

Chapter 8

CELL STRUCTURES AND FUNCTIONS

Definitions/Key Words:

CELL:

Cell is the structural and functional unit of life. All living organisms are made up of cells. Cell contain sub-cellular structure include cell wall, cell membrane, cytoplasm and cell organelles.

CELL MEMBRANE:

The cell membrane/cell plasma is present in Animal cells, plant cells and even prokaryotic cells. The membrane separates cells from one another and also the cell from the surrounding medium.

CELL WALL:

In plants, an extra protective covering of a polysaccharide, cellulose is present. The cell wall that protects plants cells from environmental variations.

CHLOROPLAST:

It is site for photosynthesis. It is a double membrane bound cell organelle.

CHROMOPLAST:

They contained coloured pigments. They are present in flowers & fruits.

CYTOPLASM:

Bulk of the cell is made up off a dense, viscous, colloidal man called “Cytoplasm”.

EUKARYOTES:

Eukaryotic cells, having nuclear membrane.

Ex: Plant and animal cells

MULTICELLULAR:

Organism made up of more than one cells are called multicellular organisms.

Ex: Humans, cows

In these organisms cell Show division of labour as particular set of cells are involved in performing a specific body function.

NUCLEOLUS:

The nucleoplasm contains a spherical body called “Nucleolus”.

NUCLEUS:

Robert brown in 1883 discovered and named Nucleus.

The nucleus consist of following structures,

- 1. Nuclear envelope**
- 2. Nucleoplasm & chromosomes**
- 3. Nucleolus**

PLASTIDS:

They are present only in plant cells, with double wall membrane depending upon the colour plastids are 3 types.

1. Leucoplasts
2. Chromoplasts
3. Chloroplasts

PROKARYOTES:

Prokaryotic cells, which do not have a well-defined nuclear membrane and the nuclear material lies freely in the cytoplasm of the cell.

Ex: Bacteria, Algae

UNICELLULAR:

Number of cells organisms made of only a single cell are called "Unicellular organism".

Ex: Amoeba, paramecium

VACUOLE:

Vacuoles is surrounded by a layer called as "Tonoplast layer".