**TOPIC – DIGESTION AND ABSORPTION; BREATHING AND EXCHANGE OF GASES; BODY FLUIDS AND CIRCULATION**

**UNITNO : B-08**

1. Digestion in our body takes place by means of

1. Biochemical method 2. Mechanical method

3. Both 1 and 2 4.Chemical method

1. Identify the mismatched pair

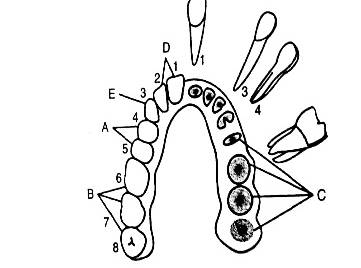
1. Parotid glands -in front of the ear-Stenson’s duct

2. Submandibular -at the angle of jaw-Wharton’s duct

3. Sublingual glands -below the tongue-Rivinian duct

4. Submaxillary glands- in front of the ear- Stenson’s duct

1. Identify A, B, C, D and E in the given figure

1. A- Molars, B- Incisor. C- Premolars, D – Canine,

E- Socket of jaw

2. A- Premolars, B- Socket of jaw, C- Canine,

D- Molars, E- Incisor

3. A- Premolars, B- Molars, C- Socket of jaw,

D- Incisor, E- Canine

4. A- Socket of jaw, B- Canine, C- Premolars,

D- Molars, E- Incisor

1. Select the incorrect statement among the following about human tongue.

1. The human tongue is freely movable muscular organ.

2. It is attached to the floor of the oral cavity by the frenulum.

3. The upper surface of the tongue has small projections called papillae

4. All papillae of human tongue bear taste buds.

1. Identify the true statements regarding human dentition

1. There are four canines in adults.

2. Premolars are absent in deciduous set

3. Number of molars remain same in children and adult

4. Number of incisors in the Upper jaw is only two.

5. Lower half of the jaw in adults consists of total eight teeth.

1. 1, 2, 5 2. 1, 2, 4, 5 3. 1, 2, 4 4. 1, 2, 3

1. Match the cells listed under column I with their locations listed under column II

|  |  |
| --- | --- |
| Column I | Column II |
| A. Kuffer cell | p. HCl |
| B. Oxyntic cell | q. Pepsinogen |
| C. Chief cell | r. Mucus |
| D. Goblet cell | s. Amylase |
|  | t. Phagocytosis |

