



# 17211

**16172**

**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.*

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|------------------------------------------------------------------------------------|-----------------|
| <b>1. Attempt any nine of the following :</b>                                      | <b>(9×2=18)</b> |
| a) Write any two important ores of Copper with Chemical formula.                   | 2               |
| b) What is the action of air on Copper ?                                           | 2               |
| c) Write the action of HCl on Aluminium.                                           | 2               |
| d) Define atmospheric corrosion with one example.                                  | 2               |
| e) Write four characteristics of good paint.                                       | 2               |
| f) Why tinned container are preferred over galvanized container for food storage ? | 2               |
| g) Show the two point of similarity between galvanizing and sherardizing.          | 2               |
| h) Define primary cell with example.                                               | 2               |
| i) Draw a neat labelled diagram of H <sub>2</sub> – O <sub>2</sub> fuel cell.      | 2               |
| j) State the properties of liquid crystal polymer.                                 | 2               |
| k) Name two types of adhesives and give their uses.                                | 2               |
| l) Write two applications of Teflon.                                               | 2               |
| <b>2. Attempt any four of the following :</b>                                      | <b>(4×4=16)</b> |
| a) Explain process of smelting of copper ore in the blast furnace.                 | 4               |
| b) Describe electrolytic reduction of alumina.                                     | 4               |
| c) Write the composition and properties of Wood's metal.                           | 4               |

**P.T.O.**



	<b>Marks</b>
d) Write the properties and application of epoxy resin.	<b>4</b>
e) Describe the Dry Cell with application.	<b>4</b>
f) Explain the construction and working of Lead – Acid storage cell with the help of diagram.	<b>4</b>
<b>3. Attempt any four of the following :</b>	<b>(4×4=16)</b>
a) Explain any four factors affecting the rate of electrochemical corrosion.	<b>4</b>
b) Write the different types of oxide films formed on the metal surface. Explain the oxide film which is more protective against corrosion.	<b>4</b>
c) Differentiate between galvanizing and tinning.	<b>4</b>
d) Explain the construction and working of Nickel-Cadmium storage cell.	<b>4</b>
e) Give the difference between Primary cell and Secondary cell.	<b>4</b>
f) Show the fuel cell differ from battery. What are the advantages of fuel cell ?	<b>4</b>

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