GURUKUL INTERNATIONAL SR. SEC. SCHOOL

MODERNITY WITH TRADITION

AFFILIATED TO CBSE, NEW DELHI

PERIODIC TEST 1 (APRIL, 2023)

SUBJECT- SCIENCE

GRADE- IX

TIME: 90 MINS. **M.M.- 40**

GENERAL INSTRUCTIONS:

1. This question paper consists of 14 questions in 5 sections.

2. All questions are compulsory. However, an internal choice is provided in some questions. A student is expected to attempt only one of these questions.

3. Section A consists of 3 one word questions carrying 1 mark each.

4. Section B consists of 3 Very Short questions carrying 02 marks each (30 to 50 words).

5. Section C consists of 3 Short Answer type questions carrying 03 marks each (50 to 80 words).

6. Section D consists of 2 Long Answer type questions carrying 05 marks each (80 to 120 words).

7. Section E consists of 3 source-based/ case-based units of assessment of 04 marks each with sub-parts.

SECTION - A

Q1. Which organelle is called the 'suicide bags' of the cell ?

Q2. Name any two substances that show sublimation.

Q3. What does the slope of a velocity - time graph tell?

SECTION – B

Q4. Why is the plasma membrane called a selectively permeable membrane ?

Q5. Convert the following temperature to Celsius scale.

(a) 293K

(b) 470K

Q6. What is negative acceleration?

SECTION - C

Q7. Make a comparison and write down ways in which plant cells are different from animal cells .

Q8. Give reasons for the following observation:

(i) The smell of hot, sizzling food reaches you several meters away, but to get the smell from cold food you have to go close.

(ii) A diver is able to cut through water in a swimming pool. Which property of matter does this observation show?

Q9. What is the difference between Average Speed and Average Velocity?

SECTION - D

Q10. A train starting from rest attains a velocity of 72 km/h in 5 minutes. Assuming that the acceleration is uniform, find

(i) the acceleration and

(ii) the distance traveled by the train for attaining this velocity.

Q11. Answer the following.

(a) Tabulate the differences in the characteristics of matter.

(b) Comment upon the following: rigidity, compressibility, fluidity, filling shape, kinetic energy and density.

SECTION - E

Q12. What happens inside the matter during a change of state? On increasing the temperature of solids, the kinetic energy of the particles increases. Due to the increase in kinetic energy, the particles start vibrating with greater speed. The energy supplied by heat overcomes the forces of attraction between the particles. The particles leave their fixed positions and start moving more freely. A stage is reached when the solid melts and is converted to a liquid.

(i) Name the process in which the change of state directly from solid to gas without changing into liquid state.

(ii) Name the process in which the change of gas to solid without changing into liquid.

(iii) Define melting point and boiling point.

(iv) Define latent heat of fusion.

Q13. The cell theory, that all plants and animals are composed of cells and that the cell is the basic unit of life, was presented by two biologists, German zoologist Schleiden (1838) and British zoologist Schwann (1839). The cell theory was further expanded by Virchow (1855) by suggesting that all cells arise from pre-existing cells. With the discovery of the electron

microscope in 1940, it was possible to observe and understand the complex structure of the cell and its various organelles.

(1) Theodore Schwann was a _____

(2) Matthias Schleiden was a _____

(3) Which of these scientists formulated the cell theory?

(4) Which scientist was the first to explain that new cells arise from pre-existing cells?

Q14. Distance is the length of the actual path covered by an object, irrespective of its direction of motion. Displacement is the shortest distance between the initial and final positions of an object in a given direction.
Distance is a scalar quantity. Displacement is a vector quantity. Distance covered can never be negative. It is always positive or zero. Displacement may be positive, negative or zero.

(i) _____ is the actual path covered by an object.
(ii) _____ is the shortest distance between the initial and final positions of an object.
(iii) Give an example of a scalar quantity?
(iv) Distance covered _____
(v) Give an example of a vector quantity?