Parikshit Yadav
IX - B
Roll. no - 35

PERIODICAL ASSESSMENT - 1
2022-2023

CLASS : IX **SUB. : SCIENCE (SET-B)**

TIME : 2 HRS. **M.M. : 50**

General Instructions :

(i) ***The question paper comprises of Two sections A, B, C and D. There are23 questions in the question paper. All questions are compulsory.***

(ii) ***Section–A - question no. 1 to 10 - all questions and parts are of one mark each. These questions contain multiple choice questions (MCQs), very short answer questions and assertion - reason type questions. Answers to these should be given in one word or one sentence.***

(iii) ***Section–B - question no. 11 to 15 are short answer type questions, carrying 2 marks each. Answers to these questions should in the range of 30 to 50 words.***

(iv) ***Section–C - question no. 16 to 20 are short answer type questions, carrying 3 marks each. Answers to these questions should in the range of 50 to 80 words.***

(v) ***Section–D – question no. - 21 to 23 are long answer type questions carrying 5 marks each. Answer to these questions should be in the range of 80 to 120 words.***

(vi) ***Wherever necessary, neat and properly labeled diagrams should be drawn.***

SECTION - A

Q.1 What is the direction of velocity of an object moving along a circular path?

Q.2 Slope of a velocity-time graph gives

(a) the distance (b) the displacement

(c) the acceleration (d) the speed

Q.3 Magnitude of displacement can be?

(a) Greater than the distance travelled

(b) Equal to the distance travelled
(c) Less than the distance travelled
(d) Both b and c

Q.4 Which of the following will not show Tyndall effect?
(a) Milk
(b) Starch solution
(c) Copper sulphate solution
(d) Fog

Q.5 How will you check the purity of a given substance?

OR

What is a Saturated Solution?

Q.6 What is the effect of temperature on the solubility of a substance?

Q.7 Organelle other than nucleus, containing DNA is
(a) Endoplasmic reticulum
(b) Golgi apparatus
(c) Mitochondria
(d) Lysosomes

For question numbers 8, 9 and 10, two statements are given- one labeled Assertion (A) and the other labeled Reason (R). Select the correct answer to these questions from the codes (a), (b), (c) and (d) as given below:

(a) Both A and R are true, and R is the correct explanation of the assertion.
(b) Both A and R are true, but R is not the correct explanation of the assertion.
(c) A is true, but R is false.
(d) A is false, but R is true.
(e) If both Assertion and Reason are false

Q.8 **Assertion(A)**: The displacement of an object can be either positive, negative or zero.
Reason(R): Displacement has both the magnitude and direction.

Q.9 **Assertion(A)**: Chloroplast in cell performs photosynthesis.
Reason(R): Chloroplast contains green pigment called chlorophyll.

Q.10 **Assertion(A)**: A solution of table salt in a glass of water is homogeneous.
Reason(R): A solution having different composition throughout is homogeneous.

SECTION - B

Q.11 Mention two differences between speed and velocity.
Q.12 **What do the graphs (I and II) shown in figure G indicate?**

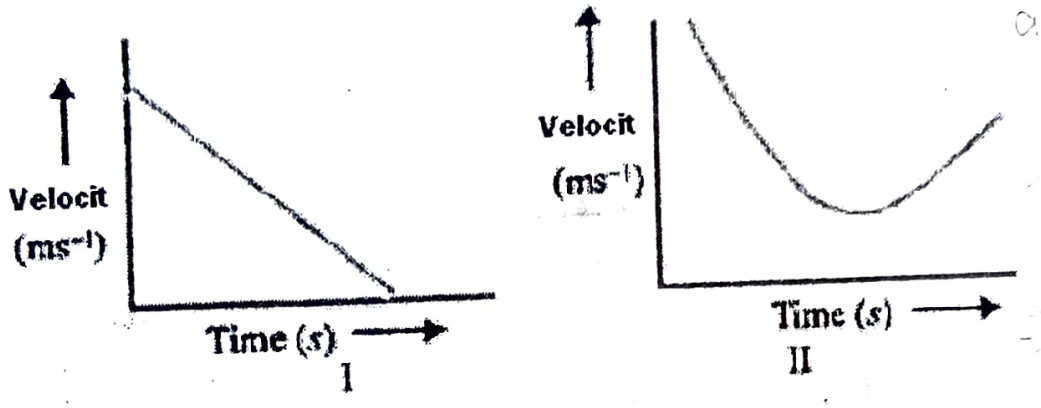

Figure G

Q.13 Why water is considered a compound? Give two reasons.
Q.14 How many litres of 15% (mass/volume) sugar solution would take it to get 75 g of sugar?

OR

A solution contains 40g of common salt in 320g of water. Claculate the concentration in terms of mass by mass percentrage of the solution.

Q.15 What happens when a plant cell is placed in a hypertonic solution? Name and define the phenomenon.

SECTION - C

Q.16 A train starting from a railway station and moving with uniform acceleration attains a speed 40 km h^{-1} in 10 minutes. Find its acceleration.

Q.17 Derive the equation of motion that describes position- velocity relation.

OR

Derive the following equation of motion graphically
$S=ut + \frac{1}{2} at^2$

Q.18 a. What would happen if the plasma membrane ruptures or break down?

b. Write two differences between prokaryotic and eukaryotic cell.

Q.19 Name the type of colloid in which the dispersed phase and dispersing medium are respectively:

a. Liquid and gas b. liquid and liquid

c. liquid and solid

Give one example of each.

Q.20 You are provided with Sugar Solution, Starch Solution and Oily water. How can you differentiate between them in terms of?

a. Homogeneity b. Filtration

c. Tyndall effect

SECTION - D

Q.21 A train is travelling at a speed of 90 km h^{-1}. Brakes are applied so as to produce a uniform acceleration of -0.5 ms^{-2}. Find how far the train will go before it is brought to rest.

Q.22 a. Draw a neat and labelled diagram of a Plant cell.

b. **Name the following:**

i. A cell organelle that generates ATP molecules

ii. an organelle that synthesize ribosomes

iii. The functional unit of DNA.

Q.23 a. Differentiate between sol, solution and suspension (any 3 points).

b. **Classify the following into physical and chemical changes:**

Dissolving common salt in water, melting of butter, rusting of almirah, burning of wood, ripening of fruit, Drying of cloth in the sun.

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