

CELL - A BASIC UNIT OF LIFE

WORKSHEET - 7

Class 9

1. Why is osmoregulation is necessary in aquatic organisms?
2. What are the differences between cell wall and cell membrane?
3. Differentiate between hypertonic and hypotonic solution.
4. Write function of plasma membrane.
5. What is 'division of labour' in multicellular organisms ?
6. Write function of cell wall.
7. What is the importance of nucleus?
8. What is ATP? Write its full form.

CAREER BOOSTER

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SOLUTION

1. Aquatic organisms have higher concentration of water outside their bodies, which causes endo-osmosis. Osmoregulation i.e., maintenance of water concentration inside their bodies, regulate concentration of water inside their cells.

2.

Cell Wall		Cell membrane
1	It is non - living	It is living
2	It is made up of cellulose	It is made up of lipids and proteins

3. Hypertonic solution – If the medium surrounding the cell has higher concentration than the cell, then the solution is called hypertonic solution. Hypotonic solution – If the medium surrounding the cell has lower concentration than the cell, then the solution is called hypotonic solution.

4. Function of plasma membrane is –
 (a) It acts as mechanical barrier between external and internal environment. Hence, protects the cell
 (b) It helps in selective absorption of molecules in and out of the cell.

5. In multicellular organisms every part of an organism performs specific function. For ex, Heart, pumps blood, stomach digest food, etc hence, all the functions of the body are divided among different parts of the body. This is known as 'division of labour'.

6. Function of cell wall –
 (a) Cell wall provides rigidity, structural strength and definite shape to the cell
 (b) It helps in transport of various substances across it.

7. Significance of nucleus are –
 (a) It control all the activities of the cell
 (b) It helps in cell division
 (c) It transfer genetic information from one generation to another

8. Energy rich molecules are called ATP. ATP provide energy to the cell ATP – Adenosine – tri – phosphate