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### **Cell Wall**

It was first discovered by Robert Hooke (1665). It is a rigid and a non-living structure which forms an outer covering of the plasma membrane in plants and fungi. It is absent in animal cells. Cell wall is metabolically active in nature and is capable of growth. Its thickness varies from 0.1-10  $\mu\text{m}$ .

Cell wall not only gives shape to cell and protects the cell from mechanical damage and infection, it also helps in cell to cell infraction and provides barrier to undesirable macromolecules.

#### **Chemical Composition**

The cell wall of algae is made up of cellulose, galactans, mannans and minerals like calcium carbonate, etc., while cell wall of plant is composed of cellulose, hemicellulose, pectins and proteins.

#### **i. Structure of Cell Wall**

On the basis of the structure, cell wall is differentiated into the following three parts

##### **Middle Lamella**

It is the layer mainly made up of calcium and magnesium pectates. It cements the cell walls of two adjoining cells together. It is absent on the outer side of surface cells middle lamella along with a cell wall transversed by plasmodesmata which connects cytoplasm of ^ neighbouring cells.