

Roll No.

Total No. of Pages : 01

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M.Tech. (EPDT) (2018 Batch) (Sem.-2)

SENSOR TECHNOLOGY & MEMS

Subject Code : MTEP-PE4B-18

M.Code : 76227

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

- 1. Attempt any FIVE questions out of EIGHT questions.**
- 2. Each question carries TWELVE marks.**

1. Discuss the process of photolithography. Mention the types of photolithography suitable for at least two MEMS devices with justification.
2. a. What are the characteristics of micro-heater?
b. In the case of photolithography, compare the two type of photo-resist used.
3. Discuss the selection of material based on applications. Support your answers by considering the suitable examples.
4. Explain dry etching and wet etching in fabrication process of MEMS devices.
5. Explain transduction pertaining to microfilm strain gauge. State the factors that lead to thin film stress.
6. What is CVD? What are the parameters that influence CVD? Compare between different CVD techniques based on temperature and pressure of operation and material used.
7. Explain the micro-systems packaging and packing technologies.
8. Write short notes on :
 - a. Reliability of MEMS devices
 - b. Anodic bonding
 - c. Applications of MEMS in biomedical instrumentation.

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.