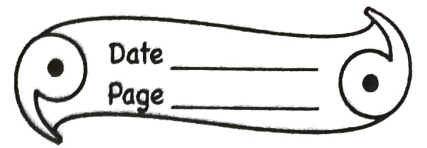


WORKSHEET-1



Case Based questions

Lymph functions as a middleman by ~~aiding~~ ^{aiding} the transport ^{of substances} between blood and tissues ~~that~~ ^{so that} the blood capillaries can't reach.

Lymphocytes are a type of WBC and they provide immunity.

Blood contains plasma, erythrocytes, leucocytes and thrombocytes while Lymph contains plasma and leucocytes. Blood's plasma has more proteins, calcium and phosphorus while lymph's plasma has fewer proteins and less calcium and phosphorus.

Lymph helps in transportation of food, therefore aiding in its absorption.

Q Transpiration occurs through stomata, lenticels and root hairs, but primarily stomata. The H_2O molecules diffuse through the stomata in the form of water vapour. This creates a low pressure that helps absorption of water from the roots.

Q. Secondary metabolites are the compounds produced by an organism that are not required in primary metabolism

Two marks questions

1. \odot Peristalsis is the process that ^{pushes} helps the food further in the alimentary canal. This process also helps with digestion in the stomach. Peristalsis occurs in the oesophagus, stomach and intestine.

2. Translocation of food in plants occurs through phloem. The food goes upward, downward as well as in all radial directions. The food is transferred into the sieve tubes by active ~~trans~~ transport. The transport of secretions inside ~~the sieve tubes~~ creates a hypertonic condition.

that builds up a pressure difference between the water potential in sieve tubes and nearby xylem cells. Due to this pressure difference, the water adjacent to xylem moves into the sieve tubes ~~at~~ into the phloem by osmosis. This leads to ~~the~~ an increase in the osmotic pressure inside sieve tubes that pushes the fluid to sucrose deficient areas of the plant, where sucrose is again actively removed and the remaining water moves into the xylem by osmosis.

3. Breathing cycle is rhythmic. It occurs at about 16 times per minute involuntarily at normal heart rate. We breathe air in and we breathe it out through our nose. However in the ~~the~~ lungs, there is always a residual volume of air that (900-1200 ml) that is always present in the lungs no matter what which keeps the gaseous exchange cycle constant and consistent.

4. Nephron is the ~~structural~~ and functional unit of kidney. Urine formation is regulated to prevent excess water loss from the body. The hormone that controls urine production is ~~Anti-diuretic~~ ~~hormone~~ ~~ADH~~.



hormone. When the waste products are filtered as primary filtrate by the Bowman's capsule, the water concentration is way too high for human body. So, ~~the~~ water and certain ions are reabsorbed back into the body. The rate of reabsorption depends upon the current water level of the body.

5. Leakage of blood reduces the blood pressure. This causes the blood not to reach some farther areas of the body. This severely reduces the efficiency of the pumping system. Also, less blood means that the blood would have to be pumped more times.

Three marks questions

1. (a) Two main gases, O_2 and CO_2 are exchanged. Oxygen travels in the ~~to~~ form of oxyhaemoglobin while CO_2 is transported either in the form of carbaminohaemoglobin or directly in the plasma.
- (b) Body temperature regulation or Thermo regulation. Blood helps evenly distribute the body temp. If one place is too hot, the



cold, blood can balance that. Blood vessels also constrict and dilate as per requirement to retain or radiate heat respectively.

c. The WBC present in blood ~~help~~ kill invading microbes and protect the body from diseases.
~~But~~

2.	Photosynthesis	Respiration
→	CO_2 is taken in and O_2 is produced	O_2 is taken in and CO_2 is produced.
	Glucose	
→	Starch is formed	Glucose is used
→	Only in Plants	Both in Plants and animals.
→	Sunlight is required	No sunlight is required
→	ATP is not produced	ATP is produced

③

3. Amoeba takes its food by phagocytosis. It extends its pseudopodia to move towards the food particle and then engulfs it. The food is ~~formed in~~ stored in a vacuole and digestive enzymes are released into it to digest it. Then the waste products are disposed off by exo

4. Dark reaction is the reaction(s) that happens in the second stage of photosynthesis and is not dependent on light. It occurs in stroma.

