



C16-MET-403

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BOARD DIPLOMA EXAMINATION, (C-16)

MARCH / APRIL — 2021

DMETE — FOURTH SEMESTER EXAMINATION

FOUNDRY TECHNOLOGY

Time : Three Hours]

[Maximum Marks : 80

PART-A

3×10=30

- Instructions :
- (i) Answer all questions.
 - (ii) Each question carries three marks.
 - (iii) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1. Define the following terms :

(a) Foundry

(b) Casting

2. Define Pattern allowance.

3. State the purpose of sand conditioning

4. State the functions of chaplets.

5. State any three differences between centrifugal and semi-centrifugal casting.

6. List out the different types of moulding process and special casting techniques.

7. State the advantages of machine moulding.

8. Draw the neat sketch of mould boxes Cope-Drag-Check.

9. Define Pressurised and Unpressurised gating system.

10. State the function of Pouring basin and Sprue

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- Instructions :
- (i) Answer any **five** questions.
 - (ii) Each question carries **ten** marks.
 - (iii) Answers should be comprehensive and the criterion for valuation is the content but not the length of the answer.

11. State the relative advantages and limitations of the given pattern making materials : 10
- (a) Wood
 - (b) Metal
 - (c) Quick setting compounds
12. Explain the properties of good moulding sand : 3+3+2+2
- (a) Permeability
 - (b) Flowability
 - (c) Thermal expansion
 - (d) Thermal stability
13. Explain the process of Core making with respect to Core making and Core backing. 5+5
14. Explain the Hot Chamber Die casting process (goose neck type) with a neat legible sketch and their applications and limitations. 10
15. Explain with a neat sketch the carbon dioxide process. 10
16. Explain with a neat sketch the operation of Jolt-Squeeze roll over draw machine. 10
17. Describe the factors involved in Riser design : 4+3+3
- (a) Modulus (Location of riser)
 - (b) Size and shape of riser
 - (c) Importance of (V/A) ratio
18. Explain the following defects with remedial measures : 4+3+3
- (a) Pin holes
 - (b) Rough surface
 - (c) Porosity

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