

**7. STUDY AND EVALUATION SCHEME FOR DIPLOMA PROGRAMME IN
RUBBER TECHNOLOGY**

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 (RUBBER TECHNOLOGY)

| 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 Chemical Engineering, 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 (RUBBER TECHNOLOGY)

| Sr. No | Subject | L T P Hrs/week | | | EVALUATION SCHEME | | | | | | Total Marks |
|-------------------------------|-------------------------------|-------------------|----------|-----------|---------------------|------------|--------------------------------------|----------|------------|----------|----------------|
| | | | | | Internal Assessment | | External Assessment (Examination) | | | | |
| | | | | | Theory | Practical | Written Paper | | Practical | | |
| | | | | | Max. Marks | Max. Marks | Max. Marks | Hrs | Max. Marks | Hrs | |
| 3.1* | Engineering Fundamentals | 4 | - | 2 | 25 | 25 | 100 | 3 | 50 | 3 | 200 |
| 3.2** | Strength of Materials | 4 | - | 2 | 25 | 25 | 100 | 3 | 50 | 3 | 200 |
| 3.3 | Unit Operations - I | 3 | - | 3 | 25 | 25 | 100 | 3 | 50 | 3 | 200 |
| 3.4* | Polymer Science | 3 | - | - | 25 | - | 100 | 3 | - | - | 125 |
| 3.5 | Rubber Materials | 3 | - | - | 25 | - | 100 | 3 | - | - | 125 |
| 3.6+ | Computer Aided Drafting | - | - | 3 | - | 50 | - | - | 50 | 3 | 100 |
| 3.7 | General Workshop Practice-III | - | - | 6 | - | 50 | - | - | 100 | 3 | 150 |
| # Student Centered Activities | | - | - | 7 | - | 25 | - | - | - | - | 25 |
| | | 17 | - | 23 | 125 | 200 | 500 | - | 300 | - | 1125 |

* Common with diploma programmes in Chemical Engineering (Spl. in Polymer Engineering) and Chemical Engineering (Spl. in Paint Technology)

** Common with diploma programmes in Mechanical Engineering and Chemical Engineering (Spl. in Polymer Engineering)

+ Common with diploma programmes in Mechanical Engineering (CAD/CAM Design and Robotics), Automobile Engineering, Chemical Engineering (Spl. in Polymer Engineering) and Chemical Engineering (Spl. in Paint Technology)

SCA 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 (RUBBER TECHNOLOGY)

| Sr. No | Subject | L T P Hrs/week | | | EVALUATION SCHEME | | | | | | Total Marks |
|-------------------------------|--|-------------------|----------|-----------|---------------------|------------|-----------------------------------|----------|------------|----------|----------------|
| | | | | | Internal Assessment | | External Assessment (Examination) | | | | |
| | | | | | Theory | Practical | Written Paper | | Practical | | |
| | | | | | Max. Marks | Max. Marks | Max. Marks | Hrs | Max. Marks | Hrs | |
| 4.1 | Rubber Processing Techniques – I | 4 | - | 6 | 25 | 25 | 100 | 3 | 50 | 3 | 200 |
| 4.2 | Rubber Testing, Characterization and Quality Control | 3 | - | 3 | 25 | 25 | 100 | 3 | 50 | 3 | 200 |
| 4.3 | Unit Operations-II | 4 | - | 3 | 25 | 25 | 100 | 3 | 50 | 3 | 200 |
| 4.4 | Latex Technology | 3 | - | - | 25 | - | 100 | 3 | - | - | 125 |
| 4.5 | Polymer Composites | 3 | - | 3 | 25 | 25 | 100 | 3 | 50 | 3 | 200 |
| 4.6* | Computer Aided Mould Design | - | - | 3 | - | 50 | - | - | 100 | 3 | 150 |
| # Student Centered Activities | | - | - | 5 | - | 25 | - | - | - | - | 25 |
| Total | | 17 | - | 23 | 125 | 175 | 500 | - | 300 | - | 1100 |

* Common with diploma programmes in Chemical Engineering (Spl. in Polymer Engineering)

SCA 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 will go for training in a relevant industry/field organisation for a minimum period of 4 weeks. He/She will be evaluated by his/her training officer in the industry/ organization for 100 marks (to be assigned in 5th semester).

FIFTH SEMESTER (RUBBER TECHNOLOGY)

| S. No | Subject | L T P Hrs/week | | | EVALUATION SCHEME | | | | | | Total Marks |
|-------|---------------------------------------|-------------------|----------|-----------|---------------------|------------|-----------------------------------|----------|------------|----------|----------------|
| | | | | | Internal Assessment | | External Assessment (Examination) | | | | |
| | | | | | Theory | Practical | Written Paper | | Practical | | |
| | | | | | Max. Marks | Max. Marks | Max. Marks | Hrs | Max. Marks | Hrs | |
| | Industrial Training | - | - | - | - | 50 | - | - | 50 | 3 | 100 |
| 5.1 | Rubber Processing Techniques - II | 4 | - | 6 | 25 | 25 | 100 | 3 | 50 | 3 | 200 |
| 5.2 | Design of Rubber Moulds and Dies - I | 4 | - | 4 | 25 | 25 | 100 | 3 | 50 | 3 | 200 |
| 5.3 | Compounding and Formulation of Rubber | 4 | - | 4 | 25 | 25 | 100 | 3 | 50 | 3 | 200 |
| 5.4 | Rubber Product Design | 4 | - | - | 25 | - | 100 | 3 | - | - | 125 |
| 5.5* | Employability Skills - I | - | - | 2 | - | 25 | - | - | 50 | 3 | 75 |
| 5.6* | Environmental Education | 3 | - | - | 25 | - | 100 | 3 | - | - | 125 |
| | # Student Centered Activities | - | - | 5 | - | 25 | - | - | - | - | 25 |
| | Total | 19 | - | 21 | 125 | 175 | 500 | - | 250 | - | 1050 |

* Common with other diploma programmes

SCA 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 (RUBBER TECHNOLOGY)

| S. No | Subject | L T P Hrs/week | | | EVALUATION SCHEME | | | | | | Total Marks |
|-------------------------------|---|-------------------|----------|-----------|---------------------|---------------|--------------------------------------|----------|---------------|----------|----------------|
| | | | | | Internal Assessment | | External Assessment (Examination) | | | | |
| | | | | | Theory | Practical | Written Paper | | Practical | | |
| | | | | | Max. Marks | Max. Marks | Max. Marks | Hrs | Max. Marks | Hrs | |
| 6.1 | Rubber Processing Techniques - III | 4 | - | 3 | 25 | 25 | 100 | 3 | 50 | 3 | 200 |
| 6.2 | Design of Rubber Moulds and Dies - II | 3 | - | 2 | 25 | 25 | 100 | 3 | 50 | 3 | 200 |
| 6.3 | Pollution Control in Rubber Industry | 3 | - | 2 | 25 | 25 | 100 | 3 | 50 | 3 | 200 |
| 6.4 | Maintenance of Rubber Processing Machinery | 3 | - | 4 | 25 | 25 | 100 | 3 | 50 | 3 | 200 |
| 6.5* | Employability Skills - II | - | - | 2 | - | 25 | - | - | 50 | 3 | 75 |
| 6.6* | Entrepreneurship Development and Management | 3 | - | - | 25 | - | 100 | 3 | - | - | 125 |
| 6.7 | Project Work | - | - | 6 | - | 50 | - | - | 100 | 3 | 150 |
| # Student Centered Activities | | - | - | 5 | - | 25 | - | - | - | - | 25 |
| Total | | 16 | - | 24 | 125 | 200 | 500 | - | 350 | - | 1175 |

* Common with other diploma programmes

SCA 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.