CLASS 9 BATCH

SHORT TEST -01

DURATION : 90 Min | **DATE : 25/06/2023** | **Max Marks : 40**

Topics covered

Chemistry :	Matter in Our Surroundings

General Instructions :

1. Immediately fill in the particulars on this page of the test booklet.
2. The test is of **90** minutes duration.
3. The test booklet consists of questions. The maximum marks are **144**.
4. All questions are compulsory.
5. No student is allowed to carry any textual material, printed, or written, bits of papers, pager, mobile phone, any electronic device, etc. inside the examination room/hall.
6. On completion of the test, the candidate must hand over the Answer Sheet to the Invigilator on duty in the Room/Hall. However, the candidates are allowed to take away this Test Booklet with them.

Name of the Student (In Capitals) : _____

Roll Number : _____

Candidate's Signature : _____

Invigilator's Signature : _____

Section A: Objective Type Questions (1 mark each)

Q.1 Which of the following sets of phenomena would increase on raising the temperature?

a) Diffusion, evaporation, compression of gases

b) Evaporation, compression of gases, solubility

c) Evaporation, diffusion, expansion of gases

d) Evaporation, solubility, diffusion, compression of gases.

Q.2 The boiling point of a liquid depends on:

a) Mass of the liquid

b) Volume of the liquid

c) Pressure of the liquid

d) Colour of the liquid

Q.3 The process of conversion of a solid into a liquid is called:

a) Melting

b) Freezing

c) Condensation

d) Sublimation

Q.4 The physical state of matter with a definite shape and volume is:

a) Solid

b) Liquid

c) Gas

d) Plasma

Q.5 On converting 25˚C, 38˚C and 66˚C to kelvin scale, the correct sequence of temperature will be

a) 298 K, 311 K, and 339 K

b) 298 K, 300 K, and 338 K

c) 273 K, 278 K, and 543 K

d) 298 K, 310 K, and 338 K

Q.6 The arrangement of particles in a solid is:

a) Random and disorganized

b) Loosely packed

c) Regular and closely packed

d) Moving freely

Q.7 The intermolecular forces in a gas are:

a) Very weak

b) Very strong

c) Moderate

d) Non-existent

Q.8 The process of conversion of a liquid into a gas at a temperature below its boiling point is called:

a) Melting

b) Freezing

c) Evaporation

d) Sublimation

Q.9 Which of the following statements about particles of matter is correct?

a) Particles of matter are stationary.

b) Particles of matter have no spaces between them.

c) Particles of matter attract each other.

d) Particles of matter have no kinetic energy.

Q.10 Which of the following substances has the highest kinetic energy?

a) Solid

b) Liquid

c) Gas

d) Plasma

Section B: Short Answer Type (2 mark each)

Q.11 Define density and give its SI unit.

Q.12 Give two ways in which melting points and boiling points can be useful.

Q.13 Why does the temperature of a substance remain constant during its melting point or boiling point?

Q.14 Which gas is called dry ice? Why?

Q.15 a) Why do the doctors advise to put strips of wet cloth on the forehead of a person having high fever?

b) Why do wet clothes dry quickly in the sun than in the shade?

Section C: Short Answer Type (3 mark each)

Q.16 Substance 'A' has high compressibility and can be easily liquefied. It can take up the shape of any container. Predict the nature of the substance. Enlist four properties of this state of matter.

Q.17 Write the various factor affecting Rate of Evaporation?

Q.18 How does evaporation differ from boiling?

Q.19 Comment on the following statements:
(a) Evaporation causes cooling.
(b) Rate of evaporation of an aqueous solution decrease with increase in humidity.
(c) Sugar crystals dissolve faster in hot water than cold water.

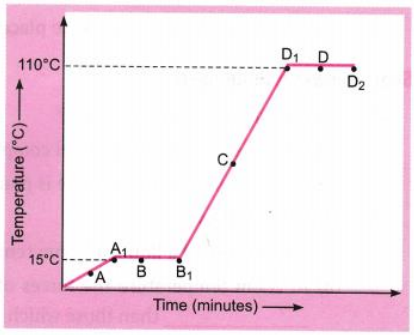
Q.20 Water as ice has a cooling effect, whereas water as steam may cause severe burns. Explain these observations.
You are given the following substances with their melting and boiling points.

Substance	Melting point (°C)	Boiling point (°C)
X	-219	-183
Y	119	445
Z	– 15	78

Identify the physical states of X, Y and Z at room temperature (30°C).
Answer:
'X' is gas at room temperature.
'Y' is solid at room temperature.
'Z' is liquid at room temperature.

Section D: Long Answer Type (5 mark each)

Q.21 The temperature-time graph given alongside shows the heating curve for pure wax.



From the graph answer the following:
(a) What is the physical state of the substance at the points A, B, C and D?
(b) What is the melting point of the substance?
(c) What is its boiling point?
(d) Which portions of the graph indicates that change of state is taking place?
(e) Name the terms used for heat absorbed during change of states involved in above process.