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Solution SAQ - 17:

Spinach looks green due to the presence of chloroplasts, papaya is yellow and edible part of watermelon is red due to the presence chromoplasts.

Solution SAQ - 18:

(a) Functions of endoplasmic reticulum:

(i) It forms supporting skeletal framework of the cell.

(ii) ER provides a pathway for the distribution of nuclear material from one cell to the other.

(b) Functions of lysosomes:

(i) Lysosomes serve as intracellular digestive system. They destroy any foreign material which enters the cells such as bacteria and virus.

(ii) Lysosomes also remove the worn out and poorly working cellular organelles by digesting them to make way for their new replacements.

Solution SAQ - 19:

(a) Ribosome.

(b) Leucoplasts.

Solution SAQ - 20:

Lysosomes contain digestive enzymes for almost all types of organic materials. If their covering membrane breaks as it happens during injury to cell, the digestive enzymes will spill over the cell contents and digest the same. As Lysosomes are organelles which on bursting can kill cells possessing them, they are called suicide bags.

Solution SAQ - 21:

(a) Cell Inclusions - Cell inclusions are non-living materials present in the cytoplasm.

(b) Cytosol - It is the soluble part of cytoplasm and is located between cell organelles.

(c) Protoplasm - Nucleus and cytoplasm together are called protoplasm.

(d) Nucleoplasm - It is the liquid ground substance present in the nucleus.

Solution SAQ - 22:

Ribosomes get synthesized in the nucleolus.

Solution SAQ - 23:

(a) 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.

(b) Plastids occur in most plant cells and are absent in animal cells.

They have their own genome and ribosomes. There are three types

of plastids: chromoplasts, chloroplasts and leucoplasts.

Solution SAQ - 24:

The cell organelles are - Endoplasmic Reticulum, Ribosomes, Golgi apparatus, Lysosomes, Mitochondria, Plastids, Vacuoles, Peroxisomes and Centrosome.

Solution SAQ - 25:

The three main functional regions of the cell are: Plasma membrane, Nucleus and the cytoplasm.

Solution SAQ - 26:

- (a) Nucleus.
- (b) Nucleus.
- (c) Vacuoles.
- (d) Nucleus.

Solution SAQ - 27:

Genes are the functional units of chromosomes which transmit the heredity information from parents to offsprings. These are located on chromosomes.

Solution SAQ - 28:

Lysosomes are called digestive bags because they digest any foreign material which enters the cell such as bacteria and virus.

Solution SAQ - 29:

Mitochondria is called the power plant of eukaryotic cell because it contains enzymes that are needed for the step wise oxidation of food stuffs present in the cells to carbon dioxide and water and energy is released.

Solution SAQ - 30:

Centrioles - Centrioles are hollow and cylindrical structures which are made up of microtubules.

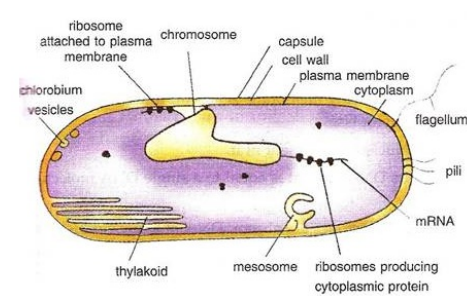
Functions: (i) It migrates to the poles of animal cells and is involved in the formation of the spindle.

(ii) In plant cells, cell division involves polar caps for the spindle formation.

Solution SAQ - 31:

Lipids gets synthesised in the smooth endoplasmic reticulum and proteins gets synthesised in the ribosomes and rough endoplasmic reticulum.

Solution SAQ - 32:



Solution SAQ - 33:

Plasmolysed cell means the cell in which the water crosses the plasma membrane in both directions but more water leaves the cell than enters it and the cell will shrink.

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