



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) Why is water not used in place of mercury in thermometers?
- (ii) Differentiate between Electrolytes and Non-electrolytes with examples.
- (iii) Briefly mention the classification of lipids.
- (iv) Discuss the importance of ions in the proper functioning of human body.
- (v) Write two advantages and two disadvantages of friction.
- (vi) Define the terms **Radioactivity** and **Half-life**.
- (vii) Define and write the formula for Coulomb's law.
- (viii) What is meant by derived units? Give any two examples.
- (ix) How does pressure differ from force?
- (x) Define **Frequency** and **Wavelength** of a sound wave.
- (xi) What is Astigmatism? How is it detected and corrected?
- (xii) Describe the characteristics of sound.
- (xiii) Name the three classes of lever.
- (xiv) Write a short note on pH scale.
- (xv) What properties do acids have in common?
- (xvi) Define the terms **Mass** and **Weight**.
- (xvii) What does a chemical formula represent?

SECTION – C (Marks 14)

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

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| Q. 3 | a. What are isotopes? Explain with examples. | 04 |
| | b. Illustrate a convex lens, indicating principal axis, principal focus and focal length. | 03 |
| Q. 4 | a. Discuss three methods of heat transfer. | 04 |
| | b. Convert 98.6 F (Fahrenheit scale) into $^{\circ}C$ (Celsius scale). | 03 |
| Q. 5 | a. Explain the structure of an atom. | 03 |
| | b. Describe the four types of chemical reactions with examples. | 04 |

