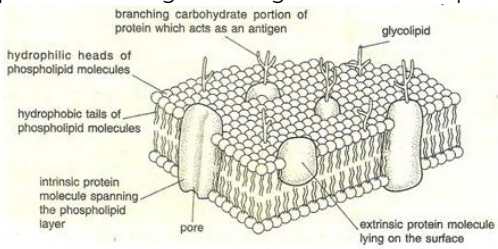
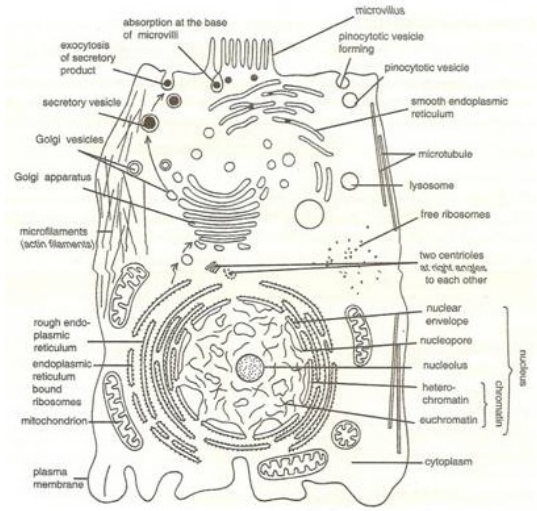
Solution LAQ - 1:
According to fluid mosaic model, plasma membrane is made up of a bilayer of phospholipids. There are two types of protein molecules: Intrinsic Proteins, which completely covers the lipid bilayer and Extrinsic Proteins, which occur either on the outer surface or on the inner surface of the lipid membrane.
The fluid mosaic membrane has been described as "a number of protein icebergs floating in the sea of lipids".

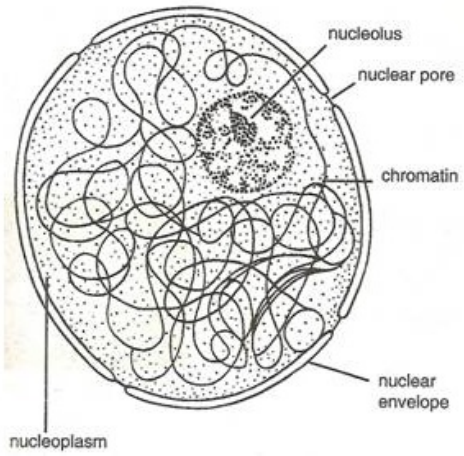


Solution LAQ - 2:



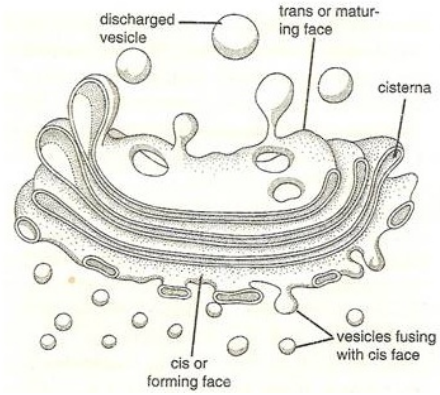
Functions of cell organelles:
(i) Endoplasmic Reticulum - It forms the supporting skeletal framework of the cell.
(ii) Ribosomes - It synthesises proteins.
(iii) Golgi Apparatus - It produces vacuoles which contain cellular secretion.
(iv) Lysosomes - It serves as intracellular digestive system as it digest the foreign materials which enter the cell.
(v) Mitochondria - These are the sites of cellular respirations
(vi) Plastids - These are present only in plants and trap solar energy to manufacture food for plants.
(vii) Vacuoles - They help to maintain the osmotic pressure in a cell.
(viii) Peroxisomes - They carry out some oxidative reactions.
(ix) Centrosome - It helps in cell division in the animal cell.
Solution LAQ - 3:
Nucleus - The nucleus is a large, centrally located spherical cellular component. It is bounded by two nuclear membranes, both forming a nuclear envelope. The nuclear envelope separates the nucleus from the cytoplasm. Within nucleoplasm two types of nuclear structures are embedded - the nucleolus and chromatin material. The nucleolus may be one or more in number and is not bounded

by any membrane. It is rich in protein and RNA molecules and acts as the site for ribosome formation.

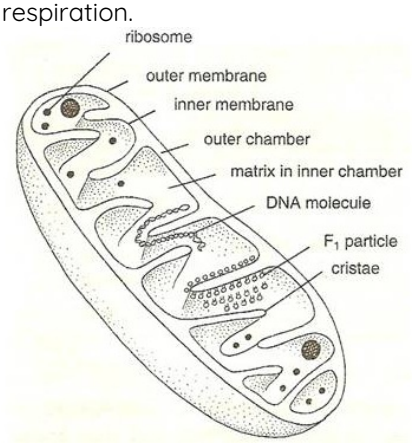


Solution LAQ - 4:

(a) Golgi apparatus consists of a set of membrane-bounded, fluid filled vesicles, vacuoles and flattened cisternae. Cisternae are usually stacked together (placed one above the other) in parallel rows. Golgi apparatus exists as an extensive network near the nucleus in the animal cells. However, the plant cells contain many freely distributed subunits of Golgi apparatus, called dictyosomes. The Golgi apparatus arises from the membrane of the smooth endoplasmic reticulum, which in turn originates from the rough endoplasmic reticulum.



(b) The mitochondria are tiny bodies of varying shapes and size. Each mitochondria is bounded by a double membrane envelope. Outer membrane is porous. The inner membrane is thrown into folds. These folds are called cristae and are studded with small rounded bodies known as F1 particles or oxysomes. The interior cavity of the mitochondria is filled with a proteinaceous matrix which contains a few small-sized ribosomes, a circular DNA molecule and phosphate granules. Mitochondria are sites of cellular respiration.



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