1. A-t, B-p, C-q, D-r

2. A-s, B-p, C-r, D-t

3. A-s, B-r, C-p D-q

4. A-t, B-q, C-p, D-r.

1. In human beings tooth is embedded in a socket of jaw bone. This is called

1. Thecodont 2.Heterodont 3.Diphyodont 4.Homodont

1. Mucus in saliva helps in lubricating and adhering the masticated food particle into a \_\_\_ in buccal cavity.

1. Chyme 2. Chyle 3. Bolus 4. Tartar

1. Select the incorrect statement from the following.

1. Mucosal epithelium has goblet cells which secrete mucous that help in lubrication.

2. Mucosa from gastric gland in stomach and crypts of Lieberkuhn in Intestine.

3. All the four histological layers show modification in different parts of alimentary canal.

4. Muscularis layer is formed by outer circular and inner longitudinal muscle layer.

1. Bile is secreted by

1. Glisson’s capsule 2. Gall bladder 3. Hepatic cells 4. Kupffer cells

1. All are secretion of pancreas except

1. Insulin 2. Glucagon 3. Chymotrypsinogen 4.Enterokinase

1. A muscular sphincter that regulates the opening of oesophagus into stomach is

1. Pyloric sphincter 2. Gastroesophageal sphincter

3. Sphincter of Oddi 4. Cervical sphincter

1. Bile and pancreatic juice is released in small intestine by

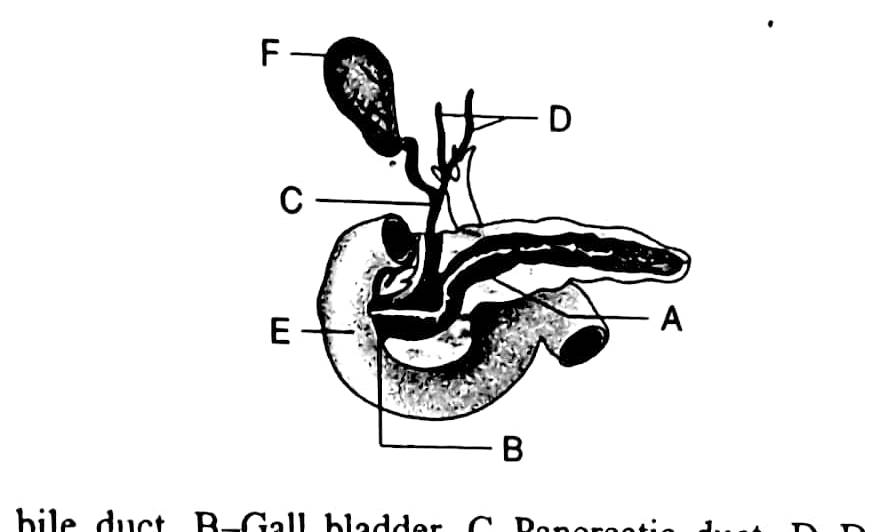
1. Cystic duct 2. Bile duct

3. Duct of Wiersung 4.Hepatic-pancreatic duct

1. Mucosal layer that forms depression in between villi in intestine is called

1. Rugae 2. Aureback’s plexus 3. Crypts 4. Plicae

1. Identify A to F in the given figure.

1. A- Common bile duct, B- Gall bladder,

C- Pancreaticduct, D-Duodenum-Hepato-

pancreatic duct, F-liver

2. A-Pancreatic duct, B- Hepato-pancreatic duct,

C- Common bile duct, D- Ducts from liver,

E- Duodenum, F-gall bladder.

3. A- Hepato-pancreatic duct, B- Ducts from liver,

C- Pancreatic duct, D- Gall bladder, E- Duodenum.

4. A- Gall bladder, B- Common bile duct, C- Duodenum, D- Pancreatic duct. E- Hepato-pancreatic duct, F-liver.

1. The bile duct and pancreatic duct opens together into the duodenum as hepato-pancreatic duct which is guarded by sphincter called

1. Sphincter of Boyden 2. Hepato pancreatic ampulla

3. Sphincter of Oddi 4. Cardiac Sphincter

1. Select the incorrect statement from the following:

1. Succus entericus act on end products produced by pancreatic enzyme.

2. Final steps of digestion occur far away from the mucosal epithelial cells of the intestine.

3. The breakdown of biomacromolecule generally occurs in the duodenum region of small intestine.

4. Simple substance form after digestion is absorbed mainly by jejunum and ileum.

1. Hormonal control of the secretion of digestive juice is carried out by local\_\_\_\_\_\_\_ produced by\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_mucosa.

