

7. STUDY AND EVALUATION SCHEME FOR DIPLOMA PROGRAMME IN INSTRUMENTATION AND CONTROL

FIRST SEMESTER

Sr. No	Subject	STUDY SCHEME			EVALUATION SCHEME						Total Marks
					Internal Assessment		External Assessment (Examination)				
					Theory	Practical	Written Paper		Practical		
					Max. Marks	Max. Marks	Max. Marks	Hrs	Max. Marks	Hrs	
Hrs/week		L	T	P							
1.1*	Communication Skills -I				3	-	2	25	25	100	3
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 (INSTRUMENTATION AND CONTROL)

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**	Basic Electrical Engineering	3	-	2	25	25	100	3	50	3	200
2.6**	Analog Electronics – I	4	-	2	25	25	100	3	50	3	200
2.7*	General Workshop Practice-II	-	-	6	-	50	-	-	+100	3	150
# Student Centred Activities		-	-	2	-	25	-	-	-	-	25
Total		22	-	18	175	200	600	-	350	-	1325

* Common with other diploma programmes

** Common with diploma programmes in Electronics and Instrumentation, Computer Engineering, Medical Electronics and Instrumentation and Control

+ 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 (INSTRUMENTATION AND CONTROL)

Sr. No	Subject	STUDY SCHEME			EVALUATION SCHEME						Total Marks
					Internal Assessment		External Assessment (Examination)				
		Theory	Practical	Written Paper		Practical					
		Max. Marks	Max. Marks	Max. Marks	Hrs	Max. Marks	Hrs				
Hrs/week		L	T	P							
3.1*	Basics of Control Systems				4	-	3	25	25	100	3
3.2*	Electrical and Electronics Materials and Components	4	-	-	50	-	100	3	-	-	150
3.3	Test and Measuring Instruments	3	-	3	25	25	100	3	50	3	200
3.4*	Principles of Instrumentation	3	-	3	25	25	100	3	50	3	200
3.5*	Electrical Machines	3	-	3	25	25	100	3	50	3	200
3.6*	Fundamentals of Digital Electronics	3	-	3	25	25	100	3	50	3	200
	# Student Centred Activities	-	-	5	-	25	-	-	-	-	25
	Total	20		20	175	150	600	250	300		1175

* Common with diploma programme in Electronics and Instrumentation

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 (INSTRUMENTATION AND CONTROL)

Sr. No	Subject	STUDY SCHEME			EVALUATION SCHEME						Total Marks
					Internal Assessment		External Assessment (Examination)				
		Theory	Practical	Written Paper		Practical					
		Max. Marks	Max. Marks	Max. Marks	Hrs	Max. Marks	Hrs				
Hrs/week		L	T	P							
4.1*	Microprocessors, Microcontroller and their Applications				4	-	3	25	25	100	3
4.2*	Transducers and Signal conditioning	3	-	3	25	25	100	3	50	3	200
4.3	Advanced Control System	3	-	3	25	25	100	3	50	3	200
4.4	Principles of Telemetry	3	-	3	25	25	100	3	50	3	200
4.5	Instrumentation Drawing	-	-	4	-	50	100	3	25	3	175
4.6*	Computer Programming and Applications	2	-	4	25	25	100	3	50	3	200
#	Student Centred Activities	-	-	5	-	25	-	-	-	-	25
Total		15		25	125	200	600	-	275		1200

* Common with diploma programme in Electronics and Instrumentation

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 4 weeks 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 (INSTRUMENTATION AND CONTROL)

Sr. No	Subject	STUDY SCHEME			EVALUATION SCHEME						Total Marks
					Internal Assessment		External Assessment (Examination)				
		Theory	Practical	Written Paper		Practical					
		Max. Marks	Max. Marks	Max. Marks	Hrs	Max. Marks	Hrs				
		Hrs/week									
		L	T	P							
Industrial Training		-	-	-	-	50	-	-	50	3	100
5.1*	Employability Skills-I	-	-	2	-	25	-	-	50	-	75
5.2**	Power Electronics	3	-	3	25	25	100	3	50	3	200
5.3**	Analytical and Environmental Instruments	4	-	3	25	25	100	3	50	3	200
5.4**	Process Instrumentation	4	-	3	25	25	100	3	50	3	200
5.5**	Process Control	4	-	3	25	25	100	3	50	3	200
5.6*	Environmental Education	3	-	-	25	-	100	3	-	-	125
5.7	Minor Project Work	-	-	3	-	100	-	-	50	3	150
# Student Centred Activities including Personality Development Camp		-	-	5	-	25	-	-	-	-	25
Total		18		22	125	300	500		350		1275

* Common with other diploma programmes

** Common with diploma programme in Electronics and Instrumentation

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 (INSTRUMENTATION AND CONTROL)

Sr. No	Subject	STUDY SCHEME			EVALUATION SCHEME						Total Marks
					Internal Assessment		External Assessment (Examination)				
		Theory	Practical	Written Paper		Practical					
		Max. Marks	Max. Marks	Max. Marks	Hrs	Max. Marks	Hrs				
Hrs/week		L	T	P							
6.1*	Employability Skills-II				-	-	2	-	25	-	-
6.2**	PLC, DCS and SCADA	4	-	3	25	25	100	3	50	3	200
6.3**	Biomedical Instrumentation	4	-	3	25	25	100	3	50	3	200
6.4	Elective	4	-	3	25	25	100	3	50	3	200
6.5*	Entrepreneurship Development and Management	3	-	-	25	-	100	3	-	-	125
6.6	Major Project Work	-	-	9	-	100	-	-	100	3	200
# Student Centred Activities including		-	-	5	-	25	-	-	-	-	25
Total		15		25	100	225	400		300		1025

* Common with other diploma programmes

** Common with diploma programme in Electronics and Instrumentation

Electives: To choose any one from the following:

6.4(a) Opto Electronic Devices and their Applications 6.4(b) Advanced Measurement Techniques 6.4(c) Virtual Instrumentation

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.