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Third Semester B.E. Degree Examination, Dec.2024/Jan.2025 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 patterns used in casting process. (08 Marks)
- b. Explain various pattern allowances provided in casting technology. (08 Marks)
- c. Write short note on sand binders and additives used in foundry. (04 Marks)

OR

- 2 a. Explain different types of cores used in casting process. (06 Marks)
- b. Explain different types of risers used in casting process. (06 Marks)
- c. Explain different types of casting defects. (08 Marks)

Module-2

- 3 a. Explain with a neat sketch, the working of sand slinger. (10 Marks)
- b. Explain with a neat sketch, carbon dioxide moulding process. (10 Marks)

OR

- 4 a. Name the centrifugal casting methods and explain the vertical centrifugal casting with a neat sketch. (10 Marks)
- b. Sketch and explain the construction and working of Cupola Furnace with different zones. (10 Marks)

Module-3

- 5 a. Explain weld joints formed in welding operation. (06 Marks)
- b. Explain TIG welding with neat sketch. (08 Marks)
- c. Explain submerged Arc welding. (06 Marks)

OR

- 6 a. Explain Atomic Hydrogen Arc welding. (07 Marks)
- b. Explain MIG welding with neat sketch. (06 Marks)
- c. Explain flame characteristics in oxy-Acetylene gas welding. (07 Marks)

Module-4

- 7 a. Explain with a neat sketch, the seam welding and list out its advantages and disadvantages. (10 Marks)
- b. With a neat sketch, explain Metal Inert Gas Welding and mention its advantages and disadvantages. (10 Marks)

OR

- 8 a. Explain atomic hydrogen welding with a neat sketch and mention its advantages and disadvantages. (10 Marks)
- b. With a neat sketch, explain Thermit Welding and mention its advantages and disadvantages. (10 Marks)

Module-5

- 9 a. Explain different types of soldering with neat sketch (any 3). (10 Marks)
b. Explain Radiography method of inspection with neat sketch. (10 Marks)

OR

- 10 a. Explain liquid penetrant inspection method with neat sketch. (10 Marks)
b. Explain ultrasonic inspection method of NDT with neat sketch. (10 Marks)

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