APPLIED SCIENCES HSSC–I

SECTION – A (Marks 10)

115

Time allowed: 10 Minutes

Version Number	3	4	9	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) What is called "to every action, there is an equal and opposite reaction"?

A. Newton first law of motion B. Newton second law of motion

C. Newton third law of motion D. None of these

2) What is called energy due to motion of the body?

A. Nuclear energy B. Mechanical energy

C. Kinetic energy D. Potential energy

3) Which of the following is cause of falling on the earth for everybody?

A. Velocity B. Acceleration

C. Speed D. Gravity

4) Which of the following is called Boyle's Law?

A. Pressure and volume are inversely proportional

B. Pressure and volume are directly proportional

C. Pressure and temperature are inversely proportional

D. Pressure and temperature are directly proportional

5) Which of the following is unit of heat energy in SI system?

A. Calorie B. Degree centigrade

C. Joule D. None of these

6) Which of the following does not allow light to pass through it?

A. Opaque B. Transparent

C. Translucent D. All of these

7) Which of the following is cause of electric fire?

A. Bare conductors B. Use of two pin sockets

C. Short circuit D. Open circuit

8) Which of the following make nucleus of atom positive?

A. Electron B. Proton

C. Neutron D. All of these

9) Which of the following may be called as Universal solvent?

A. Sulphuric acid B. Benzene

C. Water D. Sodium Chloride

10) Which one of the following produces a bitter taste when dissolves in water?

A. Acids B. Bases

C. Proteins D. Carbohydrates

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) Differentiate between Velocity and Speed.

(ii) Write Newton's second law of motion and derive a formula.

(iii) What is friction?

(iv) How a pressure is measured? Write its unit.

(v) Convert $96.6°F$ into Celsius scale.

(vi) Write two advantages and disadvantages of friction.

(vii) Define gravity and write the value of gravitational acceleration.

(viii) Define Boyle's Law and Charles's Law with mathematical formula.

(ix) Define Archimedes principle.

(x) Differentiate between ionic bond and covalent bond.

(xi) Enlist six chemical substances and their chemical formulae.

(xii) Write a short note on equilibrium.

(xiii) Define atomic number and mass number.

(xiv) Define efficiency and mechanical advantage.

(xv) Enlist needs of water in the human body and discuss one of them.

(xvi) What is difference between acid and base?

(xvii) Discuss one method of pH measurement.

SECTION – C (Marks 14)

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

Q. 3 Discuss properties of solutions.

Q. 4 Define and discuss methods of transfer of heat.

Q. 5 Write in detail reflection and refraction of light.