Life Processes

Periodic Test

Q.1. How do autotrophs obtain CO^2 and N^2 to make their food?

Answer: Autotrophs have the ability to make their own food by the process of photosynthesis. Autotrophs are also known as producers. They obtain carbon dioxide from the atmosphere through the stomata. Nitrogen, an essential element in synthesis of proteins is taken up from the soil and is converted to N^2 by root nodules.

Q.2. Name the tissue which transports (a) Soluble products of photosynthesis in plants (b) Water and minerals in plants.

Answer: a. Phloem vessels transports soluble products of photosynthesis i.e., sucrose to plant's growing and storage regions.

b. Xylem transports water and minerals in plants from roots up to the stem to the leaves.

Q.3. Name the largest: (a) Artery (b) Vein in our body.

Answer: The largest artery in the body is Aorta that pumps blood into the body. The largest vein in the body is Vena Cava (Inferior/Superior) that returns blood to the heart.

Q.4. What is the function of (a) Platelets (b) Haemoglobin in our body?

Answer: a. Platelets- Platelets are cell fragments formed in the bone marrow. They are also called thrombocytes. Platelets carry blood coagulation factors on their surfaces, hence have a major role in initiating blood clotting. They are also involved in maintaining homeostasis.

b. Haemoglobin- Haemoglobin is a special protein found in the red blood cells that imparts red colour to the blood. It picks up oxygen from lungs to form oxyhaemoglobin and delivers it to the tissues. It maintains blood pH to tolerable limits.

Q.5. What will happen to a plant if its xylem is removed?

Answer: Xylem transports water and minerals in plants from roots up to the stem to the leaves. If Xylem is removed from a plant, the plant will not be able to transport water to leaves and stems and thus the plant will ultimately die.

Q.6. Define transpiration. Give its role in the plants.

Answer: Transpiration is a process in which plants release water vapor. A part of water that plants get is used to prepare their food and store in different parts of the plant. The

remaining amount of water is released by plants in the form of water vapor in air. This process of releasing water vapor by plants into the air is called transpiration.

Transpiration has the following roles in plants- it cools the plant, maintain water cycle, allows absorption of water and minerals from soil and its transport in plants, allows diffusion of carbon dioxide from air for photosynthesis.

Q.7. What disadvantage (if any) would be there, if the human RBCs become biconvex instead of their normal biconcave shape?

Answer: If the human RBC's become biconvex instead of their normal biconcave shape, the surface area of RBC's will decrease and they will not be able to deliver the amount of oxygen they normally do because they will not accommodate enough haemoglobin to do so.

Q.8. What is the function of pancreas in the human digestive system?

Answer: Pancreas secrete insulin, glucagon and pancreatic juice. Insulin and glucagon function to control the blood sugar levels of our body. The pancreatic enzymes help in digestion of protein, fat and carbohydrates present in the food.

Q.9. Where does digestion of fat take place in our body?

Answer: Digestion of fat takes place in the small intestine. Bile emulsifies fats and breaks them into smaller fat globules. Lipase secreted from the pancreas split fat into fatty acids and glycerol.

Q.10. What is the function of digestive enzymes?

Answer: The digestive enzymes assist in digestion and absorption of nutrients in the small intestine. In the process of digestion, the salivary gland produces saliva in the mouth which digests the starch in food to make food soluble and smooth. Pancreas secrete insulin, glucagon and pancreatic juice. The pancreatic enzymes help in digestion of protein, fat and carbohydrates present in the food. Liver produces bile salts which breakdown lipids to fatty acids.

Q.11. What is meant by breathing? What happens to the rate of breathing during vigorous exercise and why?

Answer: Breathing is the act of moving air in and out of your lungs, as the diaphragm muscles moves up and down in the chest. Breathing in is called inhalation. Breathing out is called exhalation.

During vigorous exercise the rate of breathing increases than the normal rate because more oxygen is needed for more energy and carbon dioxide produced in the respiratory cells of the muscles. The increased production of carbon dioxide increases the rate of breathing and thus oxygen is quickly supplied to the body cells and carbon dioxide is rapidly removed from lungs.

Q.12. Name four chambers of human heart. State one function of each chamber in a tabular form.

Answer: The four chambers of heart are Right atrium, Left atrium, Right Ventricle and Left ventricle.

