

CBCS Scheme

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15MA35

Third Semester B.E. Degree Examination, Dec.2016/Jan.2017 Foundry Technology

Time: 3 hrs.

Max. Marks: 80

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

Module-1

- 1 a. Define casting process and what are the steps involved in making a casting. (06 Marks)
b. List the advantages and disadvantages of casting process. (06 Marks)
c. List the important applications of casting process. (04 Marks)

OR

- 2 a. What is nucleation and explain different types of nucleation process? (06 Marks)
b. With a neat sketch, explain directional and progressive solidification process. (06 Marks)
c. Write a note on Chvorinov's rule. (04 Marks)

Module-2

- 3 a. Draw the neat sketch of CUPOLA and briefly explain different zones of cupola. (10 Marks)
b. List and explain any one type of CRUCIBLE furnace. (06 Marks)

OR

- 4 a. What is a pattern and list the important functions of a pattern? (04 Marks)
b. Explain different types of allowances made on a pattern. (08 Marks)
c. Briefly explain core box. (04 Marks)

Module-3

- 5 a. Explain molding sand binders. (04 Marks)
b. List and explain any one type of molding machine. (08 Marks)
c. List the important properties of molding sand. (04 Marks)

OR

- 6 a. List and explain any one type of gate. (06 Marks)
b. Explain green sand molding process. (06 Marks)
c. Briefly, explain different types of chills used in molding process. (04 Marks)

Module-4

- 7 a. With a neat sketch, explain the various steps involved in shell molding process. (10 Marks)
b. List the advantages and disadvantages of investment casting process. (06 Marks)

OR

- 8 a. Sketch and explain continuous casting process. (08 Marks)
b. What are the methods used for removal of gates and risers? (04 Marks)
c. Briefly, explain the different foundry process used for making Al-Si alloys. (04 Marks)

Module-5

- 9 a. Briefly, explain different molding processes used for making gray-iron castings. (08 Marks)
b. Explain in brief, non-destructive testing process used in inspection of castings. (04 Marks)
c. List the different defects produced in casting and what are the causes for it. (04 Marks)

OR

- 10 a. What is foundry mechanization and list the advantages of it? (06 Marks)
b. List different types of material handling equipments used in foundry. (06 Marks)
c. Explain the importance of application of computers and necessary softwares in casting process. (04 Marks)

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