

17208

21819

2 Hours / 50 Marks

Seat No.

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- Instructions :**
- (1) All Questions are *compulsory*.
 - (2) Answer each next main Question on a new page.
 - (3) Illustrate your answers with neat sketches wherever necessary.
 - (4) Figures to the right indicate full marks.
 - (5) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. Attempt any NINE :

18

- (a) Define :
 - (i) Ore
 - (ii) Metallurgy
- (b) Name the products of blast furnace.
- (c) Define steel. Give its classification on the basis of percentage of carbon.
- (d) Define corrosion. Give its types.
- (e) Why galvanised containers cannot be used for storing food stuff ?
- (f) Define paint. Write its two constituents.
- (g) Draw neat and labelled diagram of galvanising process.
- (h) Define Soft water and Hard water.
- (i) Write characteristics of Potable water.

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- (j) Define sterilization and sedimentation.
- (k) Define Portland cement. Give its chemical composition.
- (l) Write two uses of quick lime.

2. Attempt any FOUR :

16

- (a) Give chemical reactions taking place in the zone of reduction of blast furnace.
- (b) Describe the process used for preparation of steel from pig iron using open hearth process.
- (c) Define heat treatment of steel. Write three purposes of hardening process.
- (d) Explain hydrogen evolution mechanism of immersed corrosion with suitable diagram.
- (e) Explain factors affecting rate of atmospheric corrosion.
- (f) Explain Tinning process with labelled diagram.

3. Attempt any FOUR :

16

- (a) Explain various types of impurities present in water.
 - (b) Explain ill-effects of hard water in
 - (i) paper industry
 - (ii) sugar industry
 - (c) Explain four disadvantages of scale and sludge formation in boiler.
 - (d) What is zeolite ? Explain zeolite process of softening of hard water with labelled diagram.
 - (e) Explain in brief Ion-exchange method with labelled diagram.
 - (f) Explain four constituents of cement. Write their functions.
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