CHAMBER	FUNCTION
1. Right Atrium	It receives deoxygenated blood from superior and inferior vena cava and pumps it to right ventricle through the tricuspid valve.
2. Left Atrium	It receives oxygenated blood from lung through left and right pulmonary veins and pumps this blood to left ventricle through the bicuspid valve.
3. Right Ventricle	It receives deoxygenated blood from right atrium and pumps it to the lung through pulmonary artery.
4. Left Ventricle	It receives oxygenated blood from left atrium and pumps to aorta. From aorta, the blood is sent to the body.

Q.13. Give one structural and one functional difference between an artery and a vein.

Answer:

	ARTERY	VEIN
STRUCTURAL DIFFERENCE	Arteries are thick walled and have no valves.	Veins are thin walled and have valves.
FUNTIONAL DIFFERENCE	Arteries move oxygen rich blood away from heart (except pulmonary artery).	Veins move deoxygenated blood (oxygen deficient) towards heart.

Q.14. What is meant by blood pressure? How systolic pressure differs from diastolic pressure?

Answer: blood pressure is the pressure exerted by blood against the wall of blood vessels while circulating. It is also called arterial blood pressure. Systolic and Diastolic pressure are the 2 parameters used to represent the blood pressure.

SYSTOLIC PRESSURE	DIASTOLIC PRESSURE
The maximum arterial pressure recorded during the contraction of heart is systolic pressure. (Contraction of left ventricle)	The lowest pressure recorded within the arterial blood stream when the heart is expanding is diastolic pressure. (Resting state of left ventricle)

Q.15. Differentiate between aerobic and anaerobic respiration.

Answer:

AEROBIC RESPIRATION	ANAEROBIC RESPIRATION
Occurs in mitochondria of cells.	Occurs in cytoplasm of cells.
Occurs in presence of oxygen and releases lot of energy.	Occurs in absence of oxygen and releases small energy.
The end products are carbon dioxide and water.	The end products are ethyl alcohol/lactic acid and carbon dioxide.
Occurs in most of the plants and animals	Occurs in yeast, bacteria etc.

Q.16. Name the end products formed during:

(i) Oxidation of glucose in the muscles

(ii) Oxidation of glucose in body cells

(iii) Breakdown of glucose anaerobically.

Answer: a. Oxidation of glucose in the muscles occur in the absence of oxygen. The end products formed are lactic acid and ATP.

b. Oxidation of glucose in body cells occur in the mitochondria in presence of oxygen. The end products are carbon dioxide, water and ATP.

c. Breakdown of glucose anaerobically in yeast produces Ethanol, carbon dioxide and ATP.

Q.17. Give only the function of the following

(a) Stomatal pore (b) Guard cell.

Answer: a. Stomatal pore- It allows carbon dioxide to diffuse into leaf for photosynthesis. Water vapour and oxygen leave the leaf through the stomatal pores.

b. Guard cell- Guard cell facilitate gas exchange into and out of the plant by closing and opening the stomatal pore.

Q.18. What is the role of: (a) Bile (b) Lipase (c) Salivary amylase (d) Trypsin?

Answer: a. Bile- bile which is produced by liver helps in breaking down lipids to fatty acids (in small intestine).

b. Lipase-Lipase breaks down dietary fats to fatty acids and glycerol. It is secreted by pancreas in our digestive tract.

c. Salivary amylase- It is secreted by the salivary gland and it acts on starch present in the food and breaks it down into smaller carbohydrate molecules.

d. Trypsin-Trypsin secreted by the pancreas, hydrolyses more protein present in food that isn't broken down by pepsin earlier.

Q.19. What wold be the consequences of a deficiency of haemoglobin in our bodies?

Answer: Haemoglobin picks up oxygen from lungs to form oxyhaemoglobin and delivers it to the body tissues. Its deficiency in our bodies will lead to anaemia. This is because the body cells will not receive sufficient oxygen due to deficiency of haemoglobin and thus the body will suffer with anaemia, facing nausea, dizziness, headache, fatigue etc.

Q.20. What are the necessary condition for autotrophic nutrition? What are its by-products?

Answer: Autotrophs are producers that make their own food by the process of photosynthesis. The necessary conditions for autotrophic nutrition, i.e., to make food are the presence of chlorophyll, carbon dioxide, water and sunlight. Glucose produced during photosynthesis is converted to starch and stored as food.

