

22620

M.Tech. 1st Semester (MAE) CBCS Scheme

Examination, December-2018

FOUNDRY TECHNOLOGY

Paper-MTMA 21D3

Time allowed : 3 hours]

[Maximum marks : 100

Note: Attempt any five questions. Question No. 1 is compulsory and one question from each of the four sections.

1. Discuss the following: 5×4
- (a) Chills and chaplets
 - (b) Fluidity measurement.
 - (c) Knock off feeders and wash burn cores.
 - (d) Use of robots in foundry.

Unit-I

2. (a) Discuss the types of metals and alloys commonly used in foundry? How can you classify them? 10
- (b) Discuss the construction and working of cupola furnace in detail. 10
3. (a) What is meant by directional solidification? Explain why directional solidification is preferred in foundries. 10
- (b) Discuss the construction and working of open hearth furnace in detail. 10

22620-P-2-Q-9 (18)

[P.T.O.]

Unit-II

4. Discuss in detail the mold handling equipment used at various stages of molding in a mechanized foundry. 20
5. (a) Discuss various types of gates with neat sketches along with their applications. 10
- (b) Discuss the concept of increasing riser efficiency and promoting directional solidification. 10

Unit-III

6. (a) Explain gravity die casting in detail with neat sketch with applications and advantages over sand casting. 10
- (b) Discuss cleaning operation and equipment of casting in detail. 10
7. (a) Explain continuous casting and its types in detail with applications. 10
- (b) Discuss inspection procedure of casting in detail. 10

Unit-IV

8. (a) Discuss various salvaging techniques of castings. 10
- (b) Explain the heat treatment process of Gray iron castings. 10
9. (a) Discuss the use of control charts in quality control of castings. 10
- (b) Discuss the process of pollution control in a foundry. 10