

## PRACTICE EXERCISE – 1

- Q.1** Name any two life processes.
- Q.2** What is the source of energy for living beings?
- Q.3** What process in plants is known as transpiration.
- Q.4** Define nutrition.
- Q.5** Give examples of organism having autotrophic nutrition.
- Q.6** Give examples of organism having heterotrophic nutrition.
- Q.7** Name the mode of nutrition in amoeba?
- Q.8** What are enzymes?
- Q.9** What types of chemical reactions take place in our body to break down the food materials?
- Q.10** In which forms are unused carbohydrates stored in plants?
- Q.11** Name the end products of photosynthesis in a plant.
- Q.12** Which type of plant take up  $\text{CO}_2$  at night?
- Q.13** What are stomata?
- Q.14** What is the function of stomata?
- Q.15** Name the tissue which transports soluble products of photosynthesis in a plant.
- Q.16** What are the functions of saliva?
- Q.17** Name the tissue which transport water and mineral in a plant.
- Q.18** What is the function of bile juice in digestion?
- Q.19** Where are villi present and what are their functions?
- Q.20** What is respiration.
- Q.21** What is the role of saliva in the digestion of food?
- Q.22** Where does anaerobic respiration takes place.
- Q.23** Where does anaerobic respiration takes place?
- Q.24** Out of photosynthesis and respiration in plants which process occurs:  
(a) all the time?  
(b) only at day time?
- Q.25** Name two organisms respiring anaerobically.
- Q.26** Why is anaerobic respiration less efficient?
- Q.27** What are the end products of respiration?
- Q.28** What is breathing.
- Q.29** From where do the following obtain oxygen for breathing and respiration?  
(a) aquatic animals.  
(b) Terrestrial animals
- Q.30** What is transportation?
- Q.31** What is transpiration.
- Q.32** What is the site of the tiny air - sacs at the end of smallest bronchioles in the lungs?
- Q.33** What makes red blood corpuscles red in colour?
- Q.34** Name the cell organelle in which respiration takes place?
- Q.35** Why the wall of trachea do not collapse when there is less air?
- Q.36** Name one circulatory fluid other than blood?
- Q.37** Name the functional and structural unit of kidney?
- Q.38** How many number of times you breathe in and out in a minute?

## PRACTICE EXERCISE – 2

- Q.1** Write one function each of the following components of the transport system in human beings?
- Q.2** Give reasons why the rate of breathing in aquatic organisms is much faster than the terrestrial organisms?
- Q.3** Write any three differences between aerobic and anaerobic respiration.
- Q.4** What happens to the carbohydrate (like glucose) synthesised by a plant which is not used immediately?
- Q.5** Why do plants need nitrogen? How do plants obtain nitrogen.
- Q.6** How does paramecium obtain its food?
- Q.7** Explain why animals such as amphibians and many reptiles can tolerate some mixing of oxygenated and deoxygenated blood.
- Q.8** If we observe the cross - section of a leaf under a microscope, we will notice that some cells contain green dots:
- (a) What are these green dots called?
- (b) What do the green dots contain?
- Q.9** Which contains more carbon dioxide: exhaled air or inhaled air? why?
- Q.10** Describe the process of respiration in the leaves of a plant?
- Q.11** How does fish obtain oxygen for breathing and respiration?
- Q.12** How are the lungs designed in human beings to maximise the area for exchange of gases?
- Q.13** Why does the human heart have four different chambers?
- Q.14** Describe the circulatory system in a fish. Why is it called single circulation?
- Q.15** (a) A certain tissue in a green plant somehow got blocked and the leaves
- coiled. What was the tissue that got blocked?
- (b) A certain tissue in a green plant somehow got blocked and the roots were deprived of food. What was the tissue got affected?
- Q.16** What is hypertension? How is it caused? What damage can it do?
- Q.17** What are the various types of heterotrophic nutrition? Give examples of each type.
- Q.18** Describe the process of nutrition in amoeba. Draw labelled diagrams to show the various steps in the nutrition of amoeba.
- Q.19** What substances are contained in gastric juice? What are their functions?
- Q.20** Describe the exchange of gases which takes place in the leaves of a plant:
- (i) during day time, and
- (ii) at night.
- Q.21** Write a short note on the blood vessels in our body.
- Q.22** What is meant by blood pressure? What are the two factors used to express blood pressure? How much is the normal blood pressure of a person?
- Q.23** Write a short note on 'lymph'.
- Q.24** Mention the common characteristic of the respiratory organs of different animals?
- Q.25** Name the digestion juice that has no enzymes. What is the role of this juice?
- Q.26** What do following transport:
- a. Xylem
- b. Phloem
- c. Pulmonary vein
- d. Vena cava

