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Class 11th

Sub. Biology

Date:- 30.12.20

Plasma Membrane

It is the innermost layer of the cell envelope. It is semi-permeable in nature and is responsible for the interaction of the cell with the outside environment.

It performs a number of functions as follows

- (a) It helps in the regulation of the exchange of specific materials between the cytoplasm and extracellular medium.
- (b) Selectively permits particular molecules to pass and prevents others.
- (c) Prevents loss of components from the cells through leakage.

Note:

* The plasma membrane is vital to cellular homeostasis and therefore, the health and welfare of all living organisms.

* Molecules move through membranes either passively, flowing down concentration gradients or actively, being pumped in or out of cells.

* Membrane in prokaryotes is . structurally similar to eukaryotes.

Membranous Structures

Prokaryotic cells lack the complex membrane bound organelles (such as chloroplast, mitochondria, etc). However, some other special membranous structures are found in them (i.e., mesosomes and chromatophores).

Mesosomes

These are formed by the extensions of the plasma membrane into the cell in the form of vesicles, tubules and lamellae.

Mesosomes are equal to mitochondria in eukaryotes, as these structures participate in aerobic cellular respiration in prokaryotes.