

**BT-I/D09**  
**MANUFACTURING PROCESSES**  
Paper : ME-103(E)  
(Theory)

Time : Three Hours]

[Maximum Marks : 100

**Note :** Attempt *five* questions in all, selecting at least *one* question from each unit.

**UNIT-I**

1. What is an 'Accident' ? What are the common sources of accidents ? How can these accidents be prevented ? 20
2. (a) What are Plain carbon steels ? How are they classified ? Give a few applications of different classes of plain carbon steels. 10
- (b) Write short notes on the following :
  - (i) Grey cast iron.
  - (ii) White cast iron.
  - (iii) Mottled cast iron.
  - (iv) Malleable cast iron.
  - (v) Chilled cast iron. 2x5=10

**UNIT-II**

3. (a) What are the various properties of Moulding sand ? Explain. 10
- (b) What are the various Pattern allowances ? Explain. 10
4. (a) Explain Casting defects and their remedies. 20

### UNIT-III

5. (a) Explain with sketches the following operations :
- (i) Shearing.
  - (ii) Punching.
  - (iii) Blanking.
  - (iv) Forming.
  - (v) Bending. 2×5=10
- (b) Explain the Hot extrusion process. 10
6. (a) Explain the process of Rolling and principle of Hot rolling. 10
- (b) Explain the types of Plant layout, their advantages and disadvantages. 10

### UNIT-IV

7. (a) Explain the working principle and construction features of Shaper machine tool. 10
- (b) Explain the different types of Chips in metal cutting. 10
8. (a) Explain Welding defects and their remedies. 10
- (b) Explain the following : 10
- (i) TIG welding.
  - (ii) MIG welding.
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