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PERIODIC TEST-I 2023

Class IX SUBJECT- Science M.M-40

NOTE:- This question paper contains three sections . **Section- A (BIOLOGY**), **Section –B (Physics**) and **Section –C** (Chemistry). Solve each section in separate answer sheets.

SECTION -A (BIOLOGY)

1.Cell wall is found in :- 1

a) Animal cell b) Plant cell c) both plant and animal cell d) None of these

2. A cell has no nucleus and membrane bound cell organelles. This cell is :- 1

a)Eukaryotic cell b) Plant cell c) Prokaryotic cell d) all of these

3. Which cell organelles synthesises proteins. 1

a)Mitochondrion b) Chloroplast c) Ribosomes d) None of these

4. Plastids are present only in plant cell. There are two types of plastids. Chloroplast and leucoplast. Plastids containing chlorophyll are called chloroplast.

i) Which plastid store food? 1

a.Chloroplast b) Leucoplast c) chlorophyll d) all of these.

ii) Which cell organelle has DNA? 1

a. Nucleus b) plastids c) Mitochondria d) All of these

5. A cell organelle is double layered inner layer is folded inward to form cristae. It also produces ATP. The name of cell organelle is:- 1

a) Mitochondria b) plastid c) Ribosome d) SER

6**. ASSERTION**: - Animal cells do not have chlorophyll. 1

Reason:-They cannot perform photosynthesis.

a. Both assertion and reason are true, and the reason is the correct explanation of the assertion.
b. Both assertion and reason are true, but the reason is not the correct explanation of the assertion.
c. Assertion is true but reason is false.
d. Both assertion and reason are false

7. Who discovered nucleus and when? 1

8. Which cell organelle is known as suicidal bag? 1

9. (a) Draw the diagram of a plant cell and label any five parts. 3

(b) Write any two differences between prokaryotic and Eukaryotic cell. 2

Section – B (Physics)

MCQ Type Questions (1 mark each)

Q.1) The S.I. unit of speed is -

(a) m (b) m/s (c) ms (d) cm/s

Q.2) An object covers unequal distances in equal intervals of time . The type of motion will be –

(a) uniform (b) circular (c) non – uniform (d) vibratory

Q.3) The rate of change of velocity is called -

(a) displacement (b) speed (c) acceleration (d) distance

Q.4) The correct formula of average velocity is

(a) (u + v) /2 (b) (u – v) /2 (c) (u × v) /2 (d) none of these

Q.5) In the following which is vector quantity ?

(a) speed (b) velocity (c) distance (d) average speed

Short Answer Type Questions (2 marks each)

Q.6) Write difference between speed and velocity.

Q.7) An object travels 16 m in 4 s and then another 16 m in 2 s. What is the average speed of the object ?

Case Study Based Questions (4 marks)

During uniform motion of an object along a straight line, the velocity remains constant with time. In this case, the change in velocity of the object for any time interval is zero. However, in non uniform motion, velocity varies with time. It has different values at different instants and at different points of the path. Thus, the change in velocity of the object during any time interval is not zero.

a) Define acceleration.

b) Write the S.I. unit of acceleration.

c) Rahul paddles his bicycle to attain a velocity of 6 m/s , then he applies brakes such that the velocity of the bicycle comes down to 4 m/s in 5 s . Calculate the acceleration of the bicycle.

SECTION – C (CHEMISTRY)

Case study question 1

Read the passage and answer any four questions:

Gases are highly compressible as compared to solids and liquids. The liquefied petroleum gas (LPG) cylinder that we get in our home for cooking or the oxygen supplied to hospitals in cylinders is compressed gas. Compressed natural gas (CNG) is used as fuel these days in vehicles. The liquid takes up the shape of the container in which they are kept. Liquids flow and change shape, so they are not rigid but can be called fluid. Solids and liquids can diffuse into liquids.

1. Why Compressed natural gas (CNG) is used as fuel these days in vehicles?
    1. due to its high compressibility
    2. large volumes of a gas can be compressed into a small cylinder
    3. transported easily
    4. all of these
2. Liquids have no fixed _____ but have a fixed_____ .
    1. shape, volume
    2. volume, shape
    3. shape, size
    4. size, shape
3. The aquatic animals can breathe underwater due to
    1. the presence of dissolved carbon dioxide in water
    2. the presence of dissolved oxygen in the water
    3. the presence of dissolved Nitrogen in the water
    4. all of these
4. The rate of diffusion of liquids is greater than solid due to
    1. liquid particles move freely
    2. liquid have greater space between each other
    3. both (a) and (b)
    4. none of these
5. The property of flow is unique to fluids. Which one of the following statements is correct?
    1. Only gases behave like fluids
    2. Gases and solids behave like fluids
    3. Gases and liquids behave like fluids
    4. Only liquids are fluids

Q. 2 MCQ

1. What is dry ice ?
   (a) Solid carbon dioxide (b) Nitrogen oxide c) Carbon monoxide (d) None of these
2. The solid which undergoes simulation is ?
   (a) Ice cube (b) Naphthalene (c) Sodium chloride (d) Ammonium chloride
3. Particle moves randomly in ?
   (a) Water (b) Sugar (c) nitrogen (d) Dry ice
4. Gases are ?
   (a) Incompressible (b) Compressible (c) Highly compressible (d) All of these
5. The process of conversion matter from its solid state to its liquid state at specific conditions of temperature & pressure is called ?
   (a) Boiling point (b) Freezing point (c) Vaporization (d) Melting point
6. The rate of evaporation increases when surface area ?
   (a) increases (b) decreases (c) has no effect (d) remains same
7. Convert the following temperature to the Celsius scale ?
   (a) 293 k (b) 470 k
8. Convert the following temperature to the kelvin scale ?
   (a) 25^0C (b) 373^0C