



বিদ্যাসাগর বিশ্ববিদ্যালয়

VIDYASAGAR UNIVERSITY

BCA

1st Semester Examination 2021

DIGITAL ELECTRONICS LAB

PAPER—1197

Full Marks : 70

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.

Illustrate the answers wherever necessary.

Answer any two questions.

2×35

1. Design a circuit to convert gray to binary.
2. Design a full subtractor using NOR gates only and verify its truth table.
3. Design 8 : 1 MUX using two 4 : 1 MUX and other necessary gates.

4. Implement the following Boolean function using a MUX : $F(W, X, Y, Z) = \Sigma(0, 1, 3, 4, 8, 9, 15)$
5. Design a 4 : 1 MUX using NAND gates only.
6. Design a 1-bit comparator and verify its truth table.
7. Implement full Adder using 3X8 decoder and other necessary gates.
8. Implement $Y = \Sigma(0,1,2,8,10,11,14,15)$ using NAND gates only.

(Internal Assessment : 30)
