

SANJEEVANI PUBLIC SCHOOL, UTTAM NAGAR
CLASS- X (SCIENCE)
ASSIGNMENT
LIFE PROCESSES

NAME OF STUDENT: - _____

Q1 Answer the following questions

1. Which organelle in a cell is associated with the production of energy by aerobic respiration?

Ans. Mitochondria

2. How does diaphragm help in respiration

Ans. The diaphragm muscles contract and it moves down towards abdomen. This causes increases in volume of thoracic cavity but decreases of air pressure so air is drawn into the lungs.

3. Name the passage that leads bile from liver into the gall bladder.

Ans. Cystic duct

4. Where do light and dark reaction take place

Ans. Light Reaction –Granum of Chloroplast

Dark Reaction: -Stroma of Chloroplast

5. How do submerged aquatic plants get CO₂?

Ans. In these plants carbon dioxide directly enters through the epidermis and reaches the cells in the form of bicarbonates.

6. Give the currently accepted equation of photosynthesis.

Ans. $6\text{CO}_2 + 6\text{H}_2\text{O} \xrightarrow[\text{chlorophyll}]{\text{light}} \text{C}_6\text{H}_{12}\text{O}_6 + 6\text{O}_2$

7. What is compensation point

Ans. The point at which photosynthesis and respiration in a plant are exactly balanced, and one process uses up the products of the other process is called compensation point.

8. What are the peristaltic movements

Ans. The contraction and expansion movements of the walls of food pipe are called peristaltic movements. This pushes the food in forward direction in the alimentary canal.

9. Name the three pairs of salivary glands of man

Ans. Sublingual, submandibular and parotid

10. In case malarial parasite feed upon two different organisms' man and mosquito. State the relationship.

Ans. Here Plasmodium (malarial parasite) is a parasite, Man is the host and mosquito is intermediate host

11. Write the function of liver and pancreas in our digestive system.

Ans. Liver secrete bile juice emulsify the fat present in the food. Pancreas secrete digestive enzymes as well as hormones. Trypsin is a protein digesting enzymes as amylase is starch digesting enzymes. Glucogen and insulin hormone maintain sugar level in the blood.

12. What happens to land plants if roots remain water lodged for a prolonged time?

Ans. Gaseous exchange cannot be possible and it will cause death of the plants

13. Which of the four chambers of the human heart has thickest muscular walls?

Ans. Left ventricle of the human heart has the thickest muscular walls.

14. Write the full form of SA-node. What is its other name?

Ans. Sino-atrial node. It is also called a Pace maker.

15. Name the system responsible for transportation of material in human being.

Ans. Circulatory system.

16. Name The Excretory Unit Of Kidney.

Ans. Nephron

17. Where Is Urine Carried Through Ureters?

Ans. Urinary Bladder

18. Which pigment is responsible for the transport of nutrients, respiratory gases, metabolites, hormones and waste products?

Ans. Haemoglobin

19. Which Membrane Enclosed The Heart?

Ans. Pericardium

20. What Is The Role Of Stomata In Transpiration?

Ans. Stomata takes out extra amount of water vapours.

21. Name the tissue responsible for the translocation of food in plants.

Ans. Phloem

22. Name the process by which plants lose water

Ans. Transpiration

23. Which instrument is used to hear the heart sound?

Ans. Stethoscope

24. Name the system responsible for transportation of material in human being

Ans. Blood circulatory system.

25. Name the passage in sequence through which urine passes from kidneys to the outside in humans.

How is urine prevented from flowing back into the ureters?

Ans. Kidney → Ureters → Urinary bladder → Urethra to the outside

Urine is prevented from flowing back into the ureters because the terminal part of each ureter passes obliquely through the bladder wall and so becomes closed due to compression by the contracting bladder muscles.

26. Write difference between Autotrophic nutrition and heterotrophic nutrition

Ans Autotrophic Nutrition: - Autotrophic nutrition is that made of nutrition in which an organism makes its own food from the simple inorganic materials like carbon dioxide and water present in the surroundings.

Example: -green plant, bacteria.

Heterotrophic Nutrition: - Heterotrophic nutrition is that made of nutrition in which an organism cannot make its own food from simple inorganic materials like carbon dioxide and water, and depends on other organisms for its food. Example: - All Animals

27. Write difference between aerobic respiration and anaerobic respiration

Ans.

| Aerobic respiration | Anaerobic respiration |
|---|--|
| 1. Aerobic respiration occurs in presence of O ₂ where O ₂ is utilized | 1. Anaerobic respiration occurs in absence of O ₂ |
| 2. Glucose is completely breakdown to release the end products in the form of CO ₂ and water | 2. Glucose is completely oxidized to release the end products in the form of ethanol and lactic acid |
| 3. Energy released in larger amount (i.e. 38 ATP molecules) | 3. Energy released in lesser amount (i.e. 2 ATP molecules) |
| 4. It takes place in mitochondria. | 4. It takes place in cytosol. The mitochondria are not involved |

28. Write difference between breathing and respiration

Ans.

| Breathing | Respiration |
|--|--|
| 1. It is a physical process | 1. It is a chemical process |
| 2. It is just exchange of the respiratory gases | 2. Here glucose is oxidized into different end product |
| 3. No yield energy take place | 3. Yield of energy is an essential process |
| 4. This process is take place in specific body parts | 4. This process take place in whole body parts |