

17203

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) Assume suitable data, if necessary.
 - (6) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. Attempt any NINE :

18

- (a) Name the products of blast furnace.
- (b) List two ores of iron with their chemical formula.
- (c) Write composition of ALNICO.
- (d) Give reason why is an alloying element chromium added to steel.
- (e) Define Electrochemical corrosion.
- (f) State two factors affecting immersed corrosion.
- (g) List four constituents of paint.
- (h) Give reason why galvanised containers are not used for food-stuffs.
- (i) Define fuels. How are they classified ?
- (j) Give composition of LPG.
- (k) Write two applications of Biodiesel.
- (l) Define Lubricant. Write its types.

[1 of 2]

P.T.O.

2. Attempt any FOUR :**16**

- (a) Write the chemical reactions taking place in the zone of reduction of blast furnace.
- (b) How steel is classified on the basis of carbon content ? Give composition, properties and uses of different carbon steels.
- (c) Give the difference between annealing and normalising.
- (d) State four characteristics of good fuel.
- (e) Differentiate between solid, liquid and gaseous fuel.
- (f) Give composition, properties and applications of CNG.

3. Attempt any FOUR :**16**

- (a) Describe the mechanism of electrochemical corrosion by evolution of hydrogen gas.
 - (b) Distinguish between galvanizing and tinning.
 - (c) Name and explain the process of coating small and irregular shaped iron articles to protect from corrosion.
 - (d) Explain the fluid film lubrication with labelled diagram.
 - (e) State four functions of lubricants.
 - (f) Define the terms :
 - (i) Viscosity
 - (ii) Saponification value
 - (iii) Oiliness
 - (iv) Cloud point
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