

17211

11920

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 of the following :

18

- (a) Write any two ores of aluminium with their chemical formulae.
- (b) Why galvanised container are not used for storage of food stuff ?
- (c) Write any two applications of copper.
- (d) Define Corrosion. Mention the types of Corrosion.
- (e) Name the different types of oxide films and mention the most protective oxide film.
- (f) Define Paint. Name the constituents of paint.
- (g) Distinguish between primary cell and secondary cell. (any 2 points)
- (h) Why does a dry cell become dead after a long time, even if it has not been used ?
- (i) Distinguish between dielectrics and Insulators. (any 2 points)

- (j) Give two applications of lead-acid storage cell.
- (k) Write properties and application of Tinmann's solder.
- (l) Mention two applications of silicon fluid.

2. Attempt any FOUR of the following :

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- (a) Explain the electrolytic refining of aluminium.
- (b) Write the process of smelting of copper ore with labelled diagram.
- (c) Explain the construction and working of Daniel cell.
- (d) Explain hydrogen evolution mechanism of electrochemical corrosion.
- (e) Distinguish between Galvanising and Tinning. (any four points)
- (f) Write four applications of electrically conducting polymers.

3. Attempt any FOUR of the following :

16

- (a) Describe the process of Sherardizing of protection of metal from corrosion with a neat labelled diagram.
 - (b) Describe construction and working of hydrogen-oxygen fuel cell.
 - (c) Write properties and applications of epoxy resin as insulating material.
 - (d) Explain construction and working of Ni-Cd cell.
 - (e) Write composition properties and applications of rose metal.
 - (f) Define the following terms :
 - (i) Ohm's law
 - (ii) Specific conductance
 - (iii) Electrolytic cell
 - (iv) Battery
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