The by-products of photosynthesis are oxygen and water.

Q.21. Describe double circulation in human beings. Why is it necessary?

Answer: Double circulation is the process of blood flow through heart twice. Deoxygenated blood from body is returned to heart from where it is pumped to lungs. Lungs purify the blood and the oxygenated blood from the lungs return back to heart and is pumped to the body via aorta.

Double circulation is necessary because it separates the oxygenated and deoxygenated blood, makes the circulatory system more efficient, maintains constant body temperature, increased pressure of blood flow, quick supply of oxygen etc.

Q.22. What are the differences between the transport of materials in xylem and phloem?

Answer: Xylem transports water and minerals in plants from roots up to the stem to the leaves. Phloem vessels transports soluble products of photosynthesis i.e., sucrose to plant's growing and storage regions.

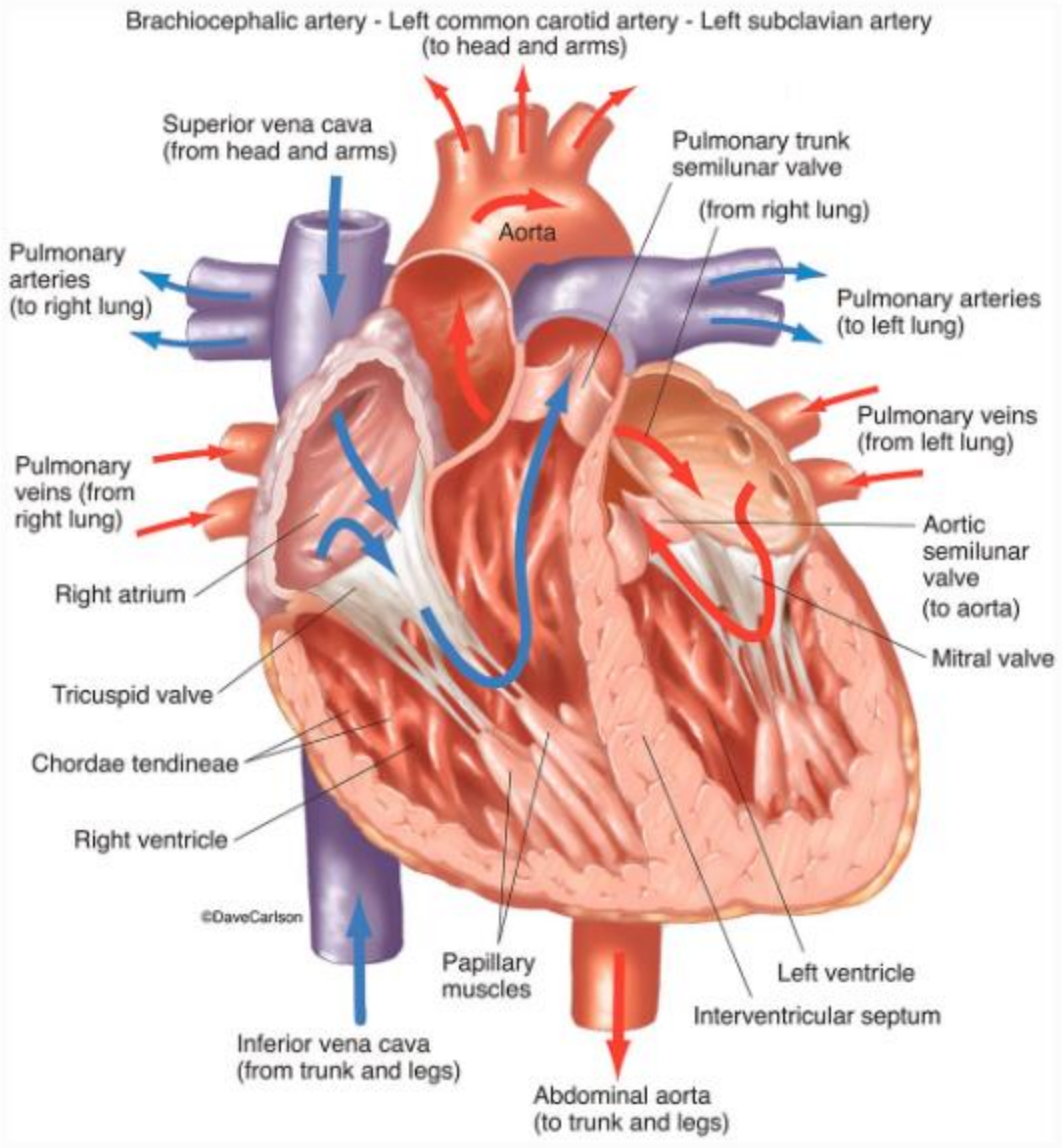
Q.23. Compare the functioning of alveoli in lungs and nephrons in the kidneys with respect to their structure and functioning.

