



**Octahedron institute, chandan nagar**

**office no 2, 1st floor chandan complex**

**Class 10 - Science**

**LIFE PROCESS**

**Maximum Marks: 90**

**Time Allowed: 2 hours**

**General Instructions:**

**ANSWER ALL QUESTIONS**

**Section A**

1. What are the differences between the transport of materials in xylem and phloem? 1
2. Why respiration is called catabolic process? 1
3. What would happen if you do not drink water for 24 hours in a hot summer month? 1
4. What happens to the rate of breathing during vigorous exercise and why? 1
5. When and where does anaerobic respiration occur in man and yeast? 1
6. How would the digestion of proteins and carbohydrates be affected if in the duodenum of man there is a blockade in the pancreatic duct? 1
7. Name the 3 common nitrogenous waste materials in vertebrates. Which of these is most toxic and which least toxic? 1
8. Man has double circulation. Name the two circulations. 1
9. Why does high temperature inhibit photosynthetic action? 1
10. Mention the steps of respiration in higher animals. 1
11. Draw a neat labelled diagram of chloroplast. 2
12. Describe the structure of the nephron with a neat labelled diagram. 2
13. What are the functions of human respiratory system? 2
14. What is the role of Hydrochloric acid in our stomach? 2
15. Distinguish between breathing and respiration. 2
16. List various functions of food. 2
17. Describe the large intestine. 2
18. Explain the role of haemoglobin in respiration. 2
19. How does respiration take place in plants? 2
20. Describe double circulation in human beings. 2

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| 21. What are the functions of chloroplast? List some of them.   | 2 |
| 22. What is meant by clotting of blood? Write a flow chart showing major events taking place in clotting of blood?  | 2 |
| 23. Describe the structure of human kidney.   | 2 |
| 24. With regard to obtaining oxygen for respiration a terrestrial organism has advantages over an aquatic organism. Give reasons to support this statement. | 2 |
| 25. What are the components of the transport system in human beings? What are the functions of these components?  | 2 |
| 26. Give the role of liver in the human beings.   | 5 |
| 27. Draw labeled diagram of human respiratory system and name the parts.  | 5 |
| 28. Describe the process of digestion of food in human beings.  | 5 |
| 29. Discuss the structure of cross-section of leaf.   | 5 |
| 30. Name the three major types of blood vessels. Explain briefly.   | 5 |
| 31. Describe human alimentary canal.  | 5 |
| 32. What is the significance of photosynthesis?   | 5 |
| 33. Describe an experiment to demonstrate that CO <sub>2</sub> is essential for photosynthesis.   | 5 |
| 34. What do you understand by parasitic nutrition?  | 5 |
| 35. Describe the structure and functioning of nephrons.   | 5 |