M.M.: 60 **Time: 90 min**

General Instructions:

(i) There are 21 questions in this paper.

(ii) All questions are compulsory.

1. Name two substances that are absorbed from the small intestine and reabsorbed in the kidney. **[2]**
2. Where do plants store their waste products? **[2]**
3. Draw a labelled diagram for a Nephron. Identify the part of nephron where filtration takes place. **[3]**
4. Name the largest gland in human body? What does it secrete? What is the function of this secretion? **[2]**
5. Differentiate between
   a. arteries and veins.
   b. Trypsin and pepsin **[4]**
6. Write the functions of-
   a. villi
   b. cartilage rings of trachea
   c. diaphragm
   d. peristalsis
   e. sphincter
   f. mucus in stomach **[3]**
7. What are the functions of HCl in stomach? How would digestion be affected if the pH of stomach was above 7? **[2]**
8. What is lymph? How is it different from Blood ? What are its functions ? **[3]**
9. Give reasons --
   a. The small intestine of goat is longer than that of a tiger
   b. bread taste sweet after chewing for some time
   c. lungs always contain a volume of air called residual volume
   d. amoeba is heterotrophic holozoic
   e. we destarch a plant before carrying out experiments on photosynthesis
   f. we use germinating seeds and potassium Hydroxide in the experiment to confirm that carbon dioxide is necessary for photosynthesis. **[6]**
10. With the flow chart explain the different modes of respiration. What is the common step of aerobic and anaerobic respiration ? Where does it take place? **[5]**
11. With a labelled diagram explain the structure of heart. Identify the artery that carries deoxygenated blood. **[5]**
12. Where does protein digestion begin ? Where is it completed? What are the end products of digestion of protein and fats? **[3]**
13. Leaves of a healthy potted plant are coated with Vaseline . Will this plant remain healthy ? Give three reasons to support your answer. **[3]**

14. Explain the process of inhalation. **[2]**
15. Write the three events of photosynthesis. How are desert plants adapted to carry out photosynthesis? **[3]**
16. What is the role of transpiration and osmosis in absorption and transport of water and minerals in a plant? **[3]**
17. How does translocation take place? **[2]**
18. Name the factors on which the amount of water reabsorbed during urine formation depends. **[2]**
19. Compare the alveoli in lungs and nephrons in the Kidney with respect to their structure and functions. **[2]**
20. Name the structure that controls the exit of undigested food from body. **[1]**
21. A doctor measures blood pressure of a person as 160 / 90 mm Hg. Name the instrument used. What is the significance of the measured blood pressure and the likely suggestions of the doctor. **[2]**