Answer:

	ALVEOLI IN LUNGS	NEPHRONS IN KIDEY
STRUCTURE	Alveoli are small with a diameter of 0.1-0.2 mm. Alveoli are thin walled balloon like structure	A nephron is about 3 cm long and is 20-30 nm in diameter. Nephron is a cluster of thin walled blood capillaries.
FUNCTIONING	Alveoli provide a large surface area for exchange of gases in lungs. They absorb oxygen that is inhaled and diffuse it into the blood and pick up carbon dioxide from the alveoli and diffuse it into the lungs which is then exhaled out.	They filter the blood and maintain osmoregulation. They filter out urine from the blood by process of ultrafiltration, reabsorption, secretion and osmosis.

Q.24. Draw a labelled diagram of sectional view of human heart of human digestive system.

Answer: Human Heart



Q.25. What is the role of folowing: (i) Lymph (ii) RBCs?

Answer: a. Lymph-lymph transports oxygen, hormones etc to the body cells. It brings back carbon dioixde and wastes from body cells to blood. Lymph also destroys invading microorganisms and any foreign particles in the lymph nodes.

b. RBC's-Red blood cells carry oxygen from lungs and transport it to cells of the body.

Q.26. Define translocation with respect to transport in plants. Why is it essential for plants? Where in plants are the following synthesised:

(a) Sugar (b) Hormone?

Answer: Translocation is the movement of sucrose made by plants from phloem to root cells by means of mass flow. The organic substances like sucrose and other chemicals

made by plants are called assimilates which are transported in sieve elements and work together with companion cells to accomplish translocation.

Translocation is important for survival of the plant and it enables sucrose to be stored. It allows the organic molecules to be transported to regions of growth and development, to plant cells for metabolism etc.

Sugar is synthesized in leaves of plant by process of photosynthesis whereas the hormones are synthesized in all parts that are leaves, stem, root, flower, seeds.

Comprehensive Exercises (MCQ)

Q.1. The opening and closing of the stomatal pore depends upon:

A. oxygen

B. temperature

C. water in guard cells

D. concentration of CO2 in stomata

Answer: The accumulation and loss of K+ ions cause the opening and closing of stomata. During day time, K+ ions are accumulated by the guard cells which increases the solute concentration and decreases the water potential. Thus, water enters the cell by endosmosis, cells become turgid and the stomatal pore open. During night time, guard cells lose the K+ ions which decreases the solute concentration and increases the water potential. Thus, water leaves the cell by exosmosis, cells lose turgidity and the stomatal pore close.

Q.2. Choose the forms in which most plants absorb nitrogen:

(i) Proteins

(ii) Nitrates and nitrites

(iii) Urea

(iv) Atmospheric nitrogen

A. (i) and (ii)

B. (ii) and (iii)

C. (iii) and (iv)

D. (i) and (iv)

Answer: Nitrogen is required by plants to make protein, amino acids. Also, it is good for growth and chlorophyll formation. Plants absorb nitrogen in the form of nitrates and

ammonia. The nitrate absorbed is reduced to nitrite in the cytosol by enzyme nitrate reductase.

Q.3. Which is the first enzyme to mix with food in the digestive tract?

A. Pepsin

B. Cellulose

C. Amylase

D. Trypsin

Answer: The first enzyme to mix with food in the digestive tract is amylase. It is secreted by the salivary gland and it acts on starch present in the food and breaks it down into smaller carbohydrate molecules.

Q.4. If salivary amylase is lacking in the saliva, which of the following events in the mouth cavity will be affected?

