



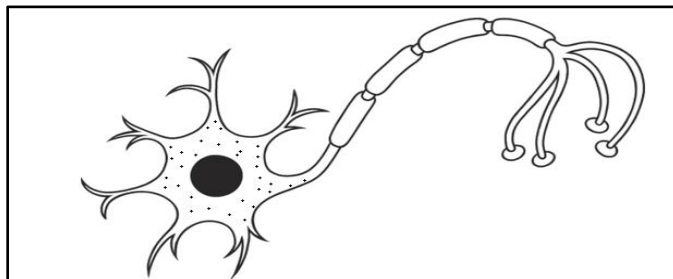
CLASS: VIII	DEPARTMENT: SCIENCE 2023 - 2024	DATE: 06-02-2024
TEXTBOOK Q & A	TOPIC: CELL- STRUCTURE AND FUNCTIONS	NOTE: A4 FILE FORMAT
NAME OF THE STUDENT:	CLASS & SEC:	ROLL NO.

1. Indicate whether the following statements are True (T) or False (F).

- (a) Unicellular organisms have one-celled body. (T/F) – [T]
- (b) Muscle cells are branched. (T/F) – [F]
- (c) The basic living unit of an organism is an organ. (T/F) – [F]
- (d) *Amoeba* has irregular shape. (T/F) – [T]

2. Make a sketch of the human nerve cell. What function do nerve cells perform?

Ans: The nerve cell receives and transfers messages, thereby helping to control and coordinate the working of different parts of the body.



3. Write short notes on the following:

- (a) Cytoplasm
- (b) Nucleus of a cell

Ans: (a) **Cytoplasm** - The jelly-like matrix present between the cell membrane and the nucleus is called cytoplasm. Various other components of cells are present in the cytoplasm. They are called as organelles E.g. Mitochondria, Golgi bodies, etc.

(b) **Nucleus of the cell-**

- i] It is generally spherical and located in the center of the cell.
- ii] The nucleus is separated from the cytoplasm by a membrane called the nuclear membrane.

iii] The nucleus contains thread-like structures called chromatin. The chromatin condenses during cell division to form chromosomes. They carry genes and help in the inheritance or transfer of characters from the parents to the offspring (young ones).

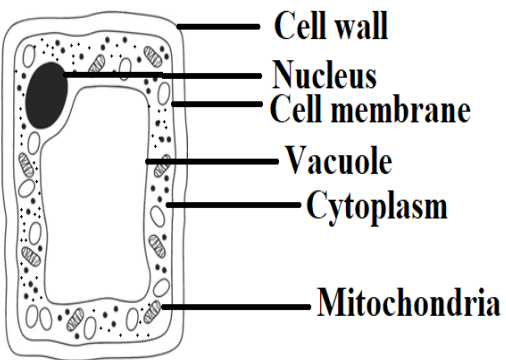
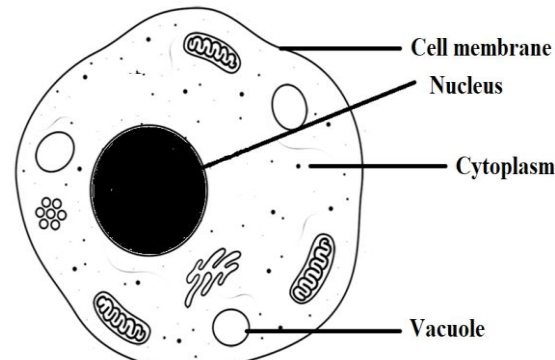
iv] The nucleus contains a small spherical body called a nucleolus.

**4. Which part of the cell contains organelles?**

**Ans:** Cell organelles are located in the cytoplasm of the cell.

**5. Make sketches of animal and plant cells. State three differences between them.**

**Ans:**

PLANT CELL	ANIMAL CELL
 <p>Labels for Plant Cell:            Cell wall            Nucleus            Cell membrane            Vacuole            Cytoplasm            Mitochondria</p>	 <p>Labels for Animal Cell:            Cell membrane            Nucleus            Cytoplasm            Vacuole</p>
1. Cell wall is present	1. Cell wall is absent.
2. Chloroplast is present.	2. Chloroplast is absent.
3. A single large vacuole is found.	3. Many small vacuoles are found

**6. State the difference between eukaryotes and prokaryotes.**

**Ans:**

PROKARYOTES	EUKARYOTES
<p>The cells having nuclear material without a nuclear membrane are termed <b>prokaryotic cells</b>.            The organisms with these kinds of cells are called <b>prokaryotes</b></p>	<p>The cells having a well-organised nucleus with a nuclear membrane are designated as <b>eukaryotic cells</b>.            The organisms with these kinds of cells are called <b>Eukaryotes</b>.</p>
E.g.: Bacteria and blue-green algae	E.g. Plant cell and animal cell

7. Where are chromosomes found in a cell? State their function.

**Ans:** Chromosomes are found in the nucleus of the cell. They carry genes and help in the inheritance or transfer of characters from the parents to the offspring.

8. 'Cells are the basic structural units of living organisms. Explain.

**Ans:** The cell is called a structural unit because the body of all organisms is made up of cells. Many cells combine to form tissue and tissues form organs. The organs combine to form organ systems and an organism has many organ systems functioning together.

9. Explain why chloroplasts are found only in plant cells.

**Ans:** Chloroplasts are found only in plant cells because they contain a green pigment called **chlorophyll**. This green pigment is important for photosynthesis in green plants. The chlorophyll pigment traps solar energy and utilises it to manufacture food for the plant.

10. Complete the crossword with the help of clues given below -

<b>Across</b>													
1.	This is necessary for photosynthesis.	<sup>1</sup> C					<sup>2</sup> O						
3.	Term for component present in the cytoplasm.												
6.	The living substance in the cell.	<sup>3</sup> O											
8.	Units of inheritance present on the chromosomes.									<sup>5</sup> V		<sup>4</sup> M	
		<sup>6</sup> P					<sup>7</sup> T						
<b>Down</b>													
1.	Green plastids.												
2.	Formed by collection of tissues.												
4.	It separates the contents of the cell from the surrounding medium.												
5.	Empty structure in the cytoplasm.												
7.	A group of cells.												
										<sup>8</sup> G			

Ans:

<sup>1</sup> C	H	L	<sup>2</sup> O	R	O	P	H	Y	L	L	
H			R								
L			G								
<sup>3</sup> O	R	G	A	N	E	L	L	E			
R			N						<sup>4</sup> M		
O							<sup>5</sup> V		E		
<sup>6</sup> P	R	O	<sup>7</sup> T	O	P	L	A	S	M		
L			I				C		B		
A			S				U		R		
S			S				O		A		
T			U				L		N		
S			E				<sup>8</sup> G	E	N	E	S

**PREPARED BY**  
Ms RANJANA SANGTANI

**CHECKED BY**  
HoD SCIENCE