1. Why cell wall is called freely permeable?

Ans - Cell wall is called freely permeable because it allows substances in solution to enter and leave the cell without any hindrance.

2. Differentiate between Chloroplast and Chromoplast

Chloroplast	Chromoplast
• These are the green plastids.	• Contains yellow and red pigments
• Traps the solar energy for photosynthesis.	• Responsible for varied colours to fruits and flowers as well as causing pollination by attracting insects.

3. What are the functions of a cell wall?

Ans - The main function of cell wall are:

i) It gives shape and rigidity to plant cell.

ii) It protects the cell from the entry of diseases causing agents.

iii) It protects the plasma membrane and protoplasm

4. Define cell. When a cell is called a living cell?

Ans- A cell can be defined as the basic structural and functional unit of an organism. A cell is said to be living when it contains a jelly like substance called protoplasm.

5. Define protoplasm.

Ans- Protoplasm is the living substance of a cell. It is made up of cytoplasm and nucleus.

6. Define unicellular organisms with example.

Ans- The organisms having just a single cell are called unicellular organism. Example: Bacteria, Yeast, Amoeba, Paramecium etc...

7. Define multicellular organisms with example.

Ans- Multicellular organisms are made of millions and billions of cells. Example: All organism

we can see around us like - Rose, Peepal, fish, lion and human beings etc...

8. Why cell division is so important?

Ans- Cell division is neccessary for replacement, repair, reproduction and growth of the cells. It is neccessary for the existence of all living beings including the plants.

9. Define vacuole.

Ans- Vacuoles are the non-living inclusions in the cytoplasm. These are filled with water and other substances in solution form called cell sap. These are present both in animal and plant cells. Vacuoles are fewer and

10. Answer the following:

(i) Define the cell theory. Name the scientists who formulated it.

Ans- Three scientists, Schleiden, Schwann and Virchow formulated the cell theory. The cell theory is described as follows:

(i) Every living organism is made up of one or many cells.

(ii) The cell is the structural unit of all living organisms.

(iii) The cell is the functional unit of all living organisms.

(iv) All cells arise from the pre-existing cells.

(ii) Classify and define the different cells according to their size.

According to their size the cells are classified as largest cells, longest cells and smallest cells.

- Largest cells: The ostrich eggs are examples of largest cell.
- Longest cells: The nerve cells are the longest cells, which are up to 3 metre of length.
- Smallest cells: The smallest cells are between 0.2 - 0.5 micrometre and found in bacteria.

(iii) Define the different cells present in animals.

Ans - The different cells present in the animals are

(i) Muscle cells: Muscle cells has the ability to contract and relax. It helps in the movement of different body parts.

(ii) Nerve cells: It helps in conducting the message in the form of impulses.

(iii) Gland cells: These are present in the various glands and secret enzymes that digest the food.

(iv) Skin cells: It is present in the skin, which is the outermost covering of the body and protects from various external factors like germs and ultraviolet rays. It also helps in regulating the body temperature.

(iv) What are plastids? State its different types

Ans- Plastids are organelles which are present only in the plant cells. These are mainly three types depending upon the pigment they contain.
These are Chloroplasts, Chromoplasts and Leukoplasts.

- Chloroplasts: These are green plastids that trap the solar energy for photosynthesis.
- Chromoplasts: These contains yellow and red pigments. They impart colours to flowers and fruits. They also attracts the insects for pollination.
- Leuko plasts: These are colourless plastids which are present in the seeds. They store starch, fat and proteins.