



C20-MET-406

7495

BOARD DIPLOMA EXAMINATION, (C-20)  
OCTOBER/NOVEMBER—2023  
DMET – FOURTH SEMESTER EXAMINATION  
STEEL MAKING

Time : 3 Hours ]

[ Total Marks : 80

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**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. State the limitations of Bessemer process.
2. State the regeneration principle involved in open hearth.
3. List any three advantages of using pure oxygen as oxidizing agent.
4. State the principle of OLP process.
5. Define carbide slag.
6. List the advantages of electric arc furnace.
7. State the importance of degassing the steels.
8. List the advantages of ESR process.
9. Define the terms killed steels and rimmed steels.
10. List any three defects of continuous cast products.

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

**11.** (a) Explain the construction and lining of open hearth process with a diagram.

**(OR)**

(b) Explain the basic Bessemer process w.r.t converter, lining and chemistry.

**12.** (a) Explain the LD process of steel making with chemical reactions.

**(OR)**

(b) Explain the KALDO process of steel making.

**13.** (a) Explain the developments in continuous steel making processes.

**(OR)**

(b) Explain the single slag practice in arc furnace.

**14.** (a) Explain the A.O.D process with a diagram.

**(OR)**

(b) Explain the R-H process of degassing with a diagram.

**15.** (a) Explain various teeming methods with diagrams.

**(OR)**

(b) Explain the ingot defects blow holes and segregation.

**PART—C**

10×1=10

- Instructions :** (1) Answer the following question.  
(2) The question carries **ten** marks.  
(3) Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer.

**16.** How the vertical mold-horizontal discharge continuous casting machine is better than vertical casting machine?

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