



12009-met-052
C09-MET-404

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BOARD DIPLOMA EXAMINATION, (C-09)

OCT/NOV-2014

DMET-FOURTH SEMESTER EXAMINATION

STEEL MAKING

Time : 3 hours]

[Total Marks : 80

PART-A

3×10=30

Instructions : (1) Answer all questions.
(2) Each question carries three marks.
shall not exceed five simple sentences.

1. Write the limitations of Bessemer process.
2. List out recent trends of open-hearth process of steelmaking.
3. Write the advantages of using pure oxygen in steelmaking.
4. List out the types of oxygen steelmaking processes.
5. Define carbide slag. Write its importance.
6. Write the raw material required for electric furnace of steelmaking.
7. List out various secondary steelmaking processes.
8. Write the objectives of degassing the liquid steel.
9. Define killed steel and semikilled steel.
10. Write any three advantages of continuous casting of liquid steel.

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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 steelmaking by acid Bessemer process w.r.t. (a) raw materials, (b) converter lining, (c) principle and process, (d) properties of steel produced. 10
12. Explain the chemistry of basic open-hearth process with the help of neat diagram. 10
13. Explain the LD process of steelmaking w.r.t. (a) raw materials, (b) converter lining, (c) principle and process, (d) properties of steel produced. 10
14. Explain stainless steelmaking by electric arc furnace w.r.t. (a) raw materials, (b) lining details, (c) electrode materials, (d) process. 10
15. Describe VOD process of secondary steelmaking in detail with the help of neat sketch. 10
16. Explain the principle of D-H process of vacuum treatment with the help of neat diagram. 10
17. (a) List out various ingot defects. 4
(b) Explain blow-holes and hair-line cracking. 6
18. (a) Explain in detail the curved mold-type continuous casting machine with neat sketch. 8
(b) What are the advantages of it? 2