## PRACTICE EXERCISE – 3

- Q.1** Define nutrition. explain various modes of nutrition?
- Q.2** What is photosynthesis? What are the three important events which occur during photosynthesis? What are the important raw material for photosynthesis? Explain it in detailed.
- Q.3** Explain the process of digestion in man.
- Q.4** What is respiration? What are the differences between aerobic and anaerobic respiration? Name some organisms that use the anaerobic mode of respiration.
- Q.5** Explain in detail the various respiratory organs present in man?
- Q.6** What is heart? Draw a sectional view of the human heart. describe the circulation of blood in human heart?
- Q.7** Describe the various excretory system of human beings along with a well labelled diagram?
- Q.8** What are the different ways in which glucose is oxidised to provide energy in various organisms? Explain by writing word equations.
- Q.9** What type of persons are put on dialysis? Explain the principle of dialysis with the help of a labelled diagram.
- Q.10** Plants absorb water from the soil. How does this water reach the tree tops? Explain in detail.
- Q.11** (a) Draw a diagram depicting Human Alimentary Canal and label on it, Gall Bladder, Liver and Pancreas.  
(b) State the roles of Liver and Pancreas.
- (c) Name the organs which performs the following functions in humans:  
(i) Absorption of digested food.  
(ii) Absorption of water.
- Q.12** Draw a sectional view of the human heart label on it, Aorta, Right Ventricle and Pulmonary veins.
- Q.13** State the functions of the following components of transport system:  
(i) Blood  
(ii) Lymph
- Q.14** Draw the respiratory system of human beings and describe the mechanism of breathing in human beings.
- Q.15** Give a well labelled diagram, explain in brief the transport and exchange of oxygen and carbon dioxide in human being.
- Q.16** What is 'double circulation of blood'? Where is it found? explain it in brief and why is it important?
- Q.17** Give a well labelled diagram of excretory system in human beings and describe the various system involved in excretion.
- Q.18** Describe the structure and functioning of nephrons.
- Q.19** With the help of a schematic flow chart show break down of glucose by various pathways during respiration?
- Q.20** Draw diagram of human excretory system?
- Q.21** List four functions of blood. Why does blood look red? Which chamber of human heart receives oxygenated blood from lungs?
- Q.22** What is transpiration? Give its two functions?
- Q.23** Draw labelled diagram of human heart?

