Silver Grove School

SAMPLE Paper (2025-26)
CLASS - IX B
SUBJECT: SCIENCE

TIME: 2;00 Hrs. M.M. 80

General Instructions:

Read the following instructions very carefully and strictly follow them:

(i) This question paper comprises 39 questions. All questions are compulsory.

(ii) This question paper is divided into FIVE sections viz. Section A, B, C, D and E.

(iii) In Section A question number 1 to 20 are Multiple Choice Questions (MCQS) carrying 1 mark each.

(iv) In Section B question number 21 to 26 are Very Short Answer (VSA) type questions carrying 2 marks each. Answer to these questions should be in the range of 30 to 50 words.

(v) In Section C question number 27 to 33 are Short Answer (SA) type questions carrying 3 marks each. Answer to these questions should be in the range of 50 to 80 words.

(vi) In Section D question number 34 to 36 are Long Answer (LA) type questions carrying 5 marks each. Answer to these questions should be in the range of 80 to 120 words.

(vii) In Section E Question number 37 to 39 are of 3 source-based/case-based units of assessment carrying 4 marks each with sub-parts.

SECTION – A (20×1= 20)

1) The cell sap of plant consists of:

(A) Water only
(B) water + organic substances
(C) Water + inorganic substances
(D) Both option A and C

2) Zig- Zag movement of solute particle in solution is known as

(A) Linear motion
(B) Circular motion
(C) Brownian motion
(D) Curved motion

3) which of the following is a broad leaf weed

(a) Convolvulus
(b) Chenopodium
(c) All of these
(d) none of these

4) Silicon is used in

(a) Bombs
(b) Rocket
(c) CPU
(d) Biscuit.

5) Solubility can be increased by ?

(a) Adding more solute
(b) adding base
(c) cooling
(d) Changing temperature continuously.

6.A passenger in a moving train tosses a coin which falls behind him. It means that motion of the train is ?

(a) accelerated (b) uniform

(c) retarded (d) along circular tracks

7. Upthrust depends on

(a) dipped volume of the body immersed (b) density of the liquid

(c) both density of the liquid and dipped volume of the body immersed

(d) volume of the liquid .

8.Rocket works on the principle of conservation of ?

(a) Mass (b) Energy

(c) Momentum (d) Velocity

9. Which force keeps the planets in orbit around the sun?

(a) Magnetic force (b) Gravitational force

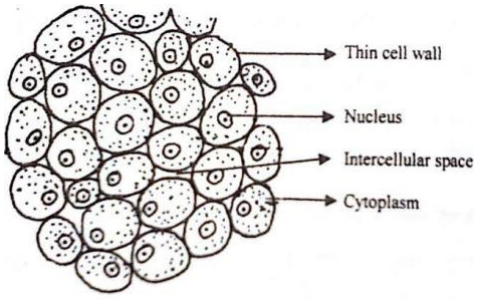
(c) Nuclear force (d) Electromagnetic force

10. According to third law of motion, action and reaction

(a) Always act on the body (b) Always act on different body in opposite direction

(c) Have same magnitude and direction (d) Act on either body at normal to each other

11 .The diagram shows a plant tissue identify the tissue and choose the correct option



A. Collenchyma B. Parenchyma

C. Chlorenchyma D. Cork

12. Plasma membranes of cell is composed of

(A) Protein and lipid (B)Lipid and vitamins

(C).Protein and glucose (D).Cellulose

13.The Plant tissue which is found at the tip of roots and shoots of plants

(A) Meristematic tissue (B)Apical meristematic tissue

(C)Permanent tissue (D)Complex tissue

14.A cell organelle that is present in animal cells but not present in plant cells is?

(A)Cytoplasm (B) Centrosome

(C)Mitochondria (D) Chromosome

15. D.N.A is not only found in nucleus but also found in the some cell organelles , these organelles are-

(A)Chloroplast and ribosome (B)Chloroplast and Golgi body

(C) Golgi body and mitochondria (D) Mitochondria and chloroplast

16. Mary sprinkled 5 kg of common salt on the grass growing on her lawn. After a couple of days, she observed that the grass had wilted and died. This was due to which of the following conditions?

(A) Endosmosis (B) Turgidity

(C) Deplasmolysis (D) Plasmolysis

Q Nos17 to 20 are assertion - reason based questions:

There are two statements 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 Assertion and Reason are true and Reason is the correct explanation of the Assertion.
(b) Both Assertion and Reason are true but Reason is not the correct explanation of the Assertion.
(c) Assertion is true but Reason is false.

(d) Assertion is false but Reason is true.

