ELEMENTARY CHEMISTRY AND CHEMICAL PATHOLOGY HSSC-II 99

SECTION – A (Marks 10)

Time allowed: 10 Minutes | **Version Number** | **3** | **4** | **0** | **1**

Note: Section – A is compulsory. All parts of this section are to be answered on the separately provided OMR Answer Sheet which 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 Choose the correct answer A / B / C / D by filling the relevant bubble for each question on the OMR Answer Sheet according to the instructions given there. Each part carries one mark.

1) Which of the following is found in haemoglobin?

A. Sodium B. Iron

C. Potassium D. Calcium

2) Hypokalaemia means decreased level of _____ in blood.

A. Magnesium B. Chloride

C. Potassium D. Calcium

3) Which of the following blood calcium level is abnormal?

A. 4 B. 8.5

C. 9.5 D. 10

4) How many electrodes are there in _____ pH meter?

A. 1 B. 2

C. 3 D. 4

5) The force which influences the separation of particles in a centrifuge machine is called:

A. Gravitational force B. Centripetal force

C. Frictional force D. Centrifugal force

6) The instrument which measures the amount of colour is called:

A. Photometer B. Densiometer

C. pH meter D. Viscometer

7) When heat is absorbed during a chemical reaction, the reaction is said to be:

A. Spontaneous B. Exothermic

C. Endothermic D. Irreversible

8) The glassware used to add solution of known concentration drop by drop into the titration flask during a titration reaction is called:

A. Funnel B. Pipette

C. Burette D. Dropper

9) The chemistry of carbon containing compound is called:

A. Organic chemistry B. Inorganic chemistry

C. Biochemistry D. Thermal chemistry

10) Which of the following is the product of an acid base reaction?

A. $NaOH$ B. HCl

C. $NaCl$ D. H_2O

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

(i) Discuss briefly the periodic table.

(ii) Explain types of mixtures on basis of composition.

(iii) What is temperature conversion formula from $^{\circ}C$ to $^{\circ}F$?

(iv) Name factors affecting solubility.

(v) Define normality with formula.

(vi) Define pH.

(vii) Enumerate any two indicators.

(viii) What is pH scale of acidity and basicity?

(ix) What is Kreb's cycle?

(x) Classify lipids.

(xi) What is β –oxidation of lipids?

(xii) Name liver function tests.

(xiii) Write down normal values of urea and creatinine with units.

(xiv) What is clinical significance of cholesterol?

(xv) What is clinical significance of Na and K in blood?

(xvi) What is clinical significance of Fe in blood?

(xvii) What is thymol turbidity test?

SECTION – C (Marks 14)

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

Q. 3 What are enzymes? Discuss classes of enzymes in detail. **(1+6)**

Q. 4 What is creatinine? How is it formed? What are its normal values in blood? Discuss its clinical significance. **(1+2+1+3)**

Q. 5 Write notes on any two of the following:

a. Decantation **(3.5)**

b. Precipitation **(3.5)**

c. Sublimation **(3.5)**