Roll No. | | | | | | |

Answer Sheet No._____ 81

Sig. of Candidate._____

Sig. of Invigilator._____

# ELEMENTARY CHEMISTRY AND CHEMICAL PATHOLOGY HSSC–I

## SECTION – A (Marks 10)

**Time allowed: 10 Minutes**

**NOTE:- Section–A is compulsory. All parts of this section are to be answered on the question paper itself. It should be completed in the first 10 minutes and handed over to the Centre Superintendent. Deleting/overwriting is not allowed. Do not use lead pencil.**

**Q. 1 Circle the correct option i.e. A / B / C / D. Each part carries one mark.**

(i) Which of the following is a monobasic acid?

A. Succinic acid B. Oxalic acid

C. Nitric acid D. Sulphuric acid

(ii) Phenolphathalein changes its colour at the pH of_____

A. 7 B. 1.8

C. 4.5 D. 8 to 9.5

(iii) The technique used for separating mixture of inks is called_____

A. Sublimation B. Distillation

C. Chromatography D. Evaporation

(iv) Oxygen and Sulphur belong to the group_____

A. II A B. III A

C. VI A D. VII A

(v) In water urea is_____

A. Soluble B. Insoluble

C. Very soluble D. Partially soluble

(vi) The normal $K^+$ level in the serum is _____

A. 2.8 – 4 mEq/L B. 137–148 mEq/L

C. 139 – 159 mEq/L D. 3.99 – 5.0 mEq/L

(vii) The principal cation of extracellular fluid is_____

A. Potassium B. Sodium

C. Both A and B D. None of these

(viii) Cushing's syndrome may be diagnosed by_____

A. Hyperkalemia B. Hypokalemia

C. Hyponatremia D. Hypernatremia

(ix) Normal value of blood urea is_____

A. 10 – 20 mg% B. 20 – 40 mg%

C. 50 – 60 mg% D. 80 – 90 mg%

(x) Which of the following is a weak acid?

A. HCl B. $H_2SO_4$

C. $CH_3COOH$ D. $HNO_3$

**For Examiner's use only:**

| | |
|---|---|
| **Total Marks:** | 10 |
| **Marks Obtained:** | |

# ELEMENTARY CHEMISTRY AND CHEMICAL PATHOLOGY 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 Attempt any THIRTEEN parts. The answer to each part should not exceed 2 to 4 lines.** **( 13 x 2= 26 )**

(i) Define Carbohydrates.
(ii) What are Fats and Oils?
(iii) What is Water balance?
(iv) Define Minerals.
(v) What is Uraemia?
(vi) How are elements classified?
(vii) What are the distinguishing features of metals?
(viii) What is the role of Iron in body?
(ix) What is Indicator?
(x) Define Metabolism.
(xi) What is Galactosemia?
(xii) What is the role of Amino acids?
(xiii) Give four general properties of enzymes?
(xiv) Write down the chemical formulae of the following:
  a. Stannous chloride b. Mercuric Chloride
  c. Lead Acetate d. Ammonium Molybdate
(xv) Why is Urine preserved?
(xvi) What is Hypoproteinemia?
(xvii) What is Addison's disease?

## SECTION – C (Marks 14)

**Note: Attempt any TWO questions. All questions carry equal marks.** **(2 x 7 = 14)**

**Q. 3** Give one method for estimation of each of the following in blood:
a. Creatinine b. Urea c. SGOT

**Q. 4** What are Lipids? Classify them. What is the role of lipids in human body?

**Q. 5** Write down the main functions of potassium in body. Explain how serum potassium is measured in the laboratory.