------|------------|----------|-------------|
| | | | | | Internal Assessment | | External Assessment (Examination) | | | | |
| | | Hrs/week | | | Theory | Practical | Written Paper | | Practical | | |
| | | L | T | P | Max. Marks | Max. Marks | Max. Marks | Hrs | Max. Marks | Hrs | |
| 4.1 ** | Materials and Metallurgy | 3 | - | 2 | 25 | 25 | 100 | 3 | 50 | 3 | 200 |
| 4.2 * | Hydraulics and Pneumatic Systems | 4 | - | 2 | 25 | 25 | 100 | 3 | 50 | 3 | 200 |
| 4.3 | Computer Aided Drafting | - | - | 3 | - | 50 | - | - | 50 | 3 | 100 |
| 4.4 ** | Machine Design and Drawing | 2 | - | 6 | 25 | 25 | 100 | 3 | 25 (Viva) | 3 | 175 |
| 4.5 ** | Workshop Technology – II | 3 | - | - | 25 | - | 100 | 3 | - | - | 125 |
| 4.6 ** | Workshop Practice – II | - | - | 9 | - | 100 | - | - | 100 | 3 | 200 |
| Student Centred Activities # | | - | - | 6 | - | 25 | - | - | - | - | 25 |
| Total | | 12 | - | 28 | 100 | 250 | 400 | - | 275 | - | 1025 |

* Common with diploma programme in Production Engineering

** Common with diploma programme in Mechanical Engineering/Production Engineering

Student Centred Activities will comprise of co-curricular activities like extension lectures, library studies, games, hobby clubs e.g. photography, painting, singing, seminars, declamation contests, educational field visits, N.C.C., NSS, Cultural Activities, Civil Defence/Disaster Management activities etc.

Industrial Training - After examination of 4th Semester, the students shall go for training in a relevant industry/field organization for a minimum period of one month and shall prepare a diary. It shall be evaluated during 5th semester by his/her teacher for 50 marks. The students shall also prepare a report at the end of training and shall present it in a seminar, which will be evaluated for another 50 marks. This evaluation will be done by HOD and lecturer incharge – training in the presence of one representative from training organization.

FIFTH SEMESTER - MECHANICAL ENGINEERING (CAD, CAM)

| Sr. No | Subject | STUDY SCHEME | | | EVALUATION SCHEME | | | | | | Total Marks |
|-----------------------------|-----------------------------|--------------|----------|-----------|---------------------|------------|-----------------------------------|----------|------------|----------|-------------|
| | | | | | Internal Assessment | | External Assessment (Examination) | | | | |
| | | Hrs/week | | | Theory | Practical | Written Paper | | Practical | | |
| | | L | T | P | Max. Marks | Max. Marks | Max. Marks | Hrs | Max. Marks | Hrs | |
| Industrial Training | | - | - | - | - | 50 | - | - | 50 | 3 | 100 |
| 5.1 ** | Theory of Machines | 4 | - | - | 25 | - | 100 | 3 | - | - | 125 |
| 5.2 | Computer Aided Design(CAD) | 4 | - | 4 | 25 | 25 | 100 | 3 | 50 | 3 | 200 |
| 5.3 * | Employability Skills - I | - | - | 2 | - | 25 | - | - | 50 | 3 | 75 |
| 5.4 * | Environmental Education | 3 | - | - | 25 | - | 100 | 3 | - | - | 125 |
| 5.5 ** | CNC Machines and Automation | 3 | - | 2 | 25 | 25 | 100 | 3 | 50 | 3 | 200 |
| 5.6 ** | Workshop Technology – III | 3 | - | - | 25 | - | 100 | 3 | - | - | 125 |
| 5.7 ** | Workshop Practice – III | - | - | 9 | - | 100 | - | - | 100 | 3 | 200 |
| Student Centred Activities# | | - | - | 6 | - | 25 | - | - | - | - | 25 |
| Total | | 17 | - | 23 | 125 | 250 | 500 | - | 300 | - | 1175 |

* Common with other diploma programmes

** Common with diploma programme in Mechanical Engineering/Production Engineering

Student Centred Activities will comprise of co-curricular activities like extension lectures, library studies, games, hobby clubs e.g. photography, painting, singing, seminars, declamation contests, educational field visits, N.C.C., NSS, Cultural Activities, Civil Defence/Disaster Management activities etc.

SIXTH SEMESTER - MECHANICAL ENGINEERING (CAD, CAM)

| Sr. No | Subject | STUDY SCHEME | | | EVALUATION SCHEME | | | | | | Total Marks |
|------------------------------|---|--------------|----------|-----------|---------------------|------------|-----------------------------------|----------|------------|----------|-------------|
| | | | | | Internal Assessment | | External Assessment (Examination) | | | | |
| | | Hrs/week | | | Theory | Practical | Written Paper | | Practical | | |
| | | L | T | P | Max. Marks | Max. Marks | Max. Marks | Hrs | Max. Marks | Hrs | |
| 6.1 + | Computer Aided Manufacturing(CAM) | 3 | - | - | 25 | - | 100 | 3 | - | - | 125 |
| 6.2 ** | Inspection & Quality Control | 4 | - | 2 | 25 | 25 | 100 | 3 | 50 | 3 | 200 |
| 6.3 ** | Industrial Engineering | 4 | - | - | 25 | - | 100 | 3 | - | - | 125 |
| 6.4 * | Entrepreneurship Development and Management | 3 | - | - | 25 | - | 100 | 3 | - | - | 125 |
| 6.5 * | Employability Skills – II | - | - | 2 | - | 25 | - | - | 50 | 3 | 75 |
| 6.6 | Project Work | - | - | 15 | - | 100 | - | - | 100 | 3 | 200 |
| Student Centred Activities # | | - | - | 7 | - | 25 | - | - | - | - | 25 |
| Total | | 14 | - | 26 | 100 | 175 | 400 | - | 200 | - | 875 |

+ Common with diploma in Production Engineering in 4th Semester

* Common with other diploma programmes

** Common with diploma programme in Mechanical Engineering/ Production Engineering

Student Centred Activities will comprise of co-curricular activities like extension lectures, library studies, games, hobby clubs e.g. photography, painting, singing, seminars, declamation contests, educational field visits, N.C.C., NSS, Cultural Activities, Civil Defence/Disaster Management activities etc.