Name :..... Total Marks = 23

Time : 1 hour Date: 16/4/2018

S1. Soap solution is very concentrated – Hypertonic solution, so water moves out of your finger cells by osmosis. **1**

S2. Robert Hooke discovered cell by observing a thin section of cork under self-designed microscope. **1**

S3. Mitochondria and Chloroplast are the two organelles that contain their own genetic material. **1**

S4. Lysosomes are known as 'suicide-bags' because when cell gets damaged during the disturbance in cellular metabolism, lysosomes may burst and the digestive enzymes thus released digest their own cell. **1**

S5. Nuclear material of prokaryotes is nucleoid not bounded by nuclear envelope. It does not have nucleolus and is referred as nucleoid. **1**

S6. **(b)** The cell will gain wate through osmosis when the solute concentration in surrounding medium is lower than solute concentration in the cell placed in it. **1**

S7. **(a)** This is the correct answer. **1**

S8. **(a)** This is the correct answer. **1**

S9. Exosmosis is the movement of water molecules from a region of low solute concentration *i.e.*, inside the cells of cucumber as compared to the external environment through a semipermeable membrane that takes place on adding salt to cuccumber slices. **1**

S10. **(c)** Robert Hooke observed dead cork cells. **1**

S11. Cell is called as the structural and functional unit of life because **2**

(a) all the living organisms are made up of cells.

(b) an organism is the functional outcome of sumtotal of all the activities performed by the cell.

S12. If the plasma membrane ruptures or breaks down them there will be spilling of cytoplasm and cell organelles, bursting of lysosomes and digestion of cellular contents. **2**

S13. Difference between prokaryotic cell and eukaryotic cell. **3**

Prokaryotic cell	Eukaryotic cell
1. Small in size (1-10 mm).	1. Size generally large (5-10 mm).
2. Nuclear region not well defined and is not bounded by nuclear membrane. It is known as nucleoid.	2. Nuclear region well defined and bounded by nuclear membrane.
3. Single chromosome is present.	3. More than one chromosome are present.
4. Nucleous is absent.	4. Nucleous is present.
5. Membrane-bound cell organelles are absent. **Example:** Bacteria, cyanobacteria, actinomycites, mycroplasmas.	5. Membrane-bound cell organelles are present. **Example:** Plants, animals, fungi.

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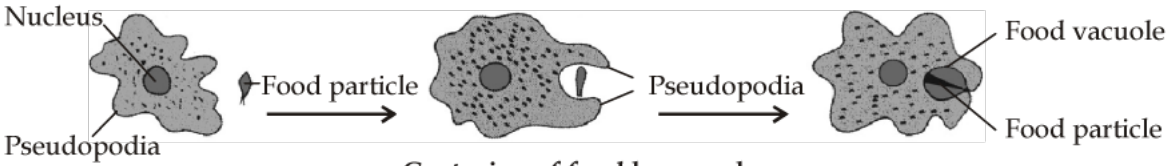
S14. Amoeba engulfs its food with the help of pesudopdodia, which are projections of cell membrane. It encircles the food particle and ingests it by the process of phagocytosis. Once the food becomes a part of cell it is referred as phagosome or food vacuole. Intracellular digestion takes place. The digested food is absorbed by the surrounding cytoplasm and the undigested matter is thrown out of the cell by the process of exocytosis. **3**



Capturing of food by amoeba

S15. Gases like CO_2 and O_2 move in and out of the cell by the process of diffusion from their region of high solute concentration to the low solute concentration due to concentration gradient *i.e.*, from a region having low solute concentration to a region of high solute concentration through semipermeable membrane. **3**

This process is called as osmosis. If the cell is placed in hypertonic solution, water comes out of the cell and exosmosis takes place. But if the cell is placed in hypotomic solution, water moves inside the cell from external environment and endosmosis takes place.

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