# DELHI PUBLIC SCHOOL, CHANDIGARH

Periodic Test - I, Session 2023-24
Class: IX, Subject: Science (Set 2)

Time: 1:30 min Aashita Sawat MM: 40

**General Instructions:**

1. Write question number, sub part number very carefully.
2. Do your paper section wise, very neatly.
3. All questions are compulsory.
4. Section A-Questions 1 to 10 carry 1 marks each.
5. Section B-Questions 11 to 13 carry 2 marks each.
6. Section C-Questions 14 to 18 carry 3 marks each.
7. Section D-Question 19 carries 5 marks.
8. Section E – Question 20 carries 4 marks
8. Draw neat diagrams wherever necessary.

## Section A

1. A particle is moving on a circular path of radius 'r'. The distance after half a circle would be:

   a) Zero b) $\pi r$

   c) 2r d) $2\pi r$

2. S.I unit of physical quantity calculated by area under velocity-time graph:

   a) m b) cm

   c) m/s d) cm/s

3. Wet clothes are kept for drying. Which of the following does not help them in drying?

   a) Spreading it out. b) Blowing wind over it.

   c) Making the room a little warmer. d) Cooling the room.

4. Solid to liquid and liquid to solid conversion is called:

   a) Fusion, condensation b) Fusion, sublimation

   c) Fusion, solidification d) Solidification, deposition

5. Cell arise from the pre-existing cells was stated by

   a) Haeckel b) Virchow

   c) Hooke d) Schleiden

6. Lysosomes are called as

   a) powerhouse of cell b) suicidal bag

   c) storehouse of cell d) control centre

7. Chromosomes are made up of

   a) DNA b) protein

   c) DNA and protein d) RNA

**Following questions consist of two statements – Assertion (A) and Reason (R). Answer these questions selecting the appropriate option given below:**

(a) Both A and R are true and R is the correct explanation of A.
(b) Both A and R are true but R is not the correct explanation of A.
(c) A is true but R is false.
(d) A is false but R is true.

8. **Assertion:** Average velocity of an object can be zero.

   **Reason:** Displacement of an object can never be zero.

9. **Assertion :** Gases exert pressure on the walls of the container.

   **Reason:** The intermolecular force of attraction is very strong in gases.

10. **Assertion :** Cell wall is selectively permeable.

    **Reason :** Cell wall is composed of cellulose.

## Section-B

11. a) State two differences between evaporation and boiling.

    b) What produces more severe burns- boiling water or steam at 373K? Why?

12. Give the difference between rough endoplasmic reticulum and smooth endoplasmic reticulum on the basis of their function and structure.

13. State the functions of nucleus in a cell.

## Section-C

14. The brakes applied to a car produce an acceleration of $6ms^{-2}$ in the opposite direction to the motion. If the car takes 2s to stop after the application of brakes, calculate the distance it travels during this time. $S = ut + \frac{1}{2}at^2$, $v^2 - u^2 = 2as$, $v = u + at$

15. a) Plot velocity-time graph for a body moving with constant velocity.

    b) Is circular motion is an accelerated motion or not? Give reason to support your answer.

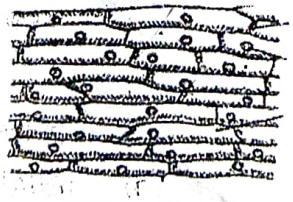
16. a) Why are we able to sip hot tea or milk faster from a saucer than a cup?

    b) When an incense stick is lit in one corner of a room, we get its smell sitting at the other corner of the room. Explain how does it happen?

    c) Name two substances that undergo sublimation.

17. Case A: A drop of sugar solution is put on a slide of onion peel cells.

    Case B: Onion peel cells are first boiled in water and then a drop of sugar solution is put on it.



Structure of an onion peel

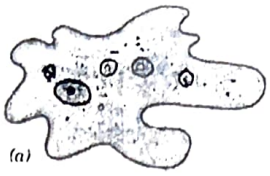
(a) State what happens to the onion peel cells in case A and case B.

(b) Give reason to justify your answer in both cases.

(a) The organism shown below is a eukaryote. How are these organisms different from prokaryotes based on their:

(i) chromosome

(ii) cell organelles




(b) State any two functions of golgi apparatus.

## Section-D

9. (a) A piece of chalk can be broken into small particles by hammering but a piece of iron cannot be broken into small particles by hammering. Explain why is it so?

(b) Convert to Celsius scale: 646K, 313K

(c) Comment upon the folowing properties for solids, liquids and gases:

i) Compressibility

ii) Intermolecular forces

iii) fluidity

## Section-E

20. A boy moves 3m towards East. He then turns and moves 4m towards North.

(a) Represent the motion of a boy diagrammatically.

(b) Calculate the distance travelled and displacement covered by a boy.

(c) Under what condition distance and displacement covered by any object is equal.