

M.Tech. (I.E.E) Examination, 2018
(2 nd. Semester)

MEMS SENSORS AND ACTUATORS

Time: Three hours

Full Marks: 100

Answer any *four* questions.
All questions *carry equal* marks.

1. Discuss briefly the Lithographic process used in MEMS fabrication Technology. State the various stages involved into the Lithographic process and discuss with the suitable illustrations.
2. Why metallization process is required for a MEMS design? Discuss about the various steps of metallization process with the help of suitable examples.
3. What are the various stages involved into the MEMS Packaging and Assembly Technology? Discuss with illustration the various stages of MEMS Packaging.
4. Discuss with illustration the different stages of Thick Film Process for MEMS Sensor preparation..
5. Discuss the basic principle of a resistive MOS gas sensor and hence derive the process flow of a silicon resistive gas sensor based on a micro hotplate.