

## *FlexiPrep*

### NCERT Class VIII Science Solutions: Chapter 8-Cell Structure and Functions Part 5 (For CBSE, ICSE, IAS, NET, NRA 2022)

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#### **Question 29:**

Amoeba and Paramecium belong to which category of organisms?

#### **Answer:**

Unicellular and Eukaryotic/Protozoa

## Eukaryotic Cell (Protozoa)

- Eukaryotic cells are large & structurally more complex (10 – 100  $\mu\text{m}$  in diameter).
- Have membrane bound organelles.
- Genetic material (DNA) is membrane bound i.e. enclosed in nucleus on chromosomes.
- Nucleoli present.
- Cell wall absent when present it is simple.
- Multiple linear chromosomes with histone.
- Mitosis
- (Sexual reproduction) Meiosis

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### Question 30:

What are the functions of cell wall in plant cells?

### Answer:

Cell wall protects the cell contents, gives shape to the cell.



## Functions of Plant cell wall

- One of the most important function of plant cell wall is to
  - prevent cell swelling as a consequence of osmotic pressure
- In contrast to animal cells, plant cells do not maintain an osmotic balance between their cytosol and extracellular fluids
  - Osmotic pressure continuously drives water into cell
  - Water influx is tolerated because of rigid cell wall
    - An internal hydrostatic pressure builds up within cell
    - Equalizing osmotic pressure and preventing further influx of water

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### **SHORT ANSWER QUESTIONS**

#### **Question 31:**

Is the following statement correct? If it is wrong, correct the statement

**Statement:** “Unicellular organisms do not respire, only multicellular organisms respire”

**Answer:**

No, the statement is wrong.

Both unicellular and multicellular organisms respire/all organisms respire.

#### **Question 32:**

Match the terms given in **column I** with their functions given in **column II** and fill the blanks given below the table:

Column I	Column II
1. Chloroplast	• Carries hereditary characters
• Cell membrane	• Controls the activities of cells
• Nucleus	• Site of photosynthesis
• Chromosome	• Controls the movement of materials into and out of cells.
<i>Match the Column I and Column II. (Q)</i>	

**Answer:**

Column I	Column II
1. Chloroplast	<b>c</b> Site of photosynthesis
1. Cell membrane	<b>d</b> Controls the movement of materials into and out of cells.
1. Nucleus	<b>b</b> Controls the activities of cells
1. Chromosome	<b>a</b> Carries hereditary characters
<i>Match the Column I and Column II. (A)</i>	

**Question 33:**

Observe the following diagram given as Fig.



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Answer the following questions.

1. Does it represent a plant cell or an animal cell?
2. Does it represent a prokaryotic cell or a eukaryotic cell?

**Answer:**

1. It represents an animal cell
2. It represents a eukaryotic cell

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