

ASSIGNMENT      Class X      SUBJECT-BIOLOGY      DATE-25.04.2020      Teacher: Mrs. Sandhya Sood

### CHAPTER-2 (LIFE PROCESSES)

- 1) What are life processes?
- 2) Explain autotrophic nutrition.
- 3) Why do green plants prepare their food?
- 4) Name the form in which plants prepare their food and store it.
- 5) Write the reaction involved in photosynthesis.
- 6) Write the main event that occur during the process of photosynthesis.
- 7) Why is diffusion insufficient to meet the requirements of multicellular organisms?
- 8) How do desert plants prepare food or perform photosynthesis?
- 9) Why should a plant be kept in a dark room before starting the experiment of photosynthesis?
- 10) Explain with an activity to show that chlorophyll is essential for photosynthesis. With diagram.

#### **\*Activity based question \***

- (a) What is variegated leaf?
  - (b) What is the purpose of keeping a plant in dark room?
  - (c) When the leaf is boiled in alcohol, why should we use water bath?
  - (d) Why should the leaf be boiled in alcohol for performing test for photosynthesis?
  - (e) Write the test for starch.
- 11) Draw a neat diagram of a cross-section of leaf.
  - 12) What is stomata? Where are they present? Write its function.
  - 13) What controls the opening and closing of guard cells?
  - 14) Draw a neat and labelled diagram of open and closed stomata pore.
  - 15) How can you show that Carbon dioxide is necessary for photosynthesis?

#### **ACTIVITY BASED QUESTIONS**

- (a) What is the purpose of KOH in this activity?
  - (b) Why should the bell jar be sealed while performing this experiment?
- 16) How do plants obtain raw materials for building their body?
  - 17) How can you show that sunlight is essential for photosynthesis?
  - 18) Explain heterotrophic nutrition.
  - 19) Where does the complete digestion of food takes place in human body?

- 20) Name the organ (gland) that prepares the bile juice and the organ that stores it.
- 21) What happens to the food in various parts of alimentary canal?
- 22) Why do herbivores have longer small intestine as compared to that of carnivores?
- 23) How energy requirement in autotrophic nutrition fulfilled?
- 24) Draw a well labelled diagram of alimentary canal.
- 25) Differentiate between:
  - (a) Pepsin and trypsin
  - (b) Breathing and respiration
  - (c) Aerobic and anaerobic respiration
- 26) Write the various methods of glucose breakdown.
- 27) Why do we sometimes suffer from cramps after heavy exercise?
- 28) What is plaque?
- 29) What is ATP? How is it produced?
- 30) Write the role of villi in small intestines?
- 31) Write the role of large intestines villi?
- 32) Explain the function of large intestine.
- 33) What are the differences between autotrophic nutrition and heterotrophic nutrition?
- 34) Where do plants get each of the raw material required for photosynthesis?
- 35) What is the role of HCl/ acid in the stomach?
- 36) What is the function of digestive enzymes?
- 37) How is the small intestine designed to absorb digested food?
- 38) Why do plants release carbon dioxide during night and oxygen during the day?
- 39) Why is the rate of breathing faster in aquatic organisms as compared to the terrestrial organisms?
- 40) Why should we breathe through our nose and not through our mouth?
- 41) Draw neat and labelled diagram of human respiratory system.
- 42) Why the rings of cartilage are present in the throat?
- 43) What are alveoli? What are their function?
- 44) Describe the mechanism of breathing in human beings / describe breathing cycle.
- 45) Why do lungs always contain a residual volume of air?
- 46) How is oxygen and carbon dioxide transported in humans?

- 47) How are the lungs designed in human beings to maximize the area for exchange of gases?
- 48) Write the main function of the blood.
- 49) Describe the flow of blood in heart.
- 50) Why do ventricle have a thick muscular walls as compared to Atria?
- 51) Write the main function of valves in our heart?
- 52) What is the size of our heart and write the importance of various chambers.
- 53) Name the instruments used for measuring blood pressure.
- 54) How is separation of left side and right side of heart useful for mammals?
- 55) Draw neat and labelled diagram of human heart.
- 56) How do amphibians and reptiles manage with their 3- chambered heart?
- 57) How does circulation takes place in fishes?
- 58) Explain the process of double circulation in human heart?
- 59) What is the normal range of systolic and diastolic pressure?
- 60) Why do arteries have thick plastic walls as compared to veins?
- 61) Why do veins have valves?
- 62) Differentiate between arteries and veins.
- 63) What are capillaries? Write their function.
- 64) What is the role of platelets in our body?
- 65) What is lymph/ tissue fluid?
- 66) Mention some functions/uses of lymph.
- 67) What is the main difference between plasma and lymph? State any other difference
- 68) How is water and minerals transported in plants?
- 69) What is transpiration? Write its advantages
- 70) Differentiate between xylem and phloem
- 71) What are the component of transport system highly organized in plants?
- 72) Name the structural unit of kidneys.
- 73) Define excretion.
- 74) What is translocation in plants?
- 75) How is food transported in plants?
- 76) Explain human excretory system with the help of a labelled diagram.

- 77) Explain the function of nephron and also the structure of nephron with a labelled diagram OR Explain how urine is formed.
- 78) What factors does the amount of water re-absorbed from tubular part of nephron depend?
- 79) What happens to the urine after it is formed?
- 80) Name the substances that are selectively re-absorbed
- 81) What is reabsorption? Where does it take place?
- 82) Draw a labelled diagram of nephrons
- 83) What are the methods used by plants to get rid of excretory products?
- 84) How is the amount of urine produced regulated?
- 85) What advantage over an aquatic organism does a terrestrial organism have with regard to obtaining oxygen for respiration?
- 86) Why is diffusion insufficient to meet the oxygen requirements of multi cellular organisms like humans?
- 87) The filtrate in the kidney is about 180l a day but why do we excrete a litre or 2 a day?
- 88) What are the waste products in plants?
- 89) Name the structural unit of kidneys
- 90) How are fats digested in our body? Where does this process take place?
- 91) What is the role of saliva?
- 92) What are the necessary conditions for photosynthesis?
- 93) How are alveoli digested to maximize the exchange of gases?
- 94) What would be the consequence of a deficiency of hemoglobin in our bodies?
- 95) What criteria do we use to decide whether something is alive?
- 96) What are outside raw materials used for by an organism?
- 97) What processes would you consider essential for maintaining life?
- 98) What is dialysis?
- 99) Explain the process of dialysis with diagram.