





# APPLIED SCIENCES HSSC-I

**Time allowed: 2:20 Hours**

**Total Marks Sections B and C: 40**

**NOTE:** Answer any thirteen parts from Section 'B' and any two questions from Section 'C' on the separately provided answer book. Use supplementary answer sheet i.e. Sheet-B if required. Write your answers neatly and legibly.

## SECTION – B (Marks 26)

**Q. 2 Answer any THIRTEEN parts. The answer to each part should not exceed 2 to 4 lines. ( 13 x 2= 26 )**

- (i) Define Boyle's law and Dalton's law of partial pressure.
- (ii) Write the inter-conversion formulas for centigrade and Fahrenheit scales of temperature.
- (iii) Write three factors which affect solubility.
- (iv) How many groups are there in the periodic table, also illustrate their valencies?
- (v) Define osmosis and diffusion with one difference.
- (vi) Define Hydrolysis reaction with one example.
- (vii) State three useful clinical applications of an acid.
- (viii) Write two main properties of a solution.
- (ix) Define power, also illustrate its formula and standard international unit.
- (x) Differentiate between conductor and insulator with one example of each.
- (xi) Define pH of a solution and its expression.
- (xii) What is Archimedes principle?
- (xiii) Define convection and conduction of heat.
- (xiv) Differentiate between mixture and compound.
- (xv) Write three uses of chlorine.
- (xvi) Name any three types of chemical reactions with example of each.
- (xvii) Differentiate between scalars and vectors.

## SECTION – C (Marks 14)

**Note:** Attempt any TWO questions. All questions carry equal marks.

**(2 x 7 = 14)**

**Q. 3** Discuss the common properties of Acids and Bases.

**Q. 4 a.** What is the importance of salts in human body?

**b.** If a force of 20N is applied to push a patient over a distance of 3m in its direction, what will be the magnitude of the work?

**Q. 5** Write all good and bad effects of friction, in detail.