A. Proteins breaking down into amino acids

B. Starch breaking down into sugars

C. Fats breaking down into fatty acids and glycerol

D. Absorption of vitamins

Answer: The main function of salivary amylase is to act on starch present in the food and breaking it down into smaller carbohydrate molecules. If salivary amylase is lacking in saliva, breaking down off starch into sugars will be affected.

Q.5. The inner lining of stomach is protected by one of the followings from hydrochloric acid. Choose the correct one:

A. Pepsin

B. Mucus

C. Salivary amylase

D. Bile

Answer: Mucus protects the inner lining of stomach from the acids and enzymes secreted in the stomach. It also protects stomach wall from irritation of mechanical injury. Protects the gastric mucosa from hydrochloric acid because of its alkaline nature.

Q.6. Which part of alimentary canal receives bile from the liver?

A. Stomach

B. Small intestine

C. Large intestine

D. Oesophagus

Answer: Bile is secreted by the liver, stored in gall bladder and released into the small intestine where it breaks down lipids into fatty acids, helps in absorption of fat soluble vitamins and neutralization of gastric acid.

Q.7. A few drops of iodine solution were added to rice water. The solution turned blue-black in colour. This indicates that rice water contains:

A. complex proteins

B. simple proteins

C. fats

D. starch

Answer: Iodine is the test for starch. If starch is present, iodine turns blue-black in colour. So, if the solution turned blue black in colour when iodine was added to rice water, it indicates that rice water had starch present in it.

Q.8. In which part of the alimentary anal food is finally digested?

A. Stomach

B. Mouth cavity

C. Large intestine

D. Small intestine

Answer: Chemical digestion takes place in small intestine. It secretes chemicals which break down the food and take away nutrients to blood stream. The maximum absorption of digested food occurs in the small intestine part of the alimentary canal. It begins from the pyloric part of stomach and ends up into large intestine. Small intestine has 3 parts- duodenum, jejunum and ileum. The undigested food is passed to the large intestine where maximum water is reclaimed before egestion of solid faeces.

Q.9. Choose the function of the pancreatic juice from the following:

A. trypsin digests protein and lipase carbohydrates

B. trypsin digests emulsified fats and lipase proteins

C. trypsin and lipase digest fats

D. trypsin digests proteins and lipase emulsified fats

Answer: Trypsin secreted by the pancreas, hydrolyses more protein present in food that isn't broken down by pepsin earlier. Lipase secreted from the pancreas split fat into fatty acids and glycerol.

Q.10. When air is blown from mouth into a test tube containing lime water, the lime water turned milky due to the presence of:

A. oxygen

B. carbon dioxide

C. nitrogen

D. water vapour

Answer: We exhale carbon dioxide, so when air is blown from mouth, i.e., carbon dioxide, into a test tube that contains lime water, the lime water turns milky due to presence of carbon dioxide. Carbon dioxide turns lime water milky. This is due to the formation of calcium carbonate when carbon dioxide combines with calcium hydroxide (limewater).

Q.11. Which of the following statements is (are) true about heart?

(i) Left atrium receives oxygenated blood from different parts of body while right atrium receives deoxygenated blood from lungs.

(ii) Left ventricle pumps oxygenated blood to different bod parts while right ventricle pumps deoxygenated blood to lungs.

(iii) Left atrium transfers oxygenated blood to right ventricle which sends it to different body parts.

(iv) Right atrium receives deoxygenated blood from different parts of the body while left ventricle pumps oxygenated blood to different parts of the body.

A. (i)

B. (ii)

C. (ii) and (iv)

D. (i) and (iii)

Answer: The left ventricle receives oxygenated blood from left atrium and pumps to aorta. From aorta, the blood is sent to the body. Right ventricle receives deoxygenated blood from right atrium and pumps it to the lung through pulmonary artery.

Right atrium receives deoxygenated blood from superior and inferior vena cava and pumps it to right ventricle through the tricuspid valve. Left atrium receives oxygenated blood from lung through left and right pulmonary veins and pumps this blood to left ventricle through the bicuspid valve.

Q.12. What prevents backflow of blood inside the heart during contraction?

A. Valves in heart

B. Thick muscular walls of ventricles

C. Thin walls of atria

D. All of the above

Answer: Bicuspid valve is found between left auricle and left ventricle. It lets blood flow from left atrium to left ventricle and prevents backflow of blood into the left atrium from the ventricle. The tricuspid valve found between right ventricle and right atrium prevents backflow of blood from right ventricle to right atrium. The thick muscular walls of left ventricle allow blood to be pumped throughout the body. The thin walls of atria allow blood to be pumped to lungs (shorter distance).

