



# 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

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  $\text{CO}_2$  is essential for photosynthesis. 5
34. What do you understand by parasitic nutrition? 5
35. Describe the structure and functioning of nephrons. 5