

17103

11920

2 Hours / 50 Marks

Seat No.

--	--	--	--	--	--	--	--

- 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 of the following :

18

- (a) (i) Explain : why an atom is electrically neutral.
- (ii) Draw the shape of 's' Orbital.
- (b) State any four properties of 'Isobars'.
- (c) Define the term 'Positive electrovalency with an example.
- (d) Distinguish between stronger electrolyte & weak electrolyte.
- (e) Why blue colour of copper sulphate solution turns to colourless after its electrolysis using platinum electrode ?
- (f) State 'Faraday's First Law'.
- (g) Calculate the pH of 0.1 molar sulphuric acid. Assume complete dissociation.
- (h) State any four properties of metal.
- (i) Explain the terms : Gangue and ore.
- (j) Give the composition of gun metal.

[1 of 2]

P.T.O.

- (k) Define the following terms :
- (i) Thermosetting plastics
 - (ii) Thermosoftening plastic
- (l) Give any four examples of synthetic rubber.

2. Attempt any FOUR of the following :

16

- (a) Calculate the atomic number and atomic mass of an atom containing 19 electrons and 20 neutrons. What should be its electrochemical nature ? Answer with reason.
- (b) Describe the formation of MgO molecule with diagram and name the type of bonding.
- (c) State any four postulates of Bohr's Atomic theory.
- (d) Explain the mechanism of electrolysis of aqueous copper sulphate solution, using platinum electrodes with a neat labelled diagram.
- (e) Define Degree of Ionisation. Explain the factors affecting the degree of Ionisation.
- (f) How the electroplating is carried out ? Explain with a neat labelled diagram.

3. Attempt any FOUR of the following :

16

- (a) Name the physical method used for concentration of sulphide ore. Explain it with diagram.
 - (b) Distinguish between Calcination and Roasting.
 - (c) Explain in detail the purpose of making alloys. (any four)
 - (d) What is 'Condensation Polymerisation' ? Explain the formation of Bakelite plastic.
 - (e) Describe the process of 'Vulcanisation of rubber'. Why is it necessary to vulcanize rubber ?
 - (f) Write applications of the following :
 - (i) Glass wool
 - (ii) Thermacole
-