

# Class IX Session 2025-26

## Subject - Science

### Sample Question Paper - 2

**Time Allowed: 3 hours**

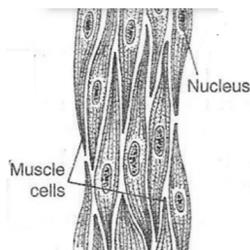
**Maximum Marks: 80**

**General Instructions:**

1. This question paper consists of 39 questions in 3 sections. Section A is Biology, Section B is Chemistry and Section C is Physics.
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.

**Section A**

1. Which type of muscles are shown in the image? [1]

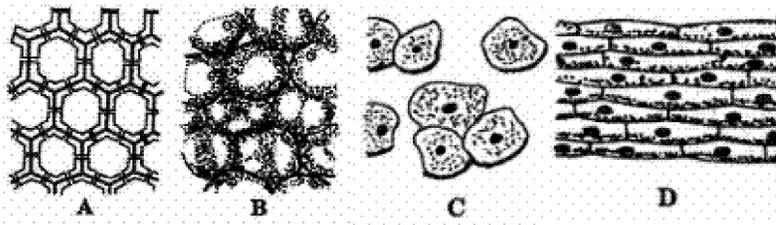


- a) Spindle-shaped, uninucleated b) Cylindrical, unbranched
  - c) Both Spindle-shaped, uninucleated and Elongated, without striations d) Elongated, without striations
2. The proteins and lipids, essential for building the cell membrane, are manufactured by [1]
- a) Golgi apparatus b) Plasma membrane
  - c) Rough endoplasmic reticulum d) Mitochondria

3. Match the following with the correct response given below: [1]

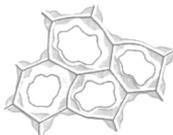
(1) Largest cell	(A) Mycoplasma
(2) Smallest cell	(B) Bacteria
(3) Single cell	(C) Amoeba
(4) Prokaryotic cell	(D) Ostrich egg

- a) 1-C, 2-B, 3-D, 4-A b) 1-D, 2-A, 3-C, 4-B
  - c) 1-B, 2-D, 3-A, 4-C d) 1-A, 2-C, 3-B, 4-D
4. Identify the tissues in given diagrams and choose the correct sequence [1]



- a) A : Parenchyma, B : Sclerenchyma, C :  
Onion peel, D : Cheek cells
- b) A : Sclerenchyma, B : Parenchyma, C :  
Onion peel, D : Cheek cells
- c) A : Parenchyma, B : Sclerenchyma, C :  
Cheek cells, D : Onion peel
- d) A : Sclerenchyma, B : Parenchyma, C :  
Cheek cells, D : Onion Peel
5. Who is known as the 'Father of white revolution' in India? [1]
- a) Prof M.S. Swaminathan
- b) Shri Jai Prakash Narain
- c) Mrs. Indira Gandhi
- d) Dr.V. Kurein
6. **Assertion (A):** Animals of colder regions and fishes of cold water have a thicker layer of subcutaneous fat. [1]  
**Reason (R):** The thick layer of subcutaneous fat acts as an insulator and prevents the heat of the body to escape out. The layer of fat acts as subcutaneous insulation of body for thermoregulation.
- 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.
7. **Assertion (A):** The compost is rich in organic matter and nutrients. [1]  
**Reason (R):** Compost prepared by using earthworms to hasten the process of decomposition of plant and animal for refuse is called vermicompost.
- 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. Describe the functions of epithelium tissue. [2]
9. i. Name the month during which Kharif crop is grown. [2]  
ii. List any two factors for which crop variety improvement is done.
- OR
- Discuss the implications of the following statement:  
"It is interesting to note that poultry is India's most efficient converter of low fibre food stuff (which is unfit for human consumption) into highly nutritious animal protein food."
10. Define the following statements :- [2]  
(i) White revolution  
(ii) Silver revolution  
(iii) Blue revolution.
11. i. Identify the tissue given in the following figure. [3]  
ii. Mention the characteristic features of the cells.  
iii. Specify the function of this tissue.

iv. Name any one part of the plant, where these cells are present.

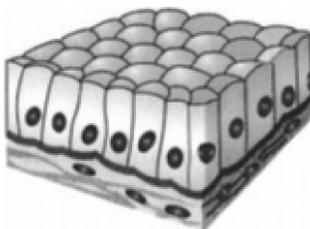


12. What is the difference between plasma membrane and cell wall ? Give the functions of each one. [3]

13. **Read the following text carefully and answer the questions that follow:** [4]

The covering or protective tissues in the animal body are epithelial tissues. Epithelium covers most organs and cavities within the body. It also forms a barrier to keep different body systems separate. Epithelial tissue cells are tightly packed and form a continuous sheet. The skin, which protects the body, is also made of squamous epithelium. Skin epithelial cells are arranged in many layers to prevent wear and tear. This columnar epithelium facilitates movement across the epithelial barrier. In the respiratory tract, the columnar epithelial tissue also has cilia, which are hair-like projections on the outer surfaces of epithelial cells. Cuboidal epithelium forms the lining of kidney tubules.

i. Identify the type of epithelial tissue shown in the following figure. (1)



ii. Which cell is present in the inner lining of the intestine? (1)

iii. Is excretion is the main function of the cuboidal epithelium? (2)

**OR**

Sometimes a portion of the epithelial tissue folds inward, and a multicellular gland is formed which is called a? (2)

14. Draw a neat labelled diagram of an animal cell. [5]

OR

Why are xylem and phloem called complex tissues? How are they different from one other?