**PRACTICE EXERCISE – 4**

- Q.1** What is the mode of nutrition in plasmodium?
- Q.2** Name the structures through which amoeba capture food?
- Q.3** Name the enzyme present in saliva?
- Q.4** What are villi?
- Q.5** Where pancreas is located?
- Q.6** Name the protein digesting enzyme present in pancreatic juice?
- Q.7** What is emulsification of fat?
- Q.8** Name the cell organelle in which respiration takes place?
- Q.9** Why the wall of trachea does not collapse when there is less air?
- Q.10** Name one circulatory fluid other than blood?
- Q.11** Name the functional and structural unit of kidney?
- Q.12** How many number of times you breathe in and out in a minute?
- Q.13** Name the instrument used to hear heart sounds?
- Q.14** Name the instrument used to measure blood pressure?
- Q.15** What are the biocatalysts of our body called as?
- Q.16** Name the organelle in which photosynthesis occurs?
- Q.17** What are stomata?
- Q.18** What is the approximate total area of human alveolar surface?
- Q.19** What is photolysis of water?
- Q.20** What is peristalsis?
- Q.21** What is sphincter muscle?
- Q.22** What are dental caries?
- Q.23** Name animal having single circulation?
- Q.24** Define double circulation?
- Q.25** What is the function of blood platelets?
- Q.26** After a vigorous exercise you may experience cramps in your leg muscles. Why does this happen?
- Q.27** Name the largest artery in human body?
- Q.28** Name the term for transport of food from leaves to their part of plants.
- Q.29** What is the role of HCl acid in our stomach?
- Q.30** What is the function of nasal cavity?
- Q.31** Write difference between breathing and respiration?
- Q.32** Write difference between aerobic and anaerobic respiration?
- Q.33** Write difference between Artery and vein?
- Q.34** How opening and closing of stomata is regulated?
- Q.35** Mention the common characteristic of the respiratory organs of different animals?
- Q.36** Name the digestion juice that has no enzymes. What is the role of this juice?
- Q.37** How are the alveoli to maximize the exchange of gases?
- Q.38** Name the various digestive glands associated with human digestive system, also give the name of secretion of these glands along with their function?
- Q.39** Describe the various events that occur during photosynthesis?
- Q.40** With the help of a schematic flow chart show break down of glucose by various pathways during respiration?
- Q.41** Draw diagram of human excretory system?
- Q.42** List four functions of blood. Why does blood look red? Which chamber of human heart receives oxygenated blood from lungs?
- Q.43** What is transpiration? Give its two functions?
- Q.44** Draw labelled diagram of human heart?
- Q.45** Draw labelled diagram of human alimentary canal?
- Q.46** Draw labelled diagram of cross-section of a leaf?
- Q.47** Explain the digestion in small intestine?
- Q.48** Explain the mechanism of urine formation?
- Q.49** Describe the course of circulation of blood from heart to organs and back to heart?
- Q.50** Describe the process of digestion of food in man?

## MULTIPLE CHOICE QUESTION'S

Q1. In case of nutrition, man is:

- (a) autotroph (b) parasite  
(c) saprophyte (d) heterotroph

Q2. Bacteria are:

- (a) autotrophs (b) parasites  
(c) saprophytes  
(d) parasites and saprophytes

Q3. Characteristics of life is:

- (a) movement (b) breathing  
(c) molecular movement (d) nutrition.

Q4. Which of the following is the ultimate source of energy for all living organisms?

- (a) Food (b) Milk  
(c) Sun (d) Electricity

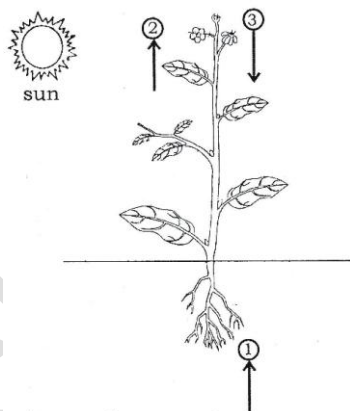
Q5. Which of the following is a parasitic plant?

- (a) Cactus (b) Saliva  
(c) Cuscuta (d) Cucumber

Q6. Watering and manuring are necessary for the growth of:

- (a) crops (b) human beings  
(c) animals (d) trees

Q7. Absorption of carbon dioxide by the plant from the atmosphere is represented by the arrow



- (a) 1 (b) 2  
(c) 3 (d) None of these

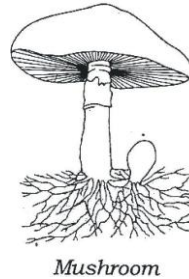
Q8. Harish wants to test the presence of starch in a leaf. Given below are the instructions to conduct the experiment. Which of the following step is NOT necessary?

- (a) Boil the leaf first in water and then in alcohol  
(b) Wash the bleached leaf

(c) Heat the leaf on a hot flame

(d) Add a few drops of iodine solution to the bleached leaf

Q9.



Mushroom

Above plant mushroom gets its food

- (a) from dead and decaying plants  
(b) from photosynthesis  
(c) by eating small insects which come near it  
(d) from the water we pour near it

Q10. A student poured alcohol on a plant continuously for a long time. The plant could not prepare food on its own. What has happened?

- (a) Alcohol absorbed all the food prepared by the plant  
(b) Alcohol does not let the plant to absorb carbon dioxide from the air  
(c) Alcohol dissolved all the minerals present in the plant  
(d) Alcohol dissolved chlorophyll present in the plant

Q11. A plant was kept in a dark room for a week. When its leaves are tested with solution, it did not show the presence of starch. From this experiment we can conclude that \_\_\_\_\_ required for photosynthesis.

