



# CBCS SCHEME

18AU36

## Third Semester B.E. Degree Examination, June/July 2023 Manufacturing Process – I

Time: 3 hrs.

Max. Marks: 100

*Note: Answer any FIVE full questions, choosing ONE full question from each module.*

### Module-1

- 1 a. Explain different types of pattern used in casting process, with neat sketch. (10 Marks)  
b. What are the steps involved in casting process? Explain them briefly. (10 Marks)

OR

- 2 a. Explain any five types of casting defects, with neat sketch. (10 Marks)  
b. Write the principles of Gate's and Risers, with neat sketch. (10 Marks)

### Module-2

- 3 a. Discuss about the Jolt and Squeeze type moulding machine and write the advantages of both. (10 Marks)  
b. Sketch and explain the sweep moulding process and list out the advantages. (10 Marks)

OR

- 4 a. Explain the construction and working principles of Hot Chamber die casting process. (10 Marks)  
b. With a sketch, explain the principle of operation of Coke Fired Pit Furnace and also list the advantages. (10 Marks)

### Module-3

- 5 a. List out the applications of welding process. (08 Marks)  
b. With neat sketch, explain the Metal Arc Welding (MAW) process and also write the advantages and disadvantages. (12 Marks)

OR

- 6 a. List out the advantages and disadvantages of Gas Welding Process. (08 Marks)  
b. Explain the construction and working Gas torch. (08 Marks)  
c. Write about Forward and Backward welding process. (04 Marks)

### Module-4

- 7 a. With neat sketch and explain working principle about spot welding. (10 Marks)  
b. List out the advantages of projection welding. (05 Marks)  
c. Write the application of resistance welding. (05 Marks)

OR

- 8 a. With a neat sketch, explain the laser beam welding process. (10 Marks)  
b. Mention the advantages and limitations of electron beam welding process. (06 Marks)  
c. List the application of explosive welding process. (04 Marks)

Module-5

- 9 a. What are the parameters which affect soldering? (06 Marks)
- b. Differentiate Soldering and Brazing. (08 Marks)
- c. List out the advantages and disadvantages of brazing. (06 Marks)

OR

- 10 a. Explain ultrasonic inspection of (NDT) with neat sketch. (10 Marks)
- b. What is NDT? List out the methods and explain magnetic particle inspection. (10 Marks)

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