2020

BCA

1st Semester Examination

DIGITAL ELECTRONICS LAB

PAPER—1197 (Set-I)

(PRACTICAL)

Full Marks : 100

Time : 3 Hours

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Answer any two questions taking one from each group

Group A

35×1

1. Design a full adder using NAND gates and verify its truth table.

2. Design gray code to BCD converter and verify the truth table.

3. Design a 1:4 DEMUX and verify its truth table.

4. Design a 3 to 8 decoder and verify the truth table.

Group B

35×1

5. Design a 4-bit ripple counter using J-K flip-flop.

6. Design an asynchronous up counter of MOD 5.

7. Design and implement a right shift register and verify the operation.

8. Design a 4-bit bidirectional shift register.

[Internal Assessment : 30]

INSTRUCTIONS

1. Problem Definition	:	3 Marks
2. Circuit Diagram	:	15 Marks
3. Truth Table	:	12 Marks
4. Output / Result with discussion	:	5 Marks
Total	:	35 Marks