

**Avinashilingam Institute for Home Science and Higher Education for Women
Coimbatore-641 043
Bachelor's Degree Examination – November 2017
III Semester**

**Class: II UG
Major :Physics**

**Time :3 hours
Max.Marks: 100**

**14) 15BPHIO3-DSE-III- Chemistry Theory for Physics
Part-A
10x1=10**

Choose the correct answer

1. Which one is easily volatile chemical?
a. HCl b. NaCl c. CuSO₄ d. Ether
2. In the titration of HCl against NaOH, the suitable indicator Used is
a. Methyl Orange b. EBT c. Phenolphthalein d. Indigo
3. Plastic Buckets are easily broken because the molecules are held together by
a. Vander waal's forces b. Metallic bond c. Ionic bond d. Co-valent bond.
4. The bond angle in ethylene molecule is
a. 144° b. 180° c. 120° d. 90°
5. Among the following which has the highest electro negativity value?
a. Cl b. Br c. F d. I
6. The valency of carbon is
a. 2 b. 4 c. 3 d. 4
7. Which one is condensation polymer?
a. Terelene b. PVC c. Polythene d. Polybutadiene.
8. [Pt (NH₃)₂ Cl₂] exhibits
a. Linkage isomerism b. Ionization isomerism c. Cis–trans isomerism
d. Co – ordination isomerism
9. Enthalpy is represented by the symbol
a. S b. H c. W d. G
10. The Conductance of a Solution Containing 1 mole of the Electrolyte is called
a. Specific conductance b. Conductance c. equivalent Conductance d. Molar Conductance

Part-B 5X6=30

Answer the following

Answer should not exceed 400 words or two pages

- 11.a. Discuss about measuring , Making up and transferring liquids and dilute solutions in chemistry Laboratory.
(or)
- 11.b. What is mean by P^H of Solution? Explain the Preparation of buffer Solution.
- 12.a. Write a Short Note on chemistry of water .
(or)
- 12.b. State and explain Hund's rule, Aufbau principle and Pauli's exclusion principle.
- 13.a. What are organic Compounds? How are they Classified? Give examples for each type.
(or)
- 13.b. What are s and p Block elements? Explain their electronic Configuration, Size, and Properties.
- 14.a. What are ligands? How are they Classified? Give Examples. Explain the EAN Concept?
(or)
- b. What are Polymers? How are they Classified? Give examples. Mention their Applications.
- 15.a. State and explain Hess's law of Constant heat of Summation. Give its Applications.
(or)
- b. Define is mean by Conductance, equivalent Conductance, molar Conductance and Specific Conductance?

Part C **5x12=60**

Answer the following

Answer should not exceed 800 words or four pages

- 16.a. Discuss about handling of Flammable, health hazardous, Corrosive chemicals, acids, bases and salts in a chemical Lab. (or)
- b. Explain mean by normality, molality, Molarity and mole Fraction of solutions?
- 17.a. (i) Explain sp and sp^2 hybridization with the help of simple organic molecules. (6)
(ii) What is mean by Carbo cations, Carbanions and free radicals? Explain their Stability. (6)
(or)
- b. Explain various types of chemical bonding with suitable examples.
- 18.a. Describe the general characteristics of d – block elements. (or)
b. describe the general characteristics of f – block elements.
- 19.a. Explain Werner's Co – ordination theory and Sidgwick's theory . (or)
- b. Describe the optical isomerism exhibited by 4 and 6 Co – ordinated compounds.
- 20.a. State and explain Kohlrausch's law and its applications. (or)
- b.(i) Derive Kirchoff's equations. (8)
(ii) Define Bond energy and Enthalpy of neutralization. (4)
