

CBCS SCHEME

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17MA35

Third Semester B.E. Degree Examination, Dec.2018/Jan.2019 Foundry Technology

Time: 3 hrs.

Max. Marks: 100

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

Module-1

- 1 a. What is casting? Explain the basic steps in making castings. (10 Marks)
b. Explain the fundamentals of solidification in alloys. (10 Marks)

OR

- 2 a. Compare metal casting with metal joining. (07 Marks)
b. List the advantages and limitations of casting process. (07 Marks)
c. Explain Chvorinov's rule. (06 Marks)

Module-2

- 3 a. With a neat sketch, explain Cupola furnace. (10 Marks)
b. Explain the factors to be considered in selection of pattern material and list the desirable properties of good pattern material. (10 Marks)

OR

- 4 a. With neat sketch, explain any five types of patterns. (10 Marks)
b. With a neat sketch, explain electric arc furnace. (10 Marks)

Module-3

- 5 a. With a neat sketch explain any 5 types of cores. (10 Marks)
b. With a sketch explain the Jolt-Squeeze machine. (10 Marks)

OR

- 6 a. Write notes on: (i) Loam molding (ii) Stack molding (10 Marks)
b. Explain core making. (10 Marks)

Module-4

- 7 a. Explain investment molding. (10 Marks)
b. With sketch explain centrifugal casting. (10 Marks)

OR

- 8 a. With a neat sketch explain continuous casting. (10 Marks)
b. Write notes on:
i) Hot chamber process
ii) Cold chamber process in pressure die casting. (10 Marks)

Module-5

- 9 a. Explain casting design considerations. (10 Marks)
b. With sketch explain any five casting defects. (10 Marks)

OR

- 10 a. Explain inspection and NDT methods for castings. (10 Marks)
b. Explain the application of computers in casting and software available for casting simulation. (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.