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BOARD DIPLOMA EXAMINATION, (C-09)

MARCH/APRIL—2014

DMET—FOURTH SEMESTER EXAMINATION

FOUNDRY TECHNOLOGY

Time : 3 hours |

| Total Marks : 80

PART—A

3×10=30

- Instructions :** (1) Answer all questions.
 (2) Each question carries three marks.
 (3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1. Define (a) pattern and (b) casting. 1½+1½
2. Classify the foundries. 3
3. What are the various casting defects? 3
4. State the uses of (a) facing sand and (b) backing sand. 1½+1½
5. List the ingredients in a core sand. 3
6. State the function of cores. 3
7. Differentiate between true centrifugal and semicentrifugal casting. 3
8. Draw the mold box scope and drag. 3

/3512

1

[Contd.]

9. State the uses of cleaner and riddle.

1½+1½

10. Define gating ratio.

3

PART-B

10×5=50

Instructions : (1) Answer any five questions.
(2) Each question carries ten marks.
(3) Answers should be comprehensive and the criterion for valuation is the content but not the length of the answer.

11. Explain the various pattern allowances. [REDACTED] 10

12. Explain the following properties of moulding sand : 2½×4=10
Permeability, Refractoriness, Green strength, Hot strength

13. Explain carbon dioxide process. 10

14. Explain investment casting process. 10

15. Explain with neat sketch, operation of sand slinger. 10

16. (a) Define the Surface-tension, density and viscosity. 5
(b) State the various energies and total energy. 5

17. State the effect of following : 2½×4=10
(a) Pouring rate
(b) Shrinkage
(c) Pouring temperature
(d) Turbulence-laminar steady flow

18. Explain any three casting defects, causes and remedies. 10
