

Printed Pages : 2



EME405

(Following Paper ID and Roll No. to be filled in your Answer Book)

**PAPER ID : 187402**

Roll No.

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**B. Tech.**

(SEM. IV) THEORY EXAMINATION, 2014-15  
**MANUFACTURING TECHNOLOGY**

Time : 3 Hours]

[Total Marks : 100

- 1 Answer any four parts : 4×5
- a) Describe types of pattern used in casting process.
  - b) Explain gating system and various parts of gating system.
  - c) Differentiate between blanking and piercing ?
  - d) What are the applications of Jigs and fixtures ?
  - e) What is manufacturing process ? Classify different manufacturing processes.
- 2 Attempt any two parts : 10×2
- a) What is difference between hot chamber and cold chamber die casting explain ?
  - b) With the help of neat sketch explain the working of die and punch assembly.
  - c) Name important locating devices used in industry with their application.

- 3 Attempt any two of the following 10×2
- a) Make a Merchant circle diagram for force analysis in metal cutting and write all the forces in terms of resultant
  - b) Derive the expression for shear angle relationship.
  - c) Explain types of chip produced during the metal cutting operation and reason to obtain specific chips.
- 4 Attempt any two of the following 10×2
- a) What is slotter ? How it is different from shaper ? Explain.
  - b) What is difference between up milling and down milling, which is preferred for good surface finish explain?
  - c) What materials are used for abrasive of grinding wheel ? Write grinding wheel specification.
- 5 Attempt any two of the following 10×2
- a) Explain any three types of resistance welding process.
  - b) Explain the working principle of EDM with neat sketch.
  - c) How explosive welding can be done? Write some applications where it is used.
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