

(3 Hours)

[Total Marks: 80]

- N. B
- 1) Question No. 1 is compulsory
 - 2) Attempt any three questions from remaining five questions
 - 3) Illustrate your answers with neat sketches
 - 4) Figure at right side indicate marks
- Q.1. Write short notes on **any four** - 20
- a. Manufacturing process
 - b. Electronic packing
 - c. Stereolithography
 - d. Rolling defects
 - e. Tool wear
- Q.2
- a) Define special casting process. Describe any one of them in details with neat sketch. 10
 - b) Explain following term
 - i) Coining ii) Piercing iii) Trimming iv) Punching 10
- Q.3
- a) Explain F.W Taylor tool life equation and draw the tool life curve for various metal. 10
 - b) Distinguish between orthogonal cutting and oblique cutting 5
 - c) Explain transfer molding with neat sketch. 5
- Q.4.
- a) Explain construction, working and application of electric discharge machining process. 8
 - b) Explain slotting machining with neat sketch. 6
 - c) Explain forward extrusion and backward extrusion 6
- Q.5
- a) what are the non –traditional machine processes? Explain any one in brief 8
 - b) Explain grinding machine with neat sketch 6
 - c) Describe the shielded metal arc welding process. 6
- Q.6.
- a) what are the three major stages in the production of silicon based integrated circuits. 10
 - b) Explain structural types and materials for PCBs with neat sketch. 10
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