WORKSHEET
Cell (CH-3)

1. The cell wall is called a freely permeable because it allow substances in solution to enter and leave the cell without any hindrance.

2. Chloroplasts were green plastids, that trap the solar energy for photosynthesis.

Chromoplasts contain yellow and red pigments. They impart varied ~~colours~~ colour to flowers and fruits. In petals of flowers, they attract insects for pollination.

3. The main functions 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 against mechanical injury.

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

5. Protoplasm is the living substance of the cell. It is made up of the cytoplasm and nucleus.

6. The body of many microscopic plants and animals are formed of just one single cell. Such organisms are called unicellular organism. Example: Paramecium, Bacteria, Yeast, Chlamydomanos and Amoeba.

7. The body of most of the ~~microscopic~~ plants and animals are formed up of million and billions of cells such organism are called multicellular organism. Example- pecpal, Hydra, neem, fish, lion, frog, humans, deer and etc are all multi-cellular organism.

8. Cell division is ~~important~~ necessary for replacement, repair, ~~reproduction~~, reproduction and growth of the cells. It is necessary for the existence of all living beings including the plants.

9. Vacuoles are the non-living inclusions in the cytoplasm. These are filled with water and other substances in solution

for called cell sap. They are present both in animal and plant cells. Vacuoles are fewer and quite large in size in plant cells and animals cell vacuoles are large in number but smaller in size.

10. i) The three scientists; Schleiden, Schwann and Virchow formulated the cell theory.

1) Every living organism is made up of one or many cells

2. The cell is the structural unit of all living organisms.

3. The cell is the functional unit of all living organisms.

4. All cells arise from the pre-existing cells

ii) There is a huge variety in the size of the cells. The greater majority of cells are very small ~~The for~~ and they can be seen only with the help of microscope. However there is a great range in their sizes.

i) The largest cells are the ostrich eggs.
ii) The ~~big~~ longest cells are the nerve cells (upto 3 metre)
iii) The smallest cells are found among bacteria (0.2-0.5 micrometre). (A micrometre is equivalent to one-thousandth of a millimetre)

iii) In Animals

- Muscle cells: Movement of body parts. It is the ability of the muscle cells to contract and relax.

- Nerve cells: conductions of messages in the form of impulses.

- Gland cells: It is the cells of ~~various~~ various glands which secrete enzymes that digest the food.

- Skin cells: The skin being the outermost covering of the body protects our body from various external factors such as germs and ultraviolet rays. It also helps in regulating the body temperature.

5- Plastids are organelles which are present only in the plant cells. These are mainly three types depending upon the pigment they contain. There are ~~the~~ chloroplasts, chromoplasts and leukoplastes. Chromoplasts: These are green plastids that trap the solar energy for photosynthesis. Chromoplasts: These ~~are~~ contains yellow and red pigments. They impart colours to flowers and fruits. They also attracts the insects for pollination. Leukoplastes. These are colourless plastids which are present in the seeds. They store starch, fat and proteins.