

Roll No.

Total Pages : 3

BT-2/M-13

8210

MANUFACTURING PROCESSES

Paper-ME-103E

Time Allowed : 3 Hours]

[Maximum Marks : 100

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

UNIT-I

1. Explain the meaning of Manufacturing Processes. What is meant by Industrial Safety? Enlist method of Safety. Give common sources and causes of Accidents. 20
2. Define the following mechanical properties of Engineering materials:
 - (i) Stength
 - (ii) Elasticity
 - (iii) Stiffness
 - (iv) Brittleness
 - (v) Ductility
 - (vi) Toughness
 - (vii) Hardness
 - (viii) Resilience
 - (ix) Malleability
 - (x) Plasticity. 20

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UNIT-II

3. (a) With neat sketch, describe the operation of cupola furnace for melting cast Iron. 10
- (b) State the various defects in sand castings and also mention their main causes and remedies. 10
4. (a) What are essential characteristics of Mould? Sketch and name the principal parts of a Mould. 10
- (b) What are essential properties of a Core? Describe briefly the types of Cores. 10

UNIT-III

5. (a) What is hot working process? What are its advantages and disadvantages? 10
- (b) Explain the following hot working processes. 10
- (i) Hot rolling
- (ii) Hot drawing.
6. Describe the following metal working processes: Shearing, Punching, Blanking, Bending and Piercing. 20

UNIT-IV

7. (a) Differentiate between Soldering and Brazing. 10
- (b) List and describe major equipment used in Electric arc welding. Also state major safety precautions used in this process. 10

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8. (a) Name the machine tools commonly used in workshop giving their applications. How the size and specification of a Lathe machine are given? 10
- (b) Name the types of chips formed during machining. Explain mechanics of Chips formation. 10