1. Neurotransmitters, liver, pancreas. 2. Hormones, Liver, pancreas

3. Hormones, Gastic, intestinal 4. Neurotransmitters, Gastic, intestinal

1. Which of the following statement is incorrect?

A. Absorption of simple sugar, alcohol, some water and medicines take place in the stomach.

B. Absorption of water, some minerals and drugs take place in large intestine.

C. Small intestine is the major site of digestion and absorption of food.

D. Fatty acid and glycerol are absorbed by lacteals.

E. Nothing is absorbed in mouth and colon.

1. A, D and E only 2. D and E only 3.E only 4. B and C only

1. Amino acids, monosaccharide, electrolytes like Na+ are mainly absorbed by

1. Osmosis 2. Passive transport

3. Facilitated transport 4. Active transport

1. Which of the following statement is wrong about chylomicrons?

A. Chylomicrons are produced in the epithelial cells of small intestine

B. It contains triglycerides, cholesterol and phospholipids.

C. It is protein coated small vesicles.

D. Chylomicrons released from the epithelial cell into lacteals.

1. A and D only 2. B and C only 3. All of these 4.None of these

1. For which of the following set of enzymes protein is not the substrate?

1. Lysozyme, salivary amylase 2. Pepsin, rennin

3. Trypsin, carboxypeptidase 4. Dipeptidase, aminopeptidase

1. Which of the following statement is incorrect?

1. Faecal accumulation in the rectum initiates a neural reflex causing an urge for its removal.

2. Reflex of vomiting is controlled by medulla.

3. Irregular bowel movement causes constipation.

4. In diarrhoea the absorption of food increases.

1. Which of the followings are functions of HCl?

1. It converts pepsinogen into pepsin

2. It prevents decay (putrification) of food in the stomach

3. It produce bilirubin and biliverdin 4. It destroys bacteria

5. Denaturation of globular proteins

1.1, 2, 3 2.1, 2, 3, 4 3.1, 2, 4, 5 4. All of these

1. Which of the following statement is not incorrect?

1. Brunner’s glands are present in the submucosa of stomach and secrete pepsinogen

2. Glottis covers epiglottis when the food is being swallowed.

3. Oxyntic cells are present in the mucosa of stomach and secrete HCI.

4. Acini are present in the pancreas and secrete steapsin.

1. Lining of nasal passage is,

1. Squamous epithelium 2. Stratified epithelium

3. Pseudostratified epithelium 4. Simple columnar epithelium

1. Which one of these cartilages is produced into ‘Adam’s Apple’?

1. Cricoid 2. Epiglottis 3.Thyroid 4. Arytenoids

1. Which among the following statements is false?

1. During inspiration, phrenic muscles and external intercostal muscles contract.

2. During expiration, phrenic muscles and external intercostal muscles relax.

3. Inspiration is a passive process.

4. Expiration is a passive process.

1. Identify the correct statement

1. Haemoglobin is necessary for transport of CO2 and carbonic anhydrase for transport of O2.

2. Haemoglobin is necessary for transport of O2 and carbonic anhydrase for transport of CO2.

3. Movement of chloride ions outside the erythrocytes is called Hamburger’s phenomenon.

4. Chloride shift is associated with transport of O2.

1. Oxyhaemoglobin dissociates at the tissue level due to acidic pH. This is called

1. Haldane effect 2. Hamburger’s phenomenon 3. Bohr effect 4. Chloride shift

1. Extra amount of air that can be expired forcibly after a normal expiration is called

1. Inspiratory reserve volume 2. Expiratory reserve volume

3. Tidal volume 4. Residual volume

1. During expiration

1. Intrapulmonary volume increases and intrapulmonary pressure decreases

2. Intrapulmonary volume decreases and intrapulmonary pressure increases

3. Intrapulmonary volume decreases and intrapulmonary pressure decreases

4. Intrapulmonary volume increases and intrapulmonary pressure increases

Multiple answer questions

In the following questions more than one of the answers given may be correct. Select the correct answers and mark them according to the codes given below.

A. 1, 2 and 3 are correct 2. 1 and 2 are correct

C. 2 and 4 are correct 4. 1 and 3 are correct

1. Mucus produced by goblet cells in nasal cavity

1. Moistens the incoming air 2. Traps the fine dust particles

3. Filters out large dust particles 4. Warms the incoming air

1. A 2. B 3.C 4. D

1. Cartilagenous rings of tracheae in man

1. Are ‘C’ shaped structures 2. Prevents tracheae from collapsing

3. Supports the tracheae 4. Are made up of surfactant

1. A 2. B 3.C 4. D

1. If the partial pressure of O2 in the blood and the nearby cell is same the cell will die because

1. The cell is incapable of taking O2 from the blood

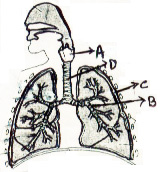
2. Affinity of haemoglobin to combine with O2 is lost

