SCHEME -2013

MECHANICAL ENGINEERING (M)

Combined I and II Semesters

Course No	Name of subject	Credits	Weekly load, hours			C A Marks	Exam Duration Hrs	U E Max Marks	Total Marks
			L	T	D/P				
13.101	Engineering Mathematics - I (ABCEFHMNPRSTU)	6	2	1	-	50	3	100	150
13.102	Engineering Physics (ABCEFHMNPRSTU)	6	2	1	-	50	3	100	150
13.103	Engineering Chemistry (ABCEFHMNPRSTU)	6	2	1	-	50	3	100	150
13.104	Engineering Graphics (ABCEFHMNPRSTU)	6	1	0	2	50	3	100	150
13.105	Engineering Mechanics (ABCEFHMNPRSTU)	6	2	1	-	50	3	100	150
13.106	Basic Civil Engineering (ABEFHMNPRSTU)	6	2	1	-	50	3	100	150
13.107	Engineering Thermodynamics (MPNSU)	6	2	1	-	50	3	100	150
13.108	Basic Electrical Engineering (ABCHMNPSTU)	6	2	1	-	50	3	100	150
13.109	Basic Electronics Engineering (BCEHMNPSU)	6	2	1	-	50	3	100	150
13.110	Mechanical Engineering Workshop (ABCEFHMNPRSTU)	2	-	-	1	25	3	50	75
13.111	Electrical & Electronics Engineering Workshop (ABCEFHMNPRSTU)	2	-	-	1	25	3	50	75
	Total	**58**	**17**	**8**	**4**	**500**		**1000**	**1500**

Third Semester

Course No	Name of subject	Credits	Weekly load, hours			C A Marks	Exam Duration Hrs	U E Max Marks	Total Marks
			L	T	D/P				
13.301	Engineering Mathematics-II (ABCEFHMNPRSTU)	4	3	1	-	50	3	100	150
13.302	Humanities (BEFMRSU)	3	3	0	-	50	3	100	150
13.303	Fluid Mechanics(MS)	4	3	1	-	50	3	100	150
13.304	Mechanics of Solids (MPSU)	4	3	1	-	50	3	100	150
13.305	Computer Programming and Numerical Methods (MP)	3	2	1		50	3	100	150
13.306	Engineering Drawing (MP) Part A: Machine Drawing	5	0	0	2	25	4	50	150
	Part B: Civil Engineering Drawing & Estimation		1	0	2	25		50	
13.307	Thermal Engineering(MU)	4	3	1	-	50	3	100	150
13.308	Civil Engineering Lab (MP)	2	-	-	2	50	3	100	150
	Total	**29**	**18**	**5**	**6**	**400**		**800**	**1200**

Fourth Semester

Course No	Name of subject	Credits	Weekly load, hours			C A Marks	Exam Duration Hrs	U E Max Marks	Total Marks
			L	T	D/P				
13.401	Engineering Mathematics -III (BCHMNPSU)	4	3	1	-	50	3	100	150
13.402	Manufacturing Process (M)	4	3	1	-	50	3	100	150
13.403	Electrical Technology (MP)	4	3	1	-	50	3	100	150
13.404	Metullargy and Material Science (MPU)	4	3	1	-	50	3	100	150
13.405	Fluid Machinery (M)	4	3	1	-	50	3	100	150
13.406	Machine Drawing (M)	3	0	0	3	50	3	100	150
13.407	Fluid Mechanics & Machines Lab(MN)	3	-	-	3	50	3	100	150
13.408	IC Engines Lab (M)	3	-	-	3	50	3	100	150
	Total	**29**	**15**	**5**	**9**	**400**		**800**	**1200**

