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C16-MET-405

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BOARD DIPLOMA EXAMINATION, (C-16)

MARCH / APRIL — 2021

DMETE — FOURTH SEMESTER EXAMINATION

STEEL MAKING

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 three simple sentences.

1. List the raw materials required for Steel making.
2. State the general principles of Open hearth steel making.
3. Mention any three advantages of using pure oxygen in steel making.
4. List the advantages of L. D. process.
5. Mention any three disadvantages of Electric arc furnace.
6. State the importance of Carbide slag.
7. Classify the degassing processes.
8. Classify Secondary Steel making processes.
9. List the ingot defects.
10. Mention the purpose of using Ferro-Alloys.

PART-B

10 × 5 = 50

- 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. Explain the Basic Bessemer process with respect to :
 - (a) Converter
 - (b) Selection of Pig Iron
 - (c) Blow
- 12. Explain Twin-hearth steel making process with neat diagram.
- 13. Explain the constructional details of L.D. converter and design of the lance.
- 14. Explain the melting practice in Induction furnace.
- 15. Explain stream degassing with legible sketch.
- 16. Explain the following remelting processes :
 - (a) ESR
 - (b) Vacuum arc remelting
- 17. Explain the three methods of teeming.
- 18. Explain the production of Ferro-Silicon.

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