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Chapter:- 1

Fundamental unit of Life

Q) Discuss the type of plastids and their respective functions.

Ans) The types of Plastids are:-

i- Chloroplasts
ii- Chromoplasts
iii- ~~Geno~~ Gerontoplasts
iv- Leucoplasts

⇒ **Chloroplasts:-**

Chloroplasts are biconvex shaped, semi-proous, double membraned, cell organelle found within the mesophyll of plant cell. They are the sites for synthesizing food by the process of photosynthesis.

⇒ **Chromoplasts:-**

Chromoplasts is the name given to an area for all the pigments to ~~be~~ be kept and synthesized in the plant. These can be usually found in flowering

plants, ageing leaves and fruits. Chloroplasts convert into chromoplasts. Chromoplasts have carotenoid pigments that allow different colours that you see in leaves and fruits. The main reason for its different colour is for attracting pollinators.

⇒ Gerontoplasts :-

There are basically chloroplasts that go with the ageing ~~pro~~ process. Geronoplasts refer to the chloroplasts of the leaves that help to convert into different other organelles when the leaf is no longer using photosynthesis usually in an autumn month.

⇒ Leucoplasts :-

These are the non-pigmented organelles which are colourless. Leucoplasts are usually found in ~~most~~ most of the non-photosynthetic parts of the plants. They are ~~mostly~~ ~~used for covering~~ mostly used for covering

amino acids and fatty acids

a) Explain the role of centrosome in cell division of an ~~animal~~ animal cell.

ans) The centrosomes help in cell division. They maintain the chromosome number during cell division. They also stimulate the changes in the shape of the cell membrane by phagocytosis. In mitosis, it helps in organising the microtubules ensuring that the centrosomes are distributed to each daughter cell.

a) Elaborate the role of ~~vacuole~~ vacuole in plant cell.

ans) Vacuoles are membrane-bound sacs within the cytoplasm of a cell that functions in several different ways. In mature ~~cells~~ plant cell vacuoles tend to be very large and are extremely important in providing structural support, as well as serving functions such as storage, waste disposal, protection and growth. Many plant cells have a large single central vacuoles

that typically takes all most 95 %
of the room in the cell.