Biology - 12th Class Biology Chapter 15 Short Questions Preparation

Q1. Give four adaptation of xerophytes.

Ans 1: Xerophytes have following adaptations.

1. Reduced leaves
2. Hidden stomata
3. Thick cuticle
4. Water storing tissues

Q2. Define dialysis.Give its types.

Ans 1: When the kidneys of a patient are failed then nitrogenous wastes are removed by filtering blood through dialysis.Dialyzing machine is called artificial kidney machine.
It has two types:

1. Peritoneal dialysis
2. Hemodialysis

Q3. Differentiate between osmoregulation and thermoregulation.

Ans 1: Osmoregulation: The mechanism of regulation, generally between organism and its environment of solute and the gain & loss of water is called osmoregulation.

Ans 2: Thermoregulation:The maintenance of body temperature within a tolerable range is called thermoregulation.

Q4. Why leaves are said to be excretophore?

Ans 1: The falling of yellow leaves in autumn is the seasonal time for the plants to get rid of the accumulated wastes and because of this reason leaves are said to be excretophore.

Q5. What is hypertonic environment and what changes occur in a cell in such environment?

Ans 1: The more concentrated external environment is called hypertonic environment. The hypertonic environment makes the cell solution concentrated and cell shrinks due loss of water.

Q6. What is counter-current multiplier.

Ans 1: This mechanism causes gradual osmotic out flow from the filtrate back to kidneys as it passes downward in the descending loop of Henle.Furthermore, ascending loop of henle does not allow out flow of water from its filtrate,instead actively transport sodium ions into kidney interstitium to sustain its high concentration.

Q7. Differentiate between hydrophytes and mesophytes.

Ans 1: Hydrophytes: Hydrophytes are the plant which grow in aquatic environment (abundant water),they have large leave surface area and stomata are present on the upper side of leaves, they have high rate of transpiration. E.g., Water lilli, Wolfia, Pistia etc.

Ans 2: Mesophytes: These are the plants which grow on land where moderate water is available: they open their stomata during flooding and close stomata during drought.For Example: rose and mango.

Q8. Name waste products produced during metabolism of purine and pyrimidine.

Ans 1: Waste products of purine and pyrimidine are hypoxanthine, xanthine, uric acid, allantoin, urea and ammonia.

Q9. What are heat-shock proteins?

Ans 1: Most plants have adopted to survive in heat stress as the plants of temperate regions face the stress of 40°C and above temperature.The cells of these plants synthesize large quantities of special proteins called heat shock proteins.These proteins embrace enzymes and other proteins thus help to prevent denaturation.

Q10. Explain briefly glomerular filtrate.

Ans 1: It is the filtrate which is produced by the filtration of blood from the glomerulus,it contains glucose,amino acid,small blood cells,salts,nitrogenous wastes and water.