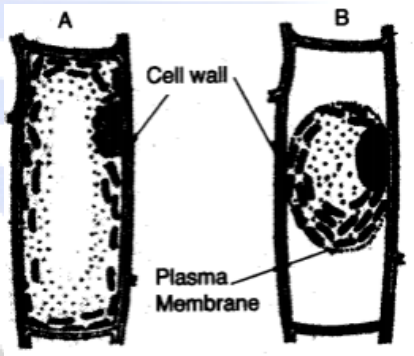
Marks: 30 **Time: 40 min**

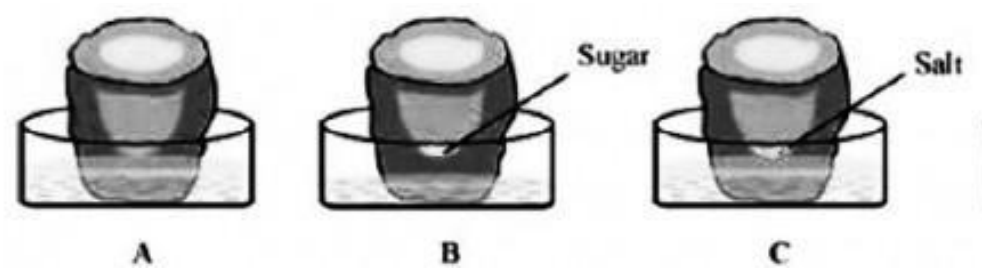
1. Name the following –
   a. The semi-autonomous cell organelle found in both animal and plant cell
   b. Scientist who proposed that all cells come from pre-existing cells
   c. A cell of your body that can change its shape
   d. Non- membrane bound cell organelle 2
2. Draw a well labelled diagram of a cell that contains chloroplast. Label 2 other features that are absent in cells that have a nucleus but not a chloroplast. 3
3. Differentiate between-
   a. RER and SER b. Nucleoid and nucleolus
   c. Mitosis and meiosis 6
4. Identify the odd one, give reason
   a. Cockroach, earthworm, amoeba, mango b. RBC, WBC, bacteria, Neuron
   c. Flagella, mitochondria, cilia, pseudopodia 3
5. What will happen if-
   a. Dry apricots are left for some time in pure water
   b. Plasma membrane ruptures
   c. Golgi body is removed from cell 3
6. a. What could be the reason for a plant cell to show a change from A to B?
   b. Name this phenomenon
   c. What will happen if this cell is placed in a hypotonic medium after stage B? 3



7. The following experiment was carried out- three peeled potatoes were taken and each of these was scooped out to make potato cups, A, B, C.

   These were then placed in 3 different petri-dishes containing water.

   Now,
   a. Potato cup A was kept empty b. 10g salt was put in B
   c. 10g sugar was put in C



Based on the experiment, answer these questions-

(i) What will happen in A, B, C

(ii) Explain your observations

(iii) Why is potato cup A necessary for this experiment? 3

8. What is the function of a cell wall in fungi? 1

9. How is the plasma membrane made? Which property of plasma membrane enables it to-

a. Control entry and exit of substances

b. Enables amoeba to acquire food 3

10. At what stage of a cell's life can we see rod shaped chromosomes? What are chromosomes made of? 1

11. Name and define the type of cell division by which sperm is produced in the testis. 1

12. How is osmosis a special case of diffusion? 1