

2017

M.Sc.

3rd Semester Examination

ELECTRONICS

PAPER—ELC-305

(Practical)

Full Marks : 50

Time : 3 Hours

The figures in the margin indicate full marks.

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

Illustrate the answers wherever necessary.

(VLSI LAB)

Answer any one question, selecting it by a lucky draw.

1. Using spice simulate MOS Inverter with different loads. (use Resistor 1K, 100K, 1000K as loads). Verify the result.

(Turn Over)

2. Using spice software simulate a CMOS inverter. obtain the transfer characteristics for different values of β_n/β_p .
3. Obtain the transient response of CMOS inverter using SPICE and Show the result.
4. Using spice software simulate CMOS NAND gate verify the result.
5. Using spice simulate CMOS NOR gate and verify result.
6. Using spice simulate CMOS XOR gate and verify result.
7. Using spice simulate CMOS AND gate and verify result.
8. Using spice simulate CMOS OR gate and verify result.
9. Implement $y = \overline{AB + C}$ using spice and check the result.
10. Implement $y = \overline{A(B + C)}$ using spice and check the result.

Distribution of Marks :

Program	: 20 Marks
Result	: 15 Marks
Viva voce	: 10 Marks
Laboratory note book	: 05 Marks
Total	: 50 Marks