3. Both 1, 2 4. None of the above

1. CO2 is transported as

1. Haemoglobinic acid 2. Carbonic acid 3. Oxyhaemoglobin 4. Bicarbonates

1. A 2. B 3.C 4. D

1. Match the following parts indicated by alphabets in the given diagram and choose the right combination of alphabets be

1. A = Larynx B = Secondary bronchus C = Pleura D = Trachea

2. A = Pharynx B = Secondary bronchus C = Ribs D = Trachea

3. A = Larynx B = Primary bronchus C = Pleura D = Bronchial tree

4. A = Epiglottis B = Primary bronchus C = Middle lobe D = Trachea

1. It is known that exposure to carbon monoxide is harmful to animals because

1. It reduces CO2 transport 2. It reduces O2 transport

3. It increases CO2 transport 4. It increase O2 transport

1. Internal respiration is characterized by

1. Diffusion of O2 from blood into tissue cells.

2. Enzymatic breakdown of nutrients to produce CO2, H2O and energy

3. Diffusion of CO2 from the cells into blood. 4. All the above

1. Which of the following statement is true?

1. Affinity of hemoglobin to O2 increases with increased concentration of CO2

2. During chloride shift ions from RBC move into plasma and bicarbonate ions from plasma move into RBC.

3. Carbaminohaemoglobin is readily produced when hemoglobin is deoxygenated

4. Respiratory centre is located in cerebellum and pons varolli

1. Volume of thoracic cavity is increased by

1. Flattening of the diaphragm and contraction of external intercostal muscles.

2. Flattening of the diaphragm and relaxation of external intercostal muscles.

3. Elevation of diaphragm and contraction of internal intercostal muscles.

4. Flattening of diaphragm and relaxation of internal intercostal muscles

1. Which is the correct sequence of the air passage in man

1. Nasal cavity → pharynx → larynx → trachea → bronchi → bronchioles → alveoli

2. Nasal cavity → larynx → bronchi → trachea → bronchioles → pharynx → alveoli

3. Nasal cavity → larynx → pharynx → trachea → bronchi → bronchioles → alveoli

4. Nasal cavity → pharynx → trachea → larynx → bronchi → bronchioles →alveoli

1. Respiration in insects is called direct because

1. The cells exchange O2/ CO2 directly with the air in the tubes

2. The tissues exchange O2/ CO2 directly with coelomic fluid

3. The tissues exchange O2/ CO2 directly with the air outside through body surface

4. Tracheal tubes exchange O2/ CO2 directly with the haemocoel which then exchange with tissues

1. A person suffers punctures in his chest cavity in an accident, without any damage to the lungs its effect could be

1. Reduced breathing rate 2. Rapid increase in breathing rate

3. No change in respiration 4. Cessation of breathing

1. A person breathes in some volume of air by forced inspiration after having a forced expiration.

This quantity of air taken in is

1. Total lung capacity 2. Tidal volume 3. Vital capacity 4. Inspiratory capacity

1. Mark the incorrect statement in context to O2 binding to Hb

1. Higher pH 2. Lower temperature 3. Lower pCO2 4. Higher PCO2

1. Incidence of Emphysema – a respiratory disorder is high in cigarette smokers. In such cases

1. The bronchioles are found damaged 2. The alveolar walls are found damaged

3. The plasma membrane is found damaged 4. The respiratory muscles are found damaged

1. Respiratory process is regulated by certain specialized centres in the brain. One of the following listed centres can reduce the inspiratory duration upon stimulation