Q.13. Single circulation, i.e., blood flows through the heart only once during one cycle of passage through the body, is exhibited by:

A. Labeo, Chameleon, Salamander

B. Hippocampus, Exocoetus, Anabas

C. Hyla, Rana, Draco

D. Whale, Dolphin, Turtle

Answer: Hippocampus, exocetus and anabas belong to the family of fishes. Fishes have 2 chambered heart, one atrium and one ventricle. Blood is pumped to the gills by heart to be re-oxygenated, from where the blood flows to rest of the body parts and returns back to the heart in just one circulation. Fishes have low blood pressure in body capillaries due to single circulation.

Q.14. In which of the following vertebrate group/groups, heart does not pump oxygenated blood to different parts of the body?

A. Pisces and amphibians

B. Amphibians and reptiles

C. Amphibians only

D. Pisces only

Answer: Fishes have 2 chambered heart, one atrium and one ventricle. Deoxygenated blood is pumped to the gills by heart where blood is oxygenated by diffusion. The oxygenated blood from the gills flows to rest of the body parts where oxygen is picked up and carbon dioxide returned back to the blood. The deoxygenated blood returns back to heart by passing through heart only once in the complete circulation.

Q.15. Which is the correct sequence of air passage during inhalation?

A. Nostrils → larynx → pharynx → trachea → lungs

B. Nasal passage → trachea → pharynx → larynx → alveoli

C. larynx → nostrils → pharynx → lungs

D. nostrils → pharynx → larynx → trachea → alveoli

Answer: The inhaled air travels from nostril to pharynx. From pharynx it enters into larynx. The epiglottis acts as a lid due to which air enters the trachea and not into the alimentary canal. The trachea thus provides a clear airway for air to enter into 2 large tubes called bronchi which leads to one of the lungs. The bronchi divide into bronchioles which further divide into alveoli. Gas exchange takes place here in alveoli.

Q.16. During respiration, exchange of gases takes place in:

A. trachea and larynx

B. alveoli of lungs

C. alveoli and throat

D. throat and larynx

Answer: Oxygen and carbon dioxide molecules are exchanged to and from the bloodstream by alveoli of lungs. Alveoli are tiny air sacs found in the lungs that allow rapid exchange of gases.

Q.17. Which of the following statements is (are) correct?

(i) Pyruvate can be converted into ethanol and carbon dioxide by yeast.

(ii) Fermentation takes place in aerobic bacteria

(iii) Fermentation takes place in aerobic bacteria

(iv) Fermentation is a form of anaerobic respiration

A. (i) and (iii)

B. (ii) and (iv)

C. (i) and (iv)

D. (ii) and (iii)

Answer: Yeast, an anaerobic microorganism converts pyruvate to ethanol by fermentation which includes decarboxylation of pyruvate to acetaldehyde and further reduction to ethanol. Carbon dioxide is also produced along.

Fermentation occurs in anaerobic environment i.e., conversion of complex compounds to simpler compounds in absence of oxygen.

Q.18. Lack of oxygen in muscles often leads to cramps among cricketers. This result due to:

A. conversion of pyruvate to ethanol

B. conversion of pyruvate of glucose

C. non-conversion of glucose to pyruvate

D. conversion of pyruvate to lactic acid

Answer: When the muscles get tired, it fails to contract even upon stimulus. Since during vigorous activity more carbon dioxide is produced and oxygen must be supplied to the tissues to overcome the deficiency of oxygen in tissues. In the deficiency of oxygen to breakdown glucose, NAD is reformed and pyruvic acid is converted to lactic acid. Increasing acidity from the accumulated lactic acid and lack of energy causes cramps.

Q.19. Choose the correct path of urine in our body:

A. kidney → ureter → urethra → urinary bladder

B. kidney → urinary bladder → urethra → ureter

C. kidney → ureter → urinary bladder → urethra

D. urinary bladder → kidney → ureter → urethra

Answer: Urine from nephron is brought to the collecting duct of kidneys where the urine enters the ureters. There are 2 ureters, each opening from one kidney into the urinary bladder. The urinary bladder stores urine and it size increases as the amount of urine collected increases. When the CNS gives a voluntary message the muscles of bladder contract and the bladder sphincter relaxes thus excreting urine out through the urethra.

