

**DELHI PUBLIC SCHOOL, JAMMU**  
**DELHI SESSION-2025-26**  
**MONTH: APRIL**  
**ASSIGNMENT**

**CLASS:IX**

**SUB: BIOLOGY**

**MM: 18**

1. What is the structural and functional unit of life? 1
  - (a) Cell
  - (b) Organism
  - (c) Tissue
  - (d) Organ
  
2. Which of the following is an example of prokaryotes? 1
  - (a) Algae
  - (b) Fungi
  - (c) Bacteria
  - (d) Protozoa
  
3. The phenomenon by which protoplast of a cell shrinks from the wall is: 1
  - (a) Osmosis
  - (b) Plasmolysis
  - (c) Diffusion
  - (d) Glycolysis

**Assertion-and-Reason Type question consists of two statements, namely, Assertion (A) and Reason (R). For selecting the correct answer, use the following code:**

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

4. **Assertion :** A cell swells up when present in a hypotonic solution. 1  
**Reason :** More water molecules enter the cell than they leave.
  
5. How is bacterial cell different from onion peel? 2
  
6. Draw a well labelled diagram of a prokaryotic cell. 3
  
7. What is active transport? Differentiate between active and passive transport. 5
  
8. **CASE BASED QUESTION:** Plant cells, in addition to the plasma membrane, have another rigid outer covering called the cell wall. The cell wall lies outside the plasma membrane. The plant cell wall is mainly composed of cellulose. Cellulose is a complex substance and provides structural strength to plants. When a living plant cell loses water

through osmosis there is shrinkage or contraction of the contents of the cell away from the cell wall. This phenomenon is known as plasmolysis. . (1+1+2=4)

**1. Which of the following is the main constituent of cell wall?**

- (a) Proteins
- (b) Lipids
- (c) Lipoproteins
- (d) Cellulose

**2. Which of the following is outer most covering of the plant cell?**

- (a) Cell membrane
- (b) Plasma membrane
- (c) Cell wall
- (d) Cellulose

**3. What is the reason behind structural strength of plant cell?**

**OR**

**3. Define : a) Endosmosis**

**b) Exosmosis**

**SUBMISSION DATE : 30<sup>th</sup> OF APRIL**