

**STUDY AND EVALUATION SCHEME FOR LATERAL ENTRY AND ITI PASSED STUDENTS
DIPLOMA PROGRAMME IN MECHANICAL ENGINEERING (Refrigeration & Airconditioning)**

THIRD SEMESTER

Sr. No.	SUBJECTS	STUDY SCHEME			Credits	MARKS IN EVALUATION SCHEME										Total Marks of Internal & External
		Periods/Week				INTERNAL ASSESSMENT			EXTERNAL ASSESSMENT							
		L	T	P		Th	Pr	Tot	Th	Hrs	Pr	Hrs	Tot			
3.1	*Applied Mathematics-III	5	-	-	4	20	-	20	50	2 ½	-	-	50	70		
3.2	Engineering Materials	4	-	2	4	20	10	30	50	2 ½	20	3	70	100		
3.3	Mechanics of Solids	4	1	2	5	20	10	30	50	2 ½	20	3	70	100		
3.4	Thermal Engineering	5	1	3	6	20	10	30	50	2 ½	20	3	70	100		
3.5	Computer Aided Drafting and 3D Modelling	-	-	8	2	-	20	20	-	-	50	3	50	70		
3.6	Workshop Technology	4	-	6	5	20	10	30	50	2 ½	20	4	70	100		
#Student Centred Activities (SCA)		-	-	3	1	-	30	30	-	-	-	-	-	30		
Total		22	2	24	27	100	90	190	250	-	130	-	380	570		

* Common with other diploma programmes

Student Centred Activities will comprise of co-curricular activities like extension lectures, self study, games, hobby clubs e.g. photography etc., seminars, declamation contests, educational field visits, N.C.C., NSS, Cultural Activities, disaster management and safety etc.

A. COMPULSORY SUBJECT OF I & II SEMESTER MECHANICAL ENGINEERING TO BE TAUGHT IN III & IV Sem. TO ITI PASSED STUDENTS OF TRADES ARE AS FOLLOWS :

TOOL & DIE MAKER(PRESS TOOLS, JIGS & FIXTURES), TOOL & DIE MAKER (DESIGN & MOULDS), MECHANIC MACHINE TOOLS MAINTENANCE), DRAUGHTSMAN (MECHANICAL), MACHINIST, MACHINIST (GRINDER), FITTER, TURNER, MECHANIC(DOMESTIC COMMERCIAL, REFRIGERATION & AC), PRODUCTION & MANUFACTURING SECTOR, AUTOMOBILE SECTOR, REFRIGERATION AND AIRCONDITIONER SECTOR, FABRICATION (FITTING & WELDING), MECHANIC (MOTOR VEHICLE), MECHANIC (AGRICULTURE M/c)

Sr. No.	SUBJECTS	STUDY SCHEME			Credits	MARKS IN EVALUATION SCHEME									Total Marks of Internal & External
		Periods/Week				INTERNAL ASSESSMENT			EXTERNAL ASSESSMENT						
		L	T	P		Th	Pr	Tot	Th	Hrs	Pr	Hrs	Tot		
1.1	*Communication Skills-I	4	-	2	4	-	-	-	50	2 ½	20	3	70	70	
1.2	*Applied Mathematics - I	5	-	-	4	-	-	-	50	2 ½	-	-	50	50	
1.3	*Applied Physics – I	5	-	2	5	-	-	-	50	2 ½	20	3	70	70	
1.4	*Applied Chemistry	5	-	2	5	-	-	-	50	2 ½	20	3	70	70	
		19		6	18	-	-	-	200		60		260	260	

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(*) It is compulsory to appear & to pass in examination From III Semester To VI Semester, But credit/marks will not be included for division and percentage of obtained marks.

(*) Four Semester (Two Years) of Extra Time will be given after diploma curriculum period (If Required) to pass the above paper (1.1 To 1.4 and 2.1 to 2.2) examination (As Per G. O. No. 2221/16-Pra. Shi.-3-2009 Dated 28-08-2009) & Revised G.O. No. 2704/16-Pra.Shi.-3-2013-46(8)/2002 Dated 09-01-2013 and B.T.E Order No. Pra.Shi.Pa/C.D.C./2022/872021 Dated 21.02.22

FOURTH SEMESTER

Sr. No.	SUBJECTS	STUDY SCHEME Periods/Week			Credits	MARKS IN EVALUATION SCHEME								Total Marks of Internal & External
		L	T	P		INTERNAL ASSESSMENT			EXTERNAL ASSESSMENT					
						Th	Pr	Tot	Th	Hrs	Pr	Hrs	Tot	
4.1	*Communication Skill-II	4	-	2	4	20	10	30	50	2 ½	20	3	70	100
4.2	Refrigeration and Air Conditioning	5	1	2	6	20	10	30	50	2 ½	20	3	70	100
4.3	Hydraulics and Pneumatics	5	1	2	6	20	10	30	50	2 ½	20	3	70	100
4.4	Computer Aided Design and Manufacturing	4	-	6	6	20	10	30	50	2 ½	20	3	70	100
4.5	*Environmental Studies	3	-	2	3	20	10	30	50	2 ½	20	3	70	100
4.6	*Energy Conservation	3	-	2	3	20	10	30	50	2 ½	20	3	70	100
4.7	Universal Human Values	2	-	1	1	-	20	20	-	-	30	3	30	50
#Student Centred Activities (SCA)		-	-	3	1	-	30	30	-	-	-	-	-	30
Total		26	2	20	30	120	110	230	300	-	150	-	450	680

* Common with other diploma programme

Student Centred Activities will comprise of co-curricular activities like extension lectures, self study, games, hobby clubs e.g. photography etc., seminars, declamation contests, educational field visits, N.C.C., NSS, Cultural Activities, disaster management and safety etc.

Industrial training of 4 weeks duration to be organised after 4th semester exams

B. COMPULSORY SUBJECT OF I & II SEMESTER MECHANICAL ENGINEERING TO BE TAUGHT IN III & IV Sem. TO ITI PASSED STUDENTS OF TRADES ARE AS FOLLOWS :

TOOL & DIE MAKER(PRESS TOOLS, JIGS & FIXTURES), TOOL & DIE MAKER (DESIGN & MOULDS), MECHANIC MACHINE TOOLS MAINTENANCE), DRAUGHTSMAN (MECHANICAL), MACHINIST, MACHINIST (GRINDER), FITTER, TURNER, MECHANIC(DOMESTIC COMMERCIAL, REFRIGERATION & AC), PRODUCTION & MANUFACTURING SECTOR, AUTOMOBILE SECTOR, REFRIGERATION AND AIRCONDITIONER SECTOR, FABRICATION (FITTING & WELDING), MECHANIC (MOTOR VEHICLE), MECHANIC (AGRICULTURE M/c)

Sr. No.	SUBJECTS	STUDY SCHEME			Credits	MARKS IN EVALUATION SCHEME								Total Marks of Internal & External
		Periods/Week				INTERNAL ASSESSMENT			EXTERNAL ASSESSMENT					
		L	T	P		Th	Pr	Tot	Th	Hrs	Pr	Hrs	Tot	
2.1	*Applied Mathematics - II	5	-	-	4	-	-	-	50	2 ½	-	-	50	50
2.2	*Applied Physics -II	5	-	2	5	-	-	-	50	2 ½	20	3	70	70
Total		10	-	2	9	-	-	-	100	-	20	-	120	120

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Industrial training of 4 weeks duration to be organised after 4th semester exams

(*) It is compulsory to appear & to pass in examination From III Semester To VI Semester, But credit/marks will not be included for division and percentage of obtained marks.

(*) Four Semester (Two Years) of Extra Time will be given after diploma curriculum period (If Required) to pass the above paper (1.1 To 1.4 and 2.1 to 2.2) examination (As Per G. O. No. 2221/16-Pra. Shi.-3-2009 Dated 28-08-2009) & Revised G.O. No. 2704/16-Pra.Shi.-3-2013-46(8)/2002 Dated 09-01-2013 and B.T.E Order No. Pra.Shi.Pa/C.D.C./2022/872021 Dated 21.02.22

FIFTH SEMESTER

Sr. No.	SUBJECTS	STUDY SCHEME Periods/Week			Credits	MARKS IN EVALUATION SCHEME								Total Marks of Internal & External
		L	T	P		INTERNAL ASSESSMENT			EXTERNAL ASSESSMENT					
						Th	Pr	Tot	Th	Hrs	Pr	Hrs	Tot	
	Industrial Training (4 Weeks)	-	-	-	2	-	-	-	-	-	50	-	50	50
5.1	*Industrial Management and Entrepreneurship Development	5	-	-	4	20	-	20	50	2 ½	-	-	50	70
5.2	Theory of Machines	5	2	-	6	20	-	20	50	2 ½	-	-	50	70
5.3	Machine Design	5	2	-	6	20	-	20	50	2 ½	-	-	50	70
5.4	Production Technology	6	-	8	7	20	20	40	50	2 ½	50	4	100	140
5.5	Production Management	4	-	2	4	20	10	30	50	2 ½	20	3	70	100
5.6	Automobile Engineering (for Automobile, Production and CAD)	4	-	4	4	20	10	30	50	2 ½	20	3	70	100
	Air Conditioning (for RAC)													
	Repair And Maintenance– I (for Repair & Maintenance)													
	#Student Centred Activities (SCA)	-	-	1	1	-	30	30	-	-	-	-	-	30
Total		29	4	15	34	120	70	190	300	-	140	-	440	630

* Common with other diploma programme

Student Centred Activities will comprise of co-curricular activities like extension lectures, self study, games, hobby clubs e.g. photography etc., seminars, declamation contests, educational field visits, N.C.C., NSS, Cultural Activities, disaster management and safety etc.

SIXTH SEMESTER

Sr. No.	SUBJECTS	STUDY SCHEME			Credits	MARKS IN EVALUATION SCHEME								Total Marks of Internal & External
		Periods/Week				INTERNAL ASSESSMENT			EXTERNAL ASSESSMENT					
		L	T	P		Th	Pr	Tot	Th	Hrs	Pr	Hrs	Tot	
6.1	Industrial Engineering	6	-	2	6	20	10	30	50	2 ½	20	3	70	100
6.2	Metrology and Measuring Instruments	5	-	4	7	20	10	30	50	2 ½	20	3	70	100
6.3	CNC Machines and Automation	4	-	4	5	20	10	30	50	2 ½	20	3	70	100
6.4	Automobile Maintenance, Servicing & Repair (for Automobile)	5	-	-	6	20	-	20	50	2 ½	-	-	50	70
	Computer Aided Design (for CAD)													
	Tool Engineering (for Production)													
	Refrigeration Plant, Erection And Servicing (for RAC)													
	Repair and Maintenance- II (for Repair & Maintenance)													
6.5	Project Work	-	-	12	4	-	40	40	-	-	60	3	60	100
#Student Centred Activities (SCA)		-	-	6	1	-	30	30	-	-	-	-	-	30
Total		20	-	28	29	80	100	180	200	-	120	-	320	500

Student Centred Activities will comprise of co-curricular activities like extension lectures, self study, games, hobby clubs e.g. photography etc., seminars, declamation contests, educational field visits, N.C.