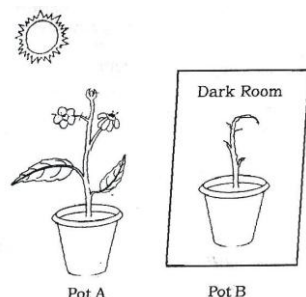
- (a) sunlight (b) iodine  
(c) starch (d) darkness

Q12. Veins:

- (a) absorb water and minerals from the soil  
(b) absorb carbon dioxide from the atmosphere  
(c) transport water, food and minerals in a leaf  
(d) release oxygen and carbon dioxide into the atmosphere

Q13. Anjali planted two plants in pot A and pot B. She poured same amount of water into both the pots but she placed pot A out in the open ground

where sunlight can fall on it and pot B in a dark room where there is no sunlight. After some days she observed that the plant in pot A has green leaves and grown in size while the plant in pot B had died. Can you tell the reason?



- (a) Anjali poured more water in pot A
- (b) The plant in pot A is more stronger
- (c) Plants need light to prepare food
- (d) Dark rooms kill plants.

**Q14.** In cactus plants, perform photosynthesis and manufacture food.

- (a) leaves (b) spines
- (c) roots (d) stem

**Q15.** Leguminous plants have their roots modified into:

- (a) fibrous roots
- (b) stilt roots
- (c) nodulated roots
- (d) prop roots

**Q16.** The function of bacteria present in the root nodules of leguminous plants is:

- (a) to store food
- (b) to perform photosynthesis
- (c) to fix the atmospheric nitrogen
- (d) to simplify the complex minerals present in the soil.

**Q17.** In *Nepenthes* plant, leaves are modified into:

- (a) leaf tendrils for mechanical support
- (b) spines to reduce the loss of water
- (c) pitchers to trap the insects
- (d) fleshy leaves to store the food and water

**Q18.** Few plants cannot synthesise food on their own and depend upon other plants and small animals. They are called heterotrophic plants. These heterotrophs are classified into

- (a) thallophytes and bryophytes

- (b) saprophytes and parasites
- (c) xerophytes and hydrophytes
- (d) saprophytes and pteridophytes

**Q19.** When the starch is treated with iodine solution, its colour changes to:

- (a) red
- (b) green
- (c) blue-black
- (d) greenish yellow

**Q20.** Parasites are

- (a) organisms which prepare food on their own
- (b) organisms which break glucose into alcohol and carbon dioxide
- (c) organisms which draw nutrition from living tissues of plants and animals
- (d) plants which kill insects for their food

**Q21.** Which of the following is a carnivorous plant?

- (a) Sundew (b) Lichen (c) Fern (d) Mould

**Q22.** Lichens are:

- (a) symbiotic algae and fungi
- (b) carnivorous plants
- (c) animals which can perform photosynthesis
- (d) interdependent algae

**Q23.** The structural unit of a living being is:

- (a) atom (b) molecule
- (c) compound substance (d) cell

**Q24.** Xerophytes have very small leaves or spines to:

- (a) reduce weight
- (b) reduce loss of water
- (c) reduce volume
- (d) be beautiful

**Q25.** Human saliva contains enzyme

- (a) pepsin (b) trypsin
- (c) ptyalin (d) amylase.

**Q26.** In acidic medium, enzyme..... acts

- (a) pepsin
- (b) trypsin
- (c) lipase
- (d) all the above.