Q.20. Which of the following is an incorrect statement?

A. Organisms grow with time

B. Organisms must repair and maintain their structure

C. Movement of molecules does not take place among cells

D. Energy is essential for life processes

Answer: Movement of molecules does take place among cells. The cell membranes are selectively permeable and allow the movement of molecules among cell. When the movement of molecule across the cell does not require energy, it is called passive transport. Movement of molecules require energy is called active transport.

Comprehensive Exercises (T/F)

Q.1. Write true or false for the following statements:

The chemical process involved in the removal of harmful metabolic wastes from the body is called excretion.

Answer: False

The chemical process involved in the removal of harmful metabolic wastes from the body is called ultrafiltration which occurs in the nephron of the kidney. The metabolic waste are then removed from by excretion/ defecation.

Q.2. Write true or false for the following statements:

Just as CO_2 is removed from the blood in the lungs, nitrogenous wastes such as urea or uric acid are removed from blood in the liver.

Answer: False

Nitrogenous wastes, salts and excess water are removed from blood in the kidney and not in liver. The process of removal of these nitrogenous waste, salts and water is called excretion.

Q.3. Write true or false for the following statements:

Urine is stored in the urinary bladder until the pressure of the expanded bladder leads to the urge to pass it out through the urethra.

Answer: True

Urine from nephron is brought to the collecting duct of kidneys where the urine enters the ureters. There are 2 ureters, each opening from one kidney into the urinary bladder. The urinary bladder stores urine and it size increases as the amount of urine collected increases. When the CNS gives a voluntary message, the muscles of bladder contract and the bladder sphincter relaxes thus excreting urine out through the urethra.

Q.4. Write true or false for the following statements:

Kidneys are located in the thoracic cavity, one on either side of the backbone.

Answer: False

Kidneys are bean shaped organs located in the left and right of vertebrae column backside below stomach. Each kidney is made up of nephrons. Nephrons are the functional unit of kidney.

Q.5. Write true or false for the following statements:

The walls of auricles are comparatively thicker than ventricles.

Answer: False

The walls of ventricles are thicker than auricles. Wall of left ventricle is thicker than right ventricle. This all is because the left ventricle has to pump blood throughout to the body while right ventricle has to only pump blood to the lungs. Auricles have thinner walls because they only have to receive blood returning to the heart.

Q.6. Write true or false for the following statements:

The largest artery is aorta and vein is vena cava.

Answer: True

The largest artery is the aorta that carries blood away from heart to rest of the body. The inferior vena cava is the largest vein that carries blood from lower half of the body to heart.

Q.7. Write true or false for the following statements:

Reptiles have three chambered heart, mammals have two chambered and fishes have only two chambered heart.

Answer: False

Reptiles have 3 chambered heart, one receives deoxygenated blood, one receives blood, and the third one mixes these two and pumps it out.

Mammals have four chambered heart- right atrium, right ventricle, left auricle and left ventricle.

Fishes have 2 chambered heart- one atrium and one ventricle.

Q.8. Write true or false for the following statements:

In xylem, minerals in solution from move in both directions (upward and downward).

Answer: False

Xylem transports water and minerals in plants from roots up to the stem to the leaves. Thus, xylem only moves solution in upward direction only.

Q.9. Write true or false for the following statements:

Bile is an alkaline fluid produced by liver and stored in the gall bladder.

Answer: True

Bile, an alkaline fluid, is secreted by the liver, stored in gall bladder and released into the small intestine where it breaks down lipids into fatty acids, helps in absorption of fat soluble vitamins and neutralization of gastric acid.

Q.10. Write true or false for the following statements:

Liver is the largest organ as well as the largest gland of the body.

Answer: True

The largest gland and organ found in human body is the liver. It is found below the diaphragm and is triangular in shape. The gland produces bile which help in breaking down lipids to fatty acids (in small intestine). As an organ, it is the largest organ of the body, weighing 1.6kg. It performs various functions like removing and excreting body wastes, synthesizing proteins, bile, plasma, fighting infections in the body, storing vitamins, minerals and sugar, excreting bilirubin etc.