

B.E. PRODUCTION ENGINEERING FOURTH YEAR FIRST SEMESTER EXAMINATION, 2024

MICRO MANUFACTURING (HONS.)

Full Marks:100

Time duration: 3 hours

Answer any FIVE questions.

1. a) Classify various micro-manufacturing processes.
b) What are the guidelines of micromachining?
c) What are the various types of microforming processes and microforming parts?
d) Mention various micro-joining processes.

(5 x 4)

2. a) Mention five hybrid micro-machining/ nano-finishing processes.
b) Mention five micro/nano level measurement instruments.
c) Discuss on one advanced hybrid micro-machining process with sketch.

(5+5+10)

3. a) Discuss on one mechanical advanced micro-machining process with sketch.
b) Discuss on laser micro-machining process with sketch.

(10+10)

4. a) Discuss on micro extrusion process with sketch.
b) Discuss on laser micro welding processes with sketch.

(8+12)

5. a) Discuss on micro-EDM system with sketch and applications of it.
b) Discuss on EMM system with sketch and applications of it.

(10+10)

6. a) Discuss on micro additive manufacturing processes and their applications.
b) Explain various methods of micro-tool development.

(10+10)