



# CBCS SCHEME

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18AU36

Third Semester B.E. Degree Examination, Dec.2023/Jan.2024

## 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. State the basic steps involved in a Casting process. (05 Marks)  
b. Mention the components produced by Casting process. (05 Marks)  
c. What are the advantages and limitations of a Casting process? (10 Marks)

OR

- 2 State and explain the different types of allowances provided in patterns. (20 Marks)

### Module-2

- 3 a. With neat diagram, explain how a jotting machine is used to make a sand mould. (10 Marks)  
b. With neat diagram, explain Sweep moulding process. (10 Marks)

OR

- 4 a. Explain Gravity die casting process. State its advantages and disadvantages. (10 Marks)  
b. With diagrams, explain Squeeze casting process. (10 Marks)

### Module-3

- 5 a. Explain the principle and operation of metal arc welding. (10 Marks)  
b. With diagram, explain Coke fired fit furnace. (10 Marks)

OR

- 6 a. With diagram, explain the principle and operation of Oxy - Acetylene gas welding. (08 Marks)  
b. State and explain the different types of flames that can be produced by regulating oxygen and acetylene. (12 Marks)

### Module-4

- 7 a. With diagram, explain the principle and operation of friction welding. (10 Marks)  
b. With neat diagram, explain the principle and operation of explosive welding. (10 Marks)

OR

- 8 a. With diagram, explain the principle and operation of TIG - welding. (12 Marks)  
b. State the advantages and disadvantages of MIG - welding. (08 Marks)

### Module-5

- 9 a. State and explain the different steps involved in fluorescent liquid penetrant inspection used to find surface defects. (10 Marks)  
b. Explain Torch brazing. (05 Marks)  
c. Explain Induction brazing. (05 Marks)

OR

- 10 a. State and explain the parameters affecting soldering process. (10 Marks)  
b. Mention the advantages and disadvantages of soldering process. (10 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.