

**QUESTIONS**

1. Name the product and by product of photosynthesis.
2. In which biochemical form the photosynthate moves in phloem tissue?
3. What are the raw materials of photosynthesis?
4. What is the similarity between chlorophyll and hemoglobin?
5. Name the products of photolysis of water.
6. What are the end products of light dependant reaction?
7. Which cell organelle is the site of photosynthesis?
8. What is the difference between digestion of heterotrophs and saprotrophs?
9. Give example of two plants and two animal parasites.
10. Name the enzyme present in saliva, what is its role in digestion?
11. Which chemical is used to test for starch? Which colour shows the presence of starch?
12. Give the term- rhythmic contraction of alimentary canal muscle to propel food.
13. Name the three secretions of gastric glands.
14. What is the function of mucus in gastric gland?
15. Name the sphincter which regulates the exit of food from the stomach.
16. Give the functions of hydrochloric acid for the body.
17. What is the role of pepsin in stomach?
18. Why pancreas is called mixed gland?
19. Give two functions of bile juice, from which organ it is released?
20. Name the largest gland of our body.
21. Name any three important enzymes of pancreas and the food component on which they act.
22. Where from intestinal juice come to the small intestine?
23. What is the function of intestinal juice?
24. What are the simplest digestive product of carbohydrate, fats and protein?
25. Name the finger like projections of small intestine and what is the necessity of such type of

projections in digestive system?

26. Why are intestinal villi highly vascular?

27. What is the function of anal sphincter?

28. Name the site of anaerobic and aerobic respiration in a cell.

29. A three carbon compound is the common product of both aerobic and anaerobic pathway.

What is that?

30. Why do we get muscle cramp after vigorous exercise?

31. Distinguish between lactic acid and alcoholic fermentation?

32. Name the energy currency molecule of cell?

33. The breathing rate of aquatic animals is high, why?

34. What is the function of mucus and fine hair in nostrils?

35. Give the function of network of capillaries on alveoli.

36. Name the main carrier of oxygen and carbon dioxide in man.

37. Why does haemoglobin molecule act as efficient carrier of oxygen than diffusion process?

38. Give example of any three substances transported by plasma.

39. Name the organ that- (a) pushes blood around body (b) make blood to reach to tissues.

40. Name the blood vessel that carries blood from heart to lungs and from lungs to heart.

41. How many heart chambers are there in (a) fish (b) frog (c) lizard (d) crocodile (e) birds (f) man?

42. Name the device that measures blood pressure.

43. What is the normal blood pressure of man?

44. Why capillaries are thin walled?

45. Which cell of blood help in wound healing?

46. What is the other name of lymph?

47. Give two function of lymph.

48. What is the direction of flow of water in xylem and food in phloem?

49. Why do plants need less energy than animals?
50. Which process acts as suction to pull water from xylem cells of roots.
51. Mention two functions of transpiration.
52. What are the two substances transported through phloem tissue?
53. Name the food component whose digestion produces nitrogenous waste?
54. Which is the functional unit of kidney?
55. What is the cup-shaped structure of nephron called?
56. Which materials are selectively reabsorbed by nephron tubule?
57. What are the two important functions of kidney.
58. What is the other name of artificial kidney?

### **ANSWERS**

1. Product-starch by product-oxygen
2. Sucrose.
3. carbon dioxide, water
4. both are pigments
5. oxygen, electron and protons
6. ATP, NADPH<sub>2</sub>
7. chloroplast
8. Heterotrophs- digestion occurs inside the body, saprotrophs- digestion occurs outside of body.
9. plant-cuscuta, orchid animal-lice, ticks
10. Salivary amylase-It digests starch to maltose.
11. Iodine solution, blue
12. Peristaltic
13. HCl, pepsin, mucus
14. Protects the inner lining of stomach from the action of acid HCl.

15. Pyloric sphincter
16. Activates pepsin, make the medium acidic for enzyme action, Microcidal.
17. Pepsin digests protein into peptones.
18. It behaves as exocrine as well as endocrine gland.
19. (i) Emulsifies fat (ii) Change the food medium into alkaline on which pancreatic enzyme can act.
20. Liver
21. (i) Amylase- carbohydrate, (ii) Lipase- fat, (iii) Trypsin- protein.
22. Secreted from internal wall of small intestine.
23. Perform final digestion of all food components.
24. (i) carbohydrate- glucose, (ii) fat- fatty acid, glycerol (iii) protein- amino acid.
25. Villi, Increase the surface area of absorption of digested food.
26. More the blood supply, the more will be the absorption of digested food.
27. Regulate the exit of waste material.
28. Anaerobic- cytoplasm, aerobic- mitochondria.
29. Pyruvic acid.
30. Because of the accumulation of lactic acid which is formed due to anaerobic break down of glucose.
31. Lactic acid is a 3 carbon compound produced on oxidation of glucose anaerobically where as ethanol a 2 carbon compound is formed on anaerobic oxidation of glucose along with  $\text{CO}_2$ .
32. ATP
33. Because they take dissolved oxygen whose percentage in water is lower than atmospheric percentage.
34. Filter impurities.
35. Exchange of gases by diffusion process. Oxygen from lungs moves to blood and carbon dioxide from blood moves to lungs.

36. O<sub>2</sub>(-ve)haemoglobin, O<sub>2</sub>(-ve)plasma.
37. Haemoglobin has high affinity for oxygen, so it carries the gas faster in blood where as diffusion is a slow process.
38. Digested food, carbon dioxide, nitrogenous waste.
39. (a) Heart, (b) blood vessel.
40. (a) Pulmonary artery, (b) pulmonary vein.
41. (a) 2, (b) 3, (c) 3, (d) 4 (e) 4 (f) 4.
42. Sphygmomanometer
43. 120/80
44. For exchange of materials by diffusion process.
45. Platelet cells.
46. Tissue fluid.
47. Carries digested and absorbed fats, drains excess fluid from extra cellular space to blood.
48. Flow of water is unidirectional i.e. from root to leaves, but flow of food bidirectional i.e. leaf to sink and vice versa.
49. Plants are nonmotile; most of the cells are dead.
50. Transpiration.
51. (i) Absorption and upward movement of water and minerals, (ii) temperature regulation.
52. Sucrose, amino acid.
53. Protein, nucleic acid.
54. Nephron.
55. Bowman's capsule.
56. Glucose, amino acids, salts, water.
57. Filtration of nitrogenous waste from blood and osmoregulation.
58. Dialysis.