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Third Semester B.E. Degree Examination, Feb./Mar. 2022 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. Briefly explain the steps involved in metal casting process with a simple sketches. (10 Marks)
- b. List the types of patterns and explain any 4 types of pattern with sketches. (10 Marks)

OR

- 2 a. What is necessity of pattern allowance? With suitable sketches, elaborate the various types of pattern allowances. (10 Marks)
- b. List the types of cores and explain any 4 types of cores with simple sketches. (10 Marks)

Module-2

- 3 a. Explain jolt squeeze machine used in moulding operation with neat sketch. (06 Marks)
- b. Explain sweep moulding with neat sketch. (06 Marks)
- c. Explain squeeze casting. (08 Marks)

OR

- 4 a. Explain shell moulding, with neat diagram. (10 Marks)
- b. Explain cupola furnace describing various zones informed in it. (10 Marks)

Module-3

- 5 a. Define welding and list out the advantages limitation and applications. (10 Marks)
- b. Explain with neat sketches any four welding defects and their causes and remedies. (10 Marks)

OR

- 6 a. With a neat sketch, explain the oxy acetylene gas welding process and mention its advantages and disadvantages. (10 Marks)
- b. Explain forward and backward welding techniques. (10 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 Tangsten Inert gas welding and mention its advantages and disadvantages. (10 Marks)

OR

- 8 a. Sketch and explain the thermit welding process. (10 Marks)
- b. With a neat sketch, explain the electron beam welding process. (10 Marks)

Module-5

- 9 a. What is brazing? Explain the different methods of brazing with simple sketches. (10 Marks)
- b. What is soldering? Compare the soldering and brazing process. (10 Marks)

OR

- 10 a. Explain the Eddy current method of inspection with suitable sketches. (10 Marks)
- b. What do you understand by NDT? Explain the ultrasonic inspection with a neat sketch. (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.