

(29)

DAE Electronics
1st year

Model Paper "Applied Chemistry"
For DAE (Ch-132) 1st Year Examination

Objective

Time: 15 Minutes
Marks: 10

Note: Write your Roll No. in space provided. Over-writing, Cutting, Erasing, Using lead pencil will result in loss of marks. Supervisory staff is requested to attach it with the answer book.

(10 x 1) = 10

Q.1 (i) In SI unit system the Fundamental unit of Intensity of light is

- (a) Ampere (b) Candella (c) Bell (d) Watt

(ii) The Chemical Formula of Aluminium sulphate is

- (a) $AlSO_4$ (b) Al_2SO_4 (c) Al_3SO_4 (d) $Al_2(SO_4)_3$

(iii) The vertical lines in the periodic table are called

- (a) Groups (b) Periods (c) Blocks (d) Series

(iv) The nature of covalent bond present in Nitrogen Molecule is

- (a) Single covalent (b) Double covalent (c) Triple covalent (d) Co-ordinate covalent

(v) The compound which cause permanent hardness in water is

- (a) $CaSO_4$ (b) Na_2SO_4 (c) $NaCl$ (d) $CaCO_3$

(vi) The Basicity of Acetic Acid (CH_3COOH) is

- (a) One (b) Two (c) Three (d) Four

(vii) In German Silver alloy the %age of silver is

- (a) 50% (b) 20% (c) 30% (d) Zero%

(viii) C_3O_2 is an example of

- (a) Normal oxide (b) Peroxide (c) Sub Oxide (d) Super-Oxide

(ix) Air is an example of a gaseous

- (a) Insulator (b) Conductor (c) Semiconductor (d) Super conductor

(x) The Etching Reagent Hydro Floric Acid (HF) is used for Etching of

- (a) Glass (b) Copper (c) Silver (d) Iron

(30)

Model Paper "Applied Chemistry"
For DAE (Ch-132) 1st Year Examination

Subjective

Time: 02:15 Hours
Marks: 40

Section-I

Q.2 Write short answers to any **TWELVE (12)** of the following questions. (12 x 2) = 24

- (i) What are Derived units? Give examples.
- (ii) Define Radical, Valency, Formula and Chemical Equation.
- (iii) State postulates of Bohr's Atomic Model.
- (iv) Differentiate between Atomic Mass and Atomic Number.
- (v) Define Co-Ordinate Covalent Bond. Give one example.
- (vi) Differentiate between Isotopes and Isobars.
- (vii) How temporary Hardness of water is removed by Clark's method.
- (viii) What are the disadvantages of scales formation in Boiler.
- (ix) State four important properties of Alpha Rays.
- (x) Name four methods to prevent Corrosion.
- (xi) State general properties of Alloys.
- (xii) Differentiate between oxidation and reduction with examples.
- (xiii) Define Faradays Laws of electrolysis. Write their mathematical forms.
- (xiv) Define conductors, semiconductors and insulators. Give examples in each case.
- (xv) Describe Rusting of iron with chemical reactions.
- (xvi) Define Etching. Name four Etching reagents.
- (xvii) What are the aims of Etching. Name two Etching processes.
- (xviii) Name six gaseous insulators.

Section-II

Note: Attempt any **TWO (2)** questions.

(2 x 8) = 16

- Q.3 (a)** Discuss four types of chemical reactions with examples. (4)
- (b) Write general characteristics of Periods and Groups of the periodic table (4)
- Q.4 (a)** Discuss different scales of measuring Hardness of water. (4)
- (b) Define salts. Give their classification with examples. (4)
- Q.5** What are Energy Bands. Discuss Conduction in Conductors, Semiconductors and Insulators with the help of Band Theory. Support your answer with diagram. (8)