**Q27.** The event that does not take place in photosynthesis, is:

- (a) absorption of light energy by chlorophyll



- (b) oxidation of carbon to carbondioxide  
(c) conversion of solar energy to chemical energy  
(d) reduction of carbondioxide to carbohydrates
- Q28.** The correct sequence of parts in human alimentary canal is  
(a) mouth → oesophagus → stomach → large intestine → small intestine  
(b) mouth → stomach → oesophagus → small intestine → large intestine.  
(c) mouth → oesophagus → stomach → small intestine → large intestine  
(d) mouth → stomach → oesophagus → large intestine → small intestine
- Q29.** In mouth cavity, enzyme amylase present in saliva, performs breaking of:  
(a) proteins into amino acids  
(b) fats into fatty acids  
(c) starch into sugars  
(d) sugars into glucose
- Q30.** Proteins are changed to simpler molecules in:  
(a) stomach (b) mouth  
(c) small intestine (d) large intestine
- Q31.** Water and some salts are absorbed in:  
(a) stomach (b) mouth cavity  
(c) small intestine (d) large intestine
- Q32.** After digestion fats change into:  
(a) amino acids  
(b) glucose  
(c) fatty acids and glycerol  
(d) all the above
- Q33.** Plaque is:  
(a) hard, protective covering on the tooth  
(b) soft covering of the tooth which is present below the visible part  
(c) the cavity which contains nerves and blood vessels in a tooth  
(d) sticky film of food, saliva and bacteria near the gums.
- Q34.** The study of teeth is called:  
(a) dentistry (b) dermatology  
(c) neurology (d) cardiology
- Q35.** For healthy teeth and bones the following mineral is required:  
(a) iron (b) Calcium  
(c) sodium (d) magnesium
- Q36.** Amoeba procures food through  
(a) proboscis (b) pseudopodia  
(c) cilia (d) tongue
- Q37.** The process of taking in food from the environment is called:  
(a) ingestion (b) digestion  
(c) assimilation (d) nutrition
- Q38.** Assimilation is  
(a) the process of breaking large food molecules into simpler molecules  
(b) the process by which undigested food is, ejected out of the body  
(c) the process by which the digested, food carried by the blood is taken in by the cells of the body  
(d) process of interchange of oxygen and carbon dioxide between haemoglobin and the cells of the body
- Q39.** The tube starting at mouth ending at anus is called  
(a) oesophagus  
(b) food cavity  
(c) alimentary canal  
(d) elementary canal
- Q40.** Large intestine absorbs  
(a) digested food  
(b) undigested food  
(c) water  
(d) remaining enzymes
- Q41.** The function of hydrochloric acid in the stomach is  
(a) to digest carbohydrates  
(b) to clean the stomach  
(c) to kill the germs  
(d) to break down proteins
- Q42.** Most of the digestion and absorption of the food takes place in  
(a) stomach (b) liver  
(c) small intestine (d) large intestine
- Q43.** The digestion taking place in small intestine is  
(a) intracellular (b) extracellular  
(c) both (d) none

**Q44.** Digestion starts and ends from

- (a) mouth to small intestine
- (b) mouth to large intestine
- (c) mouth to anus
- (d) mouth to rectum

## ANSWERS

**Q45.** The process of breaking down food by chewing is called

- (a) digestion
- (b) assimilation
- (c) salivation
- (d) mastication

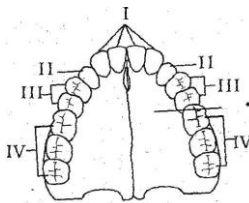
**Q46.** The part of alimentary canal that runs from the mouth to stomach is called:

- (a) trachea
- (b) bronchi
- (c) oesophagus
- (d) intestine

**Q47.** Stomach secretes:

- (a) dilute hydrochloric acid
- (b) dilute sulphuric acid
- (c) dilute citric acid
- (d) dilute nitric acid

**Q48.**



In the above diagram; the teeth marked II represent

- (a) incisors
- (b) canines
- (c) molars
- (d) premolars

**Q49.** The teeth used to grind are marked as

- (a) I
- (b) II
- (c) III
- (d) IV

**Q50.** Match the following:

- |              |                   |
|--------------|-------------------|
| 1. Incisors  | a. Grinding teeth |
| 2. Canines   | b. Cracking teeth |
| 3. Premolars | c. Cutting teeth  |
| 4. Molars    | d. Tearing teeth  |

(A) 1 – (b), 2 – (d), 3 – (a), 4 – (c)

(B) 1 – (b), 2 – (a), 3 – (d), 4 – (c)

(C) 1 – (c), 2 – (b), 3 – (d), 4 – (a)

(D) 1 – (c), 2 – (d), 3 – (b), 4 – (a)