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Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(ECE) (E-I 2012 to 2017) (Sem.-6)

MICROELECTRONICS

Subject Code : BTEC-902

M.Code : 71231

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. Differentiate between monolithic and hybrid IC.
- b. Define Wafer.
- c. What is zone refining process?
- d. Define Annealing.
- e. What is the function of epitaxial layer?
- f. Explain the role of lambda role.
- g. Why masking is done in fabrication of CMOS transistor?
- h. What is the effect of impurities on oxidation rate?
- i. What is DC sputtering?
- j. What is second breakdown?

SECTION-B

2. Write a note on :
 - a. Isolation Technique
 - b. Flip Chip Technique
3. How fabrication of BJT is done? Explain in detail
4. Define the various steps for the fabrication of MOS device.
5. What is oxidation? What are the various techniques used for oxidation?
6. Discuss Silicon Float Zone process in detail.

SECTION-C

7. What is diffusion? Explain the techniques used for the diffusion process.
8. Explain the fabrication of FET in detail.
9. Write a note on :
 - a. Lift off technology
 - b. Fine line photolithography

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.