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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)