1. Medullary inspiratory centre 2. Pneumotaxic centre

3. Apneustic centre 4. Chemosensitive centre

1. The oxygen - haemoglobin dissociation curve will show a right shift in case of

1. High pCO2 2. High pO2 3. Low pCO2 4. Less H+ concentration

1. Mark the correct pair of muscles involved in the normal breathing in humans

1. External and internal intercostal muscles

2. Diaphragm and abdominal muscles

3. Diaphragm and external intercostal muscles

4. Diaphragm and internal intercostal muscles

1. CO2 dissociates from carbamino haemoglobin when

1. pCO2 is high and pO2 is low 2. pO2 is high and pCO2 is low

3. pCO2 and pO2 are equal 4. None of the above

1. In breathing movements, air volume can be estimated by

1. Stethoscope 2. Hygrometer 3. Sphygnomanometer 4. Spirometer

1. From the following relationships between respiratory volumes and capacities mark the correct option.

i. Inspiratory capacity (IC) = Tidal Volume + Residual Volume

ii. Vital Capacity (VC) = Tidal Volume (TV) + Inspiratory ReserveVolume (IRV) + Expiratory Reserve Volume (ERV).

iii. Residual Volume (RV) = Vital Capacity (VC) – Inspiratory ReserveVolume (IRV)

iv. Tidal Volume (TV) = Inspiratory Capacity (IC) – Inspiratory Reserve Volume (IRV)

1. i Incorrect, ii Incorrect, iii Incorrect, iv Correct

2. i Incorrect, ii Correct, iii Incorrect, iv Correct

3. i Correct, ii Correct, iii Incorrect, iv Correct

4. i Correct, ii Incorrect, iii Correct, iv Incorrect

1. Match the following and mark the correct options

Animal Respiratory Organ

1. Earthworm i. Moist cuticle

2. Aquatic Arthropods ii. Gills

3. Fishes iii. Lungs

4. Birds/Reptiles iv. Trachea

1. A-ii, B-i, C-iv, D-iii 2. A-i, B-iv, C-ii, D-iii

3. A-i, B-iii, C-ii, D-iv 4. A-i, B-ii, C-i.v, D-iii

1. Which of the following has the thickest walls?

1. Left auricle 2. Left ventricle 3. Right auricle 4. Right ventricle

1. Which of the following statements is false

1. SAN generates impulses which causes atrial systole

2. AVN is located on interventricular septum

3. AV node delays impulses sent from SAN by 0.1 seconds

4. Purkinje fibres have the largest diameter among cardiac muscle fibres

1. Match the following and choose the right combination of alphabets

|  |  |  |  |
| --- | --- | --- | --- |
| Column I | | Column II | |
| a | Aorta | p | Carries oxygenated blood |
| b | Pulmonary veins | q | Carried deoxygenated blood |
| c | Pulmonary artery | r | Carries deoxygenated blood to right atrium from lower parts of the body |
| d | Post caval vein | s | Largest artery |
|  |  | t | Carries deoxygenated blood from upper parts of the body into right atrium. |

1. a=s, b,=p, c=q, d=t 2. a=s, b=p, c=q, d=r 3. a=s, b=q, c=p, d=r 4. a=s, b=q, c=p, d=t

1. Match the scientists given in column I with their work in Column II.

|  |  |  |  |
| --- | --- | --- | --- |
| Column I | | Column II | |
| a | William Einthoven | P | Developed Sphygmomanometer |
| b | Stephen Hales | Q | Discovered ECG |
| c | Rivva Rocci | R | Performed first heart transplant |
| d | Christian Barnard | S | Performed first heart angioplasty |
|  |  | T | First to measure blood pressure |

1. a=q, b =t ,c=r, d = p

2. a=q, b=t, c=s, d=p

3. a=s, b=p, c=r, d=q

4. a=q, b=t, c=p, d=r

1. Humans have double circulation which means

1. Blood circulates through heart twice 2. Blood vessels are paired

3. Heart is four chambered

4. Separate systems for circulation of oxygenated, deoxygenated blood is