

CBCS SCHEME



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18ME35B/18MEB305

Third Semester B.E. Degree Examination, Dec.2019/Jan.2020

Metal Casting and Welding

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Explain in detail any four types of pattern allowances. (10 Marks)
b. With neat sketches, explain investment moulding process. (10 Marks)

OR

- 2 a. With neat sketches, explain shell moulding process. (10 Marks)
b. Explain Open Riser and Blind Riser with neat sketches. (10 Marks)

Module-2

- 3 a. With a neat sketch, explain the constructional features and working principle of direct arc electric furnace. (10 Marks)
b. With neat sketches, explain the steps involved in slush casting process. (10 Marks)

OR

- 4 a. Explain the working of gas fired pit furnace and resistance furnace with neat sketches. (12 Marks)
b. With a neat sketch, explain Continuous Casting Process. (08 Marks)

Module-3

- 5 a. Explain Induction degassing and stream droplet degassing methods with neat sketches. (12 Marks)
b. With neat sketches, explain any four casting defects. (08 Marks)

OR

- 6 a. Describe the need of directional solidification in casting. (06 Marks)
b. State the advantages and limitations of casting process. (08 Marks)
c. With a neat sketch, explain stir casting process. (06 Marks)

Module-4

- 7 a. With a neat sketch, explain metal inert gas welding process. Also state its advantages and limitations. (10 Marks)
b. With a neat sketch, explain electron beam welding process. Also state its advantages and limitations. (10 Marks)

OR

- 8 a. State the advantages and limitations of welding processes. (06 Marks)
b. With a neat sketch, explain atomic hydrogen welding process. (08 Marks)
c. With a neat sketch, explain explosive welding process. (06 Marks)

Module-5

- 9 a. Explain the different zones in welding with a neat sketch. (06 Marks)
b. Differentiate between brazing and soldering. (08 Marks)
c. With a neat sketch, explain Ultrasonic Inspection method. (06 Marks)

OR

- 10 a. With neat sketches, explain any four welding defects. (08 Marks)
b. With neat sketches, explain the types of flames that can be obtained during oxy-acetylene welding process. (06 Marks)
c. With neat sketches, explain fluorescent (penetrant) particle inspection method. (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.