### Section B

15. Find the incorrect statement [1]

- A. Cooling is caused during boiling
- B. The normal room temperature is 298K
- C. Evaporation is a surface phenomenon but boiling is not
- D. Low boiling liquids evaporate faster than high boiling liquids.

- a) C
- b) D
- c) A
- d) B

16. Which of the following statements are true for pure substances? [1]

- i. Pure substances contain only one kind of particles
- ii. Pure substances may be compounds or mixtures
- iii. Pure substances have the same composition throughout
- iv. Pure substances can be exemplified by all elements other than nickel



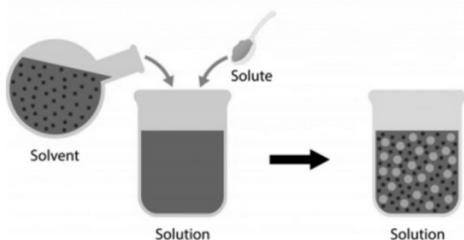
- c) A is true but R is false. d) A is false but R is true.
23. The mass of one molecule of a substance is  $4.65 \times 10^{-23}$  g. What is its molecular mass? What could this substance be? [2]
24. Liquids generally have low density as compared to solid. But you must have observed that ice floats on water. Find out why? [3]

OR

- Why are gases compressible but not liquids?
25. An element 'X' contains 6 electrons in 'M' shell as valence electrons: [3]
- (a) What is the atomic number of 'X'?
- (b) Identify whether 'X' is a metal or non-metal.
26. **Read the following text carefully and answer the questions that follow:** [4]

Mixtures are constituted by more than one kind of pure form of matter. Sodium chloride is itself a pure substance matter. The solution is a homogeneous mixture of two or more substances. Lemonade, soda water etc. are all examples of solutions. Alloys are mixtures of two or more metals or a metal and a non-metal and cannot be separated into their components by physical methods. A solution has a solvent and a solute as its components. The component of the solution that dissolves the other component in it (usually the component present in a larger amount) is called the solvent. The component of the solution that is dissolved in the solvent (usually present in lesser quantity) is called the solute.

**Solute + Solvent → Solution**



- i. In a water-sugar solution: Identify solute and solvent? (1)
- ii. What is the size of the particles of a solution? (1)
- iii. What is pure substance? (2)

OR

- What do you mean by Alloy? (2)
27. Describe valency by taking the examples of silicon and oxygen. [5]

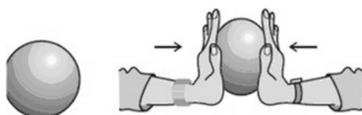
OR

For the following statements, write T for True and F for False and give a reason:

- a. J.J Thomson's proposed that the nucleus of an atom contains only nucleons.
- b. A neutron is formed by an electron and a proton combining together. Therefore it is neutral.
- c. The mass of an electron is about  $\frac{1}{2000}$  times that of a proton.
- d. An isotope of iodine is used for making a tincture of iodine, which is used as a medicine.

**Section C**

28. When we press a rubber ball with both the hands, it [1]





b. total mechanical energy?

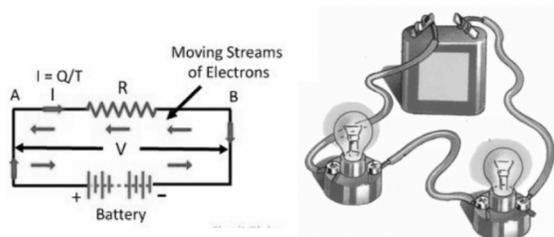
State the law on which your answer is based.

ii. A household consumes 1 kWh of energy per day. How much energy is this in joules?

37. The driver of a car travelling along a straight road with a speed of 72 Km/h observes a signboard which give the speed limit to be 54 Km/h. The signboard is 70 m ahead, when the driver applies the brakes. Calculate the acceleration of the car which will cause the car to pass the signboard at the stated speed limit. [3]

38. **Read the following text carefully and answer the questions that follow:** [4]

Electrical energy is energy derived as a result of the movement of electrically charged particles. When used loosely, electrical energy refers to the energy that has been converted from electric potential energy.



i. When 1 Joule of work is said to be done? (1)

ii. An electric oven is rated 5000 W. How many units of electrical energy does it use in 2 hours? (1)

iii. When a carpet is beaten with a stick, dust comes out of it. Explain. (2)

**OR**

A lamp consumes 1000 J of electrical energy in 10s. What is its power? (2)

39. Two identical bullets are fired one by a light rifle and another by a heavy rifle with the same force. Which rifle will hurt the shoulder more and why? [5]

**OR**

A body of mass 2 Kg is at rest at the origin of a frame of reference. A force of 5 N acts on it at  $t = 0$ . The force acts for 4 s and then stops.

i. What is the acceleration produced by the force on the body?

ii. What is the velocity at  $t = 4$  s

iii. Draw the vt graph for the period  $t = 0$  to  $t = 6$  S.

iv. Find the distance travelled in 6 s.