Fifth Semester

Course No	Name of subject	Credits	Weekly load, hours			C A Marks	Exam Duration Hrs	U E Max Marks	Total Marks
			L	T	D/P				
13.501	Engineering Mathematics - IV (CMPSU)	4	3	1	-	50	3	100	150
13.502	Theory of Machines (MP)	4	3	1	-	50	3	100	150
13.503	Industrial Electronics(MP)	3	2	1	-	50	3	100	150
13.504	Mechanics of Materials (M)	4	3	1	-	50	3	100	150
13.505	Machine Tools (MN)	4	3	1	-	50	3	100	150
13.506	ELECTIVE I	4	3	1		50	3	100	150
13.507	Production Engineering Lab (M)	3	-	-	3	50	3	100	150
13.508	Electrical & Electronics Lab (MP)	3	-	-	3	50	3	100	150
	Total	**29**	**17**	**6**	**6**	**400**		**800**	**1200**

Sixth Semester

Course No	Name of subject	Credits	Weekly load, hours			C A Marks	Exam Duration Hrs	U E Max Marks	Total Marks
			L	T	D/P				
13.601	Metrology & Instrumentation (MP)	4	3	1	-	50	3	100	150
13.602	Dynamics of Machinery (MP)	4	3	1	-	50	3	100	150
13.603	Computer Aided Design (MPU)	3	2	1	-	50	3	100	150
13.604	Heat and Mass Transfer (MSU)	4	3	1	-	50	3	100	150
13.605	Design of Machine Elements - I (M)	4	3	1	-	50	3	100	150
13.606	ELECTIVE II	4	3	1		50	3	100	150
13.607	Computer Aided Modeling and Analysis Lab(MPU)	3	-	-	3	50	3	100	150
13.608	Machine Tools Lab (M)	3	-	-	3	50	3	100	150
	Total	**29**	**17**	**6**	**6**	**400**		**800**	**1200**

Seventh Semester

Course No	Name of subject	Credits	Weekly load, hours			C A Marks	Exam Duration Hrs	U E Max Marks	Total Marks
			L	T	D/P				
13.701	Principles of Management and Decision Modeling (MPU)	3	2	1	-	50	3	100	150
13.702	Mechatronics (MPSU)	4	3	1	-	50	3	100	150
13.703	Gas Dynamics (M)	4	3	1	-	50	3	100	150
13.704	Refrigeration & Air conditioning (M)	4	3	1	-	50	3	100	150
13.705	Design of Machine Elements - II (M)	4	3	1	-	50	3	100	150
13.706	Elective III	4	3	1	-	50	3	100	150
13.707	Thermal Engineering Lab (M)	2	-	-	2	50	3	100	150
13.708	Mechanical Engineering Lab (M)	2	-	-	2	50	3	100	150
13.709	Project and Project Seminar (MPSU)	2	-	-	2	100	-		100
	Total	**29**	**17**	**6**	**6**	**500**		**800**	**1300**

Eighth Semester

Course No	Name of subject	Credits	Weekly load, hours			C A Marks	Exam Duration Hrs	U E Max Marks	Total Marks
			L	T	D/P				
13.801	Energy Management(MP)	3	2	1	-	50	3	100	150
13.802	Industrial Engineering (MPU)	3	2	1	-	50	3	100	150
13.803	Automobile Engineering (M)	4	3	1	-	50	3	100	150
13.804	Computer Integrated Manufacturing (MU)	4	3	1	-	50	3	100	150
13.805	Elective IV	4	3	1	-	50	3	100	150
13.806	Elective V	4	3	1	-	50	3	100	150
13.807	Seminar (MPSU)	2	-	-	2	100	-	-	100
13.808	Project , Viva-Voce & Industrial Visit (MPSU)	5	-	-	5	100	-	100	200
	Total	**29**	**16**	**6**	**7**	**500**		**700**	**1200**

13. 506 Elective I

13.506.1	Professional Ethics and Human Values (MPU)
13.506.2	Advanced Welding Technology (MPU)
13.506.3	Foundry Technology (MPU)
13.506.4	Advanced Fluid Mechanics (MPU)
13.506.5	Composite Materials Technology (MPU)
13.506.6	Non Destructive Testing (MPU)
13.506.7	Powder Metallurgy (MPU)
13.506.8	Human Aspects of Management (MP)
13.506.9	Environmental Science (MP)
13.506.10	Environmental Pollution Control (MP)
13.506.11	Disaster Management (MP)

13.606 Elective II

13.606.1	Artificial Intelligence Systems (MPU)
13.606.2	Mechanical Working Methods (MPU)
13.606.3	System Modeling & Simulation (MPU)
13.606.4	Materials Handling (MPU)
13.606.5	Total Quality Management (MPU)
13.606.6	Advanced Manufacturing Processes (MPU)
13.606.7	Material Characterisation (MPU)
13.606.8	Micromachining Methods (MPU)
13.606.9	New Energy Systems (MP)
13.606.10	Object Oriented Programming (MP)
13.606.11	Nuclear Engineering (MP)
13.606.12	Instrumentation and Control (MP)
13.606.13	Precision Engineering (MP)
13.606.14	Advanced Mechanics of Solids (MP)
13.606.15	Tool Engineering (M)

13.706 Elective III

13.706.1	Plant Engineering & Maintenance (MPU)
13.706.2	Fracture Mechanics (MPU)
13.706.3	Entrepreneurship Development (MPU)
13.706.4	Finite Element Methods (MPU)
13.706.5	Metal Forming (MPU)
13.706.6	Non-Conventional Machining Techniques (MPU)
13.706.7	Experimental Methods In Engineering (MPU)
13.706.8	Mechanical Vibration & Noise Control (MPU)
13.706.9	Failure Analysis (MPU)
13.706.10	Industrial Automation (MPU)
13.706.11	Advanced Thermodynamics (MP)
13.706.12	Industrial Heat Transfer (MP)
13.706.13	Computer Graphics (MP)
13.706.14	Marketing Management (MP)
13.706.15	Industrial Hydraulics (MP)
13.706.16	Machine Tool Technology (MP)
13.706.17	Turbo Machines (MP)
13.706.18	Bio Materials (MP)
13.706.19	Concurrent Engineering (MP)
13.706.20	Alternate Energy Sources (MP)

13. 805 Elective IV

13.805.1	Experimental Stress Analysis Techniques (MPU)
13.805.2	Aerospace Engineering (MPU)
13.805.3	Facilities Planning (MPU)
13.805.4	Design of Jigs And Fixtures (MPU)
13.805.5	Controls In Machine Tools (MPU)
13.805.6	Design of Pressure Vessels & Piping (MPU)
13.805.7	Tribology (MPU)
13.805.8	Cryogenic Engineering (MPU)
13.805.9	Research Methodology (MPU)
13.805.10	Nanotechnology (MPU)
13.805.11	Multiphase Flow (MP)
13.805.12	Non Linear Dynamics and Chaos (MP)
13.805.13	Value Engineering (MP)
13.805.14	Continuum Mechanics (MP)
13.805.15	Industrial Safety Engineering (MP)
13.805.16	Engineering Design (MP)
13.805.17	Advanced Decision Modeling (MP)

13. 806 Elective V

13.806.1	Industrial Quality Control (MPU)
13.806.2	Creativity & Product Development (MPU)
13.806.3	Advanced Kinematics of Machines (MPU)
13.806.4	Financial Management (MPU)
13.806.5	Flexible Manufacturing Methods (MPU)
13.806.6	Computational Fluid Dynamics (MPU)
13.806.7	Management Information Systems (MPU)
13.806.8	Production & Operations Management (MPU)
13.806.9	Project Management (MPU)
13.806.10	Robotics (MPU)
13.806.11	Industrial Refrigeration (MP)
13.806.12	Propulsion Engineering (MP)
13.806.13	Design of Heat Transfer Equipment (MP)
13.806.14	Technology Forecasting (MP)
13.806.15	Design of IC Engines (MP)
13.806.16	Logistics and Supply Chain Management (MP)
13.806.17	Surface Engineering (MP)
13.806.18	Supply Chain Management(MP)