

ENGINEERING AND TECHNOLOGY GROUP

ELECTRONICS TECHNOLOGY

Scheme of Examination

Std. XI

Paper	Title of the Paper	Theory		Practical		Term work	Project work	I.V. *	Total Marks
		Marks	Time (Hrs)	Marks	Time (Hrs)				
3	Digital Electronics	80	3	80	3	20	10	10	200

* IV = Industrial Visits

Practical

Sr. No.	List of Practical's	Periods
1.	Convert binary number to decimal number and vice versa.	9
2.	Convert Hexadecimal number to decimal number and vice versa.	9
3.	Convert octal number to decimal number and vice versa.	9
4.	Subtract binary numbers using 1's compliment method and 2's compliment method.	9
5.	Draw logic diagram for Boolean equation, simplify it by Boolean algebra and draw simplified diagram.	9
6.	Identify IC 7404, 7408, 7432 and verify truth table of all basic gates.	9
7.	Identify IC 7400, 7402, 7486 and verify truth table of all derived gates.	9
8.	Construct and verify Ex-OR gate using basic gates only.	9
9.	Construct and Prove Demorgan's theorem.	9
10.	Construct basic gates using NAND gate.	9
11.	Construct basic gates using NOR gate.	9
12.	Study of half adder circuit.	9
13.	Study of Full adder circuit.	9
14.	Construct Ex-OR as 4 bit controlled invertors.	9
15.	Construct 4:1 Multiplexer using IC74153 and verify its truth table.	9
16.	Construct 1:4 De-multiplexer using IC74139 and verify its truth table.	9
17.	Construct BCD to seven segment display using IC7447 and verify its truth table.	9
18.	Construct Encoder using IC74147 and verify its truth table.	9
19.	Construct decade counter using IC7490 and verify its truth table.	9
20.	Construct R-2R ladder for 4 bit DAC and test it.	9
21.	Construct and test simultaneous ADC using OPAMP.	9
22.	Project, Industrial Visit	51
	Total	240