(17) Assertion (A): An object can move with constant velocity if no net force act on it.
Reason (R) :No net force is needed to move an object with constant velocity.
(18) Assertion (A) : Mitochondria is the power house of the cell.
Reason (R) : Mitochondria produce cellular energy in the form of ATP.
(19) Assertion : The endoplasmic reticulum which lacks ribosomes is called smooth endoplasmic reticulum
Reason : SER is mainly involved in protein synthesis.
(20) Assertion:- Smoke is a colloid

Reason:- Smoke consists of solids and gases

SECTION – B (12Marks)

Q Nos. 21 to 26 are very short answer questions

21) Describe functions of bones.
22) State postulates of Dalton theory
23) Differentiate between metals and non metals based upon the various properties that they show.
24) Write chemical formula of the Magnesium chloride
25) What is vaporization?
26) What is the total Momentum of the bullet and gun before firing?

SECTION – C (21 Marks)

Q. Nos. 27 to 33 are short answer questions.

27) The kinetic energy of an object of mass m moving with a velocity of 5 m/s is 25 J . What will be its kinetic energy when its velocity is doubled? What will be its kinetic energy when its velocity is increased to three times?

28) How does solid gets directly converted into gaseous state of matter?

29) A man falling on a cemented floor receives more injuries than a man falling on a sandy floor. Why?
30) What is the mass of an object whose Weight is 196N?
31) Give reason of the following

i) Why does a gas exert pressure?

ii) Why does a gas fill a vessel completely?

iii) Why are gases so easily compressible whereas it is almost impossible to compress a solid or a liquid ?

32)

(i) Write the difference between parenchyma and sclerenchyma.

(ii) Write the function of the stomata.

33) write the difference between xylem and phloem.

SECTION – D (15Marks)

34) (i) State the universal law of Gravitational.

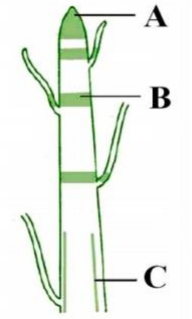
(ii) What happens to the force between two objects if

(a) mass of one object is doubled.

(b) the distance between object is tripled.

35)A 8000 kg engine pulls a train of 5 wagons, each of 2000 kg, along a horizontal track. If the engine exerts a force of 40000N and the track offers a friction force of 5000 N, then
calculate:
(a) the net accelerating force and
(b) the acceleration of the train.

36) Observe the diagram given below carefully and label the regions marked A, B and C in the diagram.



(b) Explain the all labeled parts A,B and C

SECTION – E (12Marks)

Q Nos. 37 to 39 are case based /data based questions with 2 to 3 short sub parts . Internal choice is provided in one of these sub parts.

37).There are two types of changes i.e., physical and chemical changes that we come across in our daily life. Difference between physical and chemical change is that in physical change, no new compounds are formed but only the physical properties of the substances get mass changed. On the other hand, in chemical changes new compounds are always formed. Also, physical changes being temporary are easily reversible while chemical changes being permanent are irreversible in nature.

1. Which among the following is an example of a chemical change?

(a) Adding concentrated sulphuric acid to sugar (b) Folding of paper

(c) Kneading of wheat flour (d) Sublimation of ammonium chloride

2. Which among the following is an example of a physical change?

(a) Burning of wood (b) Souring of Milk

(c) Digestion of food (d) Magnetizing a piece of iron

38).A body of mass 10 kg starting from rest accelerates uniformly to a Speed of 30m/s in 10 s. Brakes are applied and the body stops in 5 seconds.

(i) Find the accelerating force on the car ?

(ii) Find the retarding force on the car?

39). A few layers of cells beneath the epidermis are generally simple permanent tissue. Parenchyma is the most common simple permanent tissue. It consists of relatively unspecialized cells with thin cell walls. They are living cells. Collenchyma allows bending of various parts of the plant-like tendrils and stems of climbers without breaking. Sclerenchyma tissue makes the plant hard and stiff. We have seen the husk of a coconut. It is made of sclerenchymatous tissue. They are long and narrow as the walls are thickened due to lignin. The tissue is present in stems, around vascular bundles, in the veins of leaves and in the hard covering of seeds and nuts.

1. The flexibility in plants is due to

(a). collenchyma (b). parenchyma

(c). chlorenchyma (d). aerenchyma

2.Function of aerenchyma:

(a).It performs photosynthesis (b).It helps the aquatic plant to float

(c).It provides mechanical support (d).none of these

3.Which of the following tissues has dead cells?

(a) Parenchyma (b) Sclerenchyma

(c) Collenchyma (d) Epithelial tissue

4.Which of the following statement is incorrect

i. Parenchyma tissues have intercellular spaces.

ii. Collenchymatous tissues are irregularly thickened at corners.

iii. Apical and intercalary meristems are permanent tissues.

iv. Meristematic tissues, in its early stage, lack vacuoles, muscles

a (I) and (II)

b.(II) and (III)

c.(III) and (I)

d.Only (III)

5.Which of the following is the function of Sclerenchyma tissue.

(a) Transpiration (b) Provides mechanical support

(c) Provides strength to the plant parts (d) None of these.