

Exam.Code:0975
Sub. Code: 7422

1129

M. Tech. (Micro-Electronics)
First Semester
MIC-102: Integrated Circuit Technology

Time allowed: 3 Hours

Max. Marks: 50

NOTE: Attempt five questions in all, including Question No. 1 which is compulsory and selecting two questions from each Unit.

x-x-x

- I. Attempt the following:-
- Point defects
 - Diffusion
 - Direct compounding
 - Name water cleaning technique
 - Oxidation
 - Etching.
 - Name one MOS device fabrication.
 - Name Sputtering technique
 - One problem in CMOS process
 - Surface Concentration (10x1)

UNIT - I

- Explain the wafer preparation processes for MOS technologies. (10)
- Differentiate between p-channel and n-channel. What is ion- Implantation? (10)
- Explain oxidation diffusion and metallization process in detail. (10)

UNIT - II

- Explain Bipolar and MOS device fabrication techniques. (10)
- Write the differences between p MOS and n MOS with CMOS Technologies. (10)
- Explain the following:-
 - Dry and Wet Etching
 - Nonlinear Regression
 - 1win well CMOS Process (10)

x-x-x