

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech. (ECE) (Sem.-6)

MICROELECTRONICS

Subject Code : BTEC-902

M.Code : 71231

Date of Examination : 16-07-22

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION 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

1. Answer briefly :

- a. What do you mean by microelectronics?
- b. Write down the reaction to grow GaAs.
- c. What are the different sources used in ion lithography?
- d. What do you mean by lateral diffusion?
- e. Write down the difference between LPE and VPE.
- f. Write down the reaction for the formation of silicon.
- g. Draw the apparatus for silicon float zone process.
- h. What are different types of isolation?
- i. Difference between dry and wet etching.
- j. What do you mean by twin well CMOS process?

SECTION-B

2. What do you mean by zone refining?
3. Discuss various IC packaging?
4. What do you mean by reactive plasma etching?
5. Discuss fabrication of BJT?
6. What do you mean by LPE, VPE and MBE?

SECTION-C

7. Discuss in detail about fabrication of IC.
8. What do you mean by photolithography?
9. Discuss in detail about various steps for fabrication of diodes, resistors, transistors and capacitors.

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.