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Third Semester B.E. Degree Examination, Aug./Sept. 2020 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. Classify manufacturing process and explain the factors to be considered while selecting a process for a given application. (10 Marks)
- b. Briefly describe the steps involved in making a casting. (05 Marks)
- c. List various types of patterns and explain the match plate pattern with a neat sketch. (05 Marks)

OR

- 2 a. List different types of sand moulds and discuss skin Dried Sand mould and its advantages and disadvantages. (05 Marks)
- b. What are cores? Briefly explain their significance in sand moulding process. (10 Marks)
- c. What are various casting defects? Explain any four defects with neat sketches. (05 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. Define welding and list out its advantages, limitations and applications. (08 Marks)
- b. Explain with neat sketches, any four welding defects and their causes and remedies. (12 Marks)

OR

- 6 a. With a neat sketch, explain the "Oxy-Acetylene Gas Welding process and mention its advantages and disadvantages. (12 Marks)
- b. Explain Forward and Backward welding techniques. (08 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)

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.

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. Define soldering and explain soldering Iron method with a neat sketch. (10 Marks)
- b. What is Brazing? What are different Brazing methods? Explain Torch Brazing with a sketch. (10 Marks)

OR

- 10 a. With neat sketches, explain Fluorescent Penetrant Inspection. (10 Marks)
- b. Explain Radiography (X-ray) inspection and give its advantages. (10 Marks)

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