⇨ **Self-Assessment**

⇨ **Section A – (2 Marks Questions)**

1. Why is diffusion insufficient to meet the oxygen requirements of multicellular organisms like humans?
2. List in tabular form two differences between xylem and phloem.
3. State the main function of arteries. Why do they have thick and elastic walls?
4. Explain in brief two ways by which leaves of a plant help in excretion.
5. Why is transpiration important for plants?
6. Name the basic filtration unit of the human kidney.
7. What advantage over an aquatic organism does a terrestrial organism have with regard to obtaining oxygen for respiration?
8. What is translocation in plants?
9. What is the function of bile in digestion?
10. What role do guard cells play in stomata opening and closing?
11. State two functions of the epiglottis during breathing.
12. How is double circulation different from single circulation?
13. State the function of chlorophyll.
14. "All plants give out oxygen during day and carbon dioxide during night." Do you agree with this statement? Give reason.
15. Why do veins have thin walls as compared to arteries?

⇨ **Section B – 3 (Marks Questions)**

1. Explain the process of digestion of food in the human alimentary canal.
2. How is oxygen and carbon dioxide transported in human beings?
3. Describe the structure and function of the nephron.
4. Differentiate between arteries, veins and capillaries.
5. How does the small intestine absorb digested food?
6. Explain how plants get rid of their waste products.
7. What are the components of blood? Mention their functions.
8. Explain the role of stomata in photosynthesis and transpiration.
9. What is the first step of cellular respiration? In which part of the cell does it occur?
10. Why do herbivores have a longer small intestine compared to carnivores?
11. Explain the mechanism of breathing in humans.
12. Differentiate between aerobic and anaerobic respiration giving examples.
13. Explain the process of translocation of food in plants.

14. Describe the flow chart of double circulation of blood in human beings.
15. Blood does not clot in the blood vessels. Give reason.

⇨ **Section C – 5 Marks Questions**

1. Explain the process of photosynthesis in detail with the help of a labelled diagram.
2. Describe the process of digestion of food in the human alimentary canal in detail.
3. Explain the process of excretion in human beings with a neat labelled diagram of the excretory system.
4. How does respiration take place in humans? Explain with a diagram of the human respiratory system.
5. Explain the transport of water, minerals and food in plants.
6. Describe the working of the human heart with the help of a labelled diagram.
7. What are the main steps of nutrition in human beings? Explain each briefly.
8. Compare the processes of photosynthesis and respiration in plants.
9. Explain the process of removal of waste products in plants and animals.
10. Design an experiment to demonstrate that carbon dioxide is essential for photosynthesis.
11. Draw a labelled diagram of the human nephrons. Explain how selective re absorption works.
12. Explain why the rate of breathing increases during exercise; what changes occur in the body?
13. Explain the adaptations of lungs (alveoli) for efficient gaseous exchange.
14. How are nutrients transported in humans? Explain the role of blood, heart, and blood vessels.

⇨ **Assertion and Reason**

1. **Assertion (A) :** Plants lack excretory organs.
   Reason (R) : Plants usually absorb essential nutrients.
2. **Assertion (A) :** In anaerobic respiration, one of the end product is alcohol.
   Reason (R) : There is an incomplete breakdown of glucose.
3. **Assertion (A) :** In plants there is no need of specialised respiratory organs.
   Reason (R) : Plants do not have great demands of gaseous exchange.
4. **Assertion :** Trachea does not collapse, when there is no air in it.
   Reason : Trachea is supported by cartilage.
5. **Assertion :** Phloem helps in translocation of food from the leaves.
   Reason: Phloem provides mechanical support to plant.
6. **Assertion :** Most of the living organisms carry out aerobic respiration.
   Reason: Mitochondria is the site of aerobic respiration in the cell.