

SCIENCE

STRUCTURE OF CELL

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the digestive organs which together constitute the digestive system. Each organ in the system performs different functions such as digestion, assimilation and absorption. Similarly, different organs of a plant perform specific/specialised functions. For example, roots help in the absorption of water and minerals. Each organ is further made up of smaller parts called tissues. A tissue is a group of similar cells performing a specific function. Paheli realised that an organ is made up of tissues which in turn, are made up of cells. The cell in a living organism is the basic structural unit.

❖ Cell membrane or plasma membrane:

A cell is essentially a tiny 'bag' of living matter. The covering of this 'bag' is called the cell membrane or plasma membrane. It maintains the shape and size of the cell and protects its contents. It acts like a sentry-allowing only some things to enter and leave the cell and stopping others. For example, it allows oxygen and nutrients to pass into the cell and lets wastes pass out of it. This is why it is called selectively permeable.

❖ Cell wall:

Plant cells have an additional protective wall called the cell wall. It is thick, rigid and permeable, and is made up of a carbohydrate called cellulose.

❖ Cytoplasm :

The matter inside the cell membrane is called cytoplasm. It consists of a jellylike fluid with various structures, such as the nucleus, floating in it. These structures are called organelles.

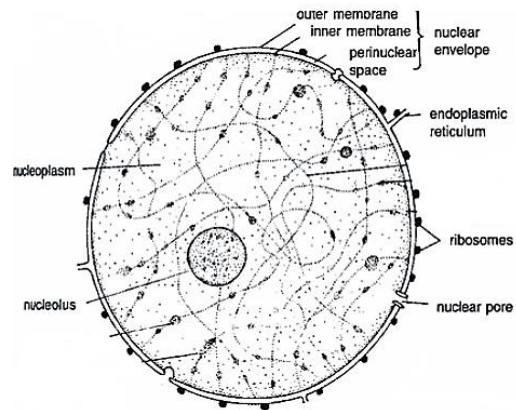
Salts, proteins, sugar and other substances are dissolved in the fluid.

❖ Nucleus:

Almost every cell has a nucleus. Red blood cells are among the exceptions. The nucleus is the

largest and the most important organelle of the cell. It is usually spherical or oval in shape.

Inside it there are thread like structures called chromosomes. Nucleus is the controlling central cell. Chromosomes have genes arranged in a linear fashion.



It is the most important part of the living cell. It is usually spherical or oval in shape.