Roll No. | | | | | | | | | | | | | Total No. of Pages : 02

Total No. of Questions : 18

B.Tech. (ECE) (Sem.–5)

VLSI/ULSI TECHNOLOGY

Subject Code : BTEC-905C-18

M.Code : 78709

Time : 3 Hrs. Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A

Write briefly :

1) Define polishing process.

2) What are various thin oxide properties?

3) Explain dry, HCL dry and wet oxidation.

4) Define the term lithography.

5) What are various clean room and safety requirements?

6) What are the desired properties of metallization for integrated circuits?

7) Explain mask generation.

8) Enlist RTP techniques.

9) Define rapid thermal processing.

10) Explain CVD.

SECTION-B

11) Describe characterization of impurity profiles.

12) Explain the various effects of impurities and damage on oxidation rate.

13) What are wet chemical etching techniques?

14) Explain RIE techniques.

15) Explain newer lithography techniques for VLSI/ULSI.

SECTION-C

16) Explain CVD techniques for deposition of polysilicon.

17) Describe various oxidation techniques.

18) List possible ways of growing an oxide on a substrate without forming oxidation induced stacking faults.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.