105

Roll No. | | | | | | |

Answer Sheet No._____

Sig. of Candidate._____

Sig. of Invigilator._____

APPLIED SCIENCES 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) What is the second name of sugar?

A. Lactose B. Sucrose

C. Maltose D. Fructose

(ii) Which of the following organ is responsible for converting chemical energy into mechanical energy?

A. Joint B. Heel

C. Muscle D. Nose

(iii) Which of the following is equal to 200 N?

A. 100 kg B. 50 kg

C. 20 kg D. 20 Joule

(iv) Which one of the following is the most reactive and oxidizing agent?

A. Chlorine B. Bromine

C. Iodine D. Florine

(v) Equation of Newton's third law of motion is:

A. $F = ma$ B. $F = mg$

C. $F = -F$ D. $F = G\frac{m_1 m_2}{r^2}$

(vi) Valency of group 7 in the periodic table is:

A. +1 B. +4

C. –1 D. –2

(vii) Atomic mass is defined as:

A. Mass of protons and neutrons in an atom

B. Mass of protons in an atom

C. Mass of electrons and protons in an atom

D. Mass of neutrons in an atom

(viii) What is the average value of 'g' on the moon?

A. $1.8\,m/\sec^2$ B. $9.6\ m/\sec^2$

C. $1.6\,m/\sec^2$ D. $6.1\,m/\sec^2$

(ix) What is the intensity value of threshold of hearing?

A. 1 dB B. 2 dB

C. 0 dB D. 20 dB

(x) Name of group 6 in the periodic table is:

A. Halogens B. Carbon family

C. Nitrogen family D. Oxygen family

For Examiner's use only:

Total Marks: 10

Marks Obtained:

106

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.