Roll No. .... Total Pages : 2

BT-5/D-22 **45255**

VLSI TECHNOLOGY
Paper : ECP-5-A

Time : Three Hours] [Maximum Marks : 75

Note : Attempt *five* questions in all, selecting at least *one* question from each unit. All questions carry equal marks.

UNIT–I

1. What do you mean by crystal growth? Explain Czochralski technique of crystal growth.

2. What is plasma oxidation? Describe its properties and defects due to oxidation.

UNIT–II

3. What is Epitaxy? Explain MBE system in detail for growth of epitaxial layer.

4. Explain Fick's theory of diffusion along with solution of Fick's law.

UNIT–III

5. Differentiate between optical and non-optical lithography and give detailed description of ion beam lithography.

6. What do you mean by etching in VLSI technology. Explain dry and wet etching along with sputter etching.

UNIT–IV

7. Describe theory and working of PVD technique for metallization.

8. Give detailed description of CMOS fabrication steps.