

PAPER – B (Objective Type)

Write Serial No. of your answer book \_\_\_\_\_

Time Allowed : 15 Minutes

Maximum Marks : 10

Signature of Deputy Supdt. \_\_\_\_\_

Note : Use this paper to write the answers to the objective questions. No mark will be awarded for cutting, over-writing or using a pencil. This paper must be tagged with the answer-book.

1. Some possible answers to each statement are given below. Tick (✓) mark the correct answer : 10

(i) 40 gms / 100 ml of NaOH is : ( 1 N , 2 N , Non solution. 10 N )

(ii) 6.3 gms / lit of oxalic acid is :

( N / 10 solution. N / 2 solution. N / 5 solution. N / 100 solution. )

(iii)  $\text{Na}_2\text{CrO}_4$  is : ( Soluble in water. Insoluble in water. Sparingly soluble in water.

All of these. )

(iv) KCl is a : ( Base. Acid. Salt. None of these )

(v) Baking soda is : ( NaOH , NaCl ,  $\text{NaHCO}_3$  , HCl )

(vi) Copper is an : ( Electrolyte. Conductor. Non electrolyte. None of these. )

(vii) Light is produced due to jump up and down of :

( Electron. Proton. Neutron. None of these. )

(viii) Sound produces :

( Pressure. Heat. Impulse. Light. )

(ix) Electrons are found in :

( Orbits. photons. elements. All of these. )

(x) Pressure is : ( Force. Motion. Wave. Light. )

Roll No \_\_\_\_\_ ( To be filled in by the candidate)

**APPLIED SCIENCES ( PHYSICS & CHEMISTRY )**

✓ PAPER – B ( Essay Type )                      207-( FIRST YEAR )

Time Allowed : 1.45 hours

Maximum Marks : 40

Note : All questions are/attempted on the answer book.

**SECTION – I**

2. Write any TWELVE (12) short answers of the following questions :

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- (i) How you can prepare oxygen from water?
- (ii) What do you understand by term distillation? How this process is used for purification of water?
- (iii) Define acid, base and salt with example.
- (iv) Describe briefly the process of titration.
- (v) Differentiate between :
  - (a) Heat and temperature.
  - (b) Pressure and force
  - (b) Speed and velocity.
  - (d) Static and current electricity.
- (vi) Describe Boyle's law with its application in daily life.
- (vii) Define Charle's Law.
- (viii) What do you understand with the term radioactivity? Why some elements are radioactive, whereas some elements are not radioactive?
- (ix) Define law of inertia.
- (x) Define the velocity, speed, gravity, specific gravity.
- (xi) Write short notes on lipids.
- (xii) What do you know about magnetic and magnetism?
- (xiii) Differentiate between :
  - (a) Coulomb's law.
  - (b) Ohm's law.
- (xiv) What do you understand by the terms normality, molarity and molality of the solutions? Give examples.
- (xv) Define the terms : ion, empirical formula, gram, atom, mole, normality.
- (xvi) Write a short note on filtration.
- (xvii) Describe briefly the process of fractional distillation.

**SECTION – II**

Note : Attempt any TWO questions.

3. Define laws of motion with examples. 8
4. Define the term solution. Discuss different types of solutions with example. 8
5. Explain Pascale's law of pressure. Explain the working hydraulic press as an example of its application. 8