

CBCS SCHEME

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18IP36

Third Semester B.E. Degree Examination, Dec.2019/Jan.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. Define Manufacturing. Classify various types of Manufacturing Process and cite examples. (10 Marks)
b. What are the common materials used for pattern-making? Discuss their relative merits and demerits. (10 Marks)

OR

- 2 a. Write short notes with sketch on: i) Gated Pattern ii) Sweep Pattern. (08 Marks)
b. What are the main characteristics which a good moulding sand should possess? (06 Marks)
c. What is the function of additives in moulding sand? Explain the effects of various additives used in moulding sand. (06 Marks)

Module-2

- 3 a. What is core? Explain any two types of cores along with sketches. (07 Marks)
b. With an illustration explain sand slinger in mould making process. (05 Marks)
c. With an illustration explain investment mould for casting. (08 Marks)

OR

- 4 a. With an illustration explain CO₂ mould process. (08 Marks)
b. With an illustration explain shell mould process. (08 Marks)
c. List the different types of defects in casting. (04 Marks)

Module-3

- 5 With an illustration explain the following and mention their applications:
a. Pressure die casting process
b. Continuous casting process. (20 Marks)

OR

- 6 a. With an illustration explain electric arc furnace. (08 Marks)
b. With an illustration explain CUPOLA furnace. (12 Marks)

Module-4

- 7 a. What is Welding? Give a broad classification of welding processes. (06 Marks)
b. With an illustration explain submerged arc welding process. (08 Marks)
c. Differentiate between TIG and MIG welding process. (06 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. With an illustration explain Atomic Hydrogen welding process. (08 Marks)
b. Explain different types of flames used in gas welding and mention their applications. (08 Marks)
c. Write a note on forward and backward welding. (04 Marks)

Module-5

- 9 With an illustrations explain the following process:
a. Spot welding
b. Electron beam welding. (20 Marks)

OR

- 10 With an illustration explain the following inspections used in welding and casting process.
a. Ultrasonic inspection
b. Radiography technique. (20 Marks)

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