Roll No. | | | | | | | Answer Sheet _____

Sig. of Candidate._____ Sig. of Invigilator._____

ELEMENTARY CHEMISTRY AND CHEMICAL PATHOLOGY

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 an acid?

A. $NaNO_3$ B. Na_2SO_4

C. $NaHSO_4$ D. Na_2CO_3

(ii) Helium is used in balloon in place of Hydrogen because it is _____.

A. More abundant than hydrogen B. Lighter than hydrongen

C. Radioactive D. None of these

(iii) Which of the following elements has an atomic number 21?

A. Halogen B. Representative element

C. Transition element D. Alkali metal

(iv) A salt derived from a strong base and a weak acid will give a salt that is _____.

A. Acidic B. Basic

C. Neutral D. Volatile

(v) Gain of electron is termed as _____.

A. Electrolysis B. Oxidation

C. Reduction D. Combustion

(vi) Pellagra is caused due to the deficiency of _____.

A. Thiamine B. Riboflavin

C. Niacin D. Folate

(vii) Normal value of indirect billirubin in blood is _____.

A. 0.3 mg / dl B. 0.7 mg / dl

C. 0.5 – 5.0 mg / dl D. 1.0 – 2.0 mg / dl

(viii) Scurvy is caused due to the deficiency of _____.

A. Vitamin A B. Protein

C. Vitamin C D. Minerals

(ix) Iodine deficiency causes _____.

A. Oedema B. Perforation

C. Goitre D. None of these

(x) The chief function of Copper in the body is concerned with the prevention of _____.

A. Rickets B. Beriberi

C. Anaemia D. Xenthoma

_____

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

(i) Define Lipid.

(ii) Differentiate between Glucose and Fructose.

(iii) Name four Cations in the human body.

(iv) Define Trace element and give one example.

(v) Which organ of the body synthesizes urea?

(vi) Differentiate between Atomic number and Atomic weight.

(vii) Write down the valencies of Fe, Cu, Co and Mn.

(viii) Why is Zinc important in the body?

(ix) Write down Handerson Hassel Bach equation.

(x) How many ATPs are peoduced from CHO metabolism?

(xi) What is Lactose tolerance?

(xii) Define Essential amino acids.

(xiii) Define Enzyme and Co-factor. Also give example of each.

(xiv) Write down the chemical formula of the following:

a. Phosphoric acid b. Galactose

c. Ammonium bicarbonate d. Glycerol

(xv) Name four abnormal constituents of urine.

(xvi) What is Hypocalcaemia?

(xvii) Define Oedema and give its cause.

SECTION – C (Marks 14)

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

Q. 3 Give one method of each for estimation of the following in the blood:

a. Bilirubin (Direct)

b. Uric Acid

Q. 4 Define and Classify Vitamins. Explain the role of Vitamin A in the human body.

Q. 5 Name Lipid Profile tests with normal values. Explain how serum Cholesterol is measured in the laboratory.