

PYQ (CSS 2021)

Difference in structure and Functions of a cell wall and cell membrane.

INTRODUCTION

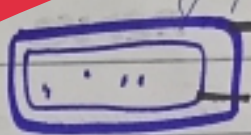
Both cell wall and cell membrane are important parts of cell in different organisms. Cell wall is present in animal cell however cell membrane is present in plant and animal cells both.

CELL WALL

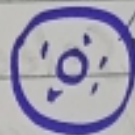
CELL MEMBRANE

1. Definition

"The outermost boundary of a plant cell which is secreted by protoplasm"



"The outermost boundary of animal cell involves in cell transportation"



2. Composition

Has different composition in different organisms.

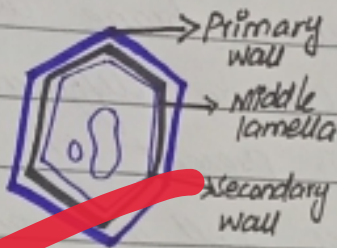
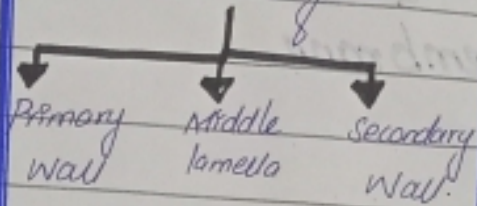
Bacteria made up of peptidoglycan.

Made up of Proteins, Lipids and Carbohydrates

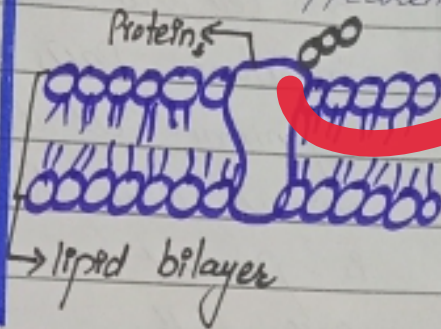
Proteins - 20-40%
Lipids - 60-80%

3. STRUCTURE

Contains 3 layers:



Contains lipid bilayer in which protein molecules are embedded given it a fluid mosaic appearance



1. FUNCTIONS

1. Shape to cell:

Due to its rigidity gives shape to the cell.

2. Transportation:

Transportation of all material takes place

through it.

3. Not Selective:

It is not selective allows the movement of all substances through the cell.

1. Semi-Permeable

Selective in nature allows selective components to pass through it.

2. Transmission of nerve impulse

Transmission of impulse and co-ordination takes place through it.

3. Concentration Gradient

Maintains a concentration gradient of Ca^{+2} & Na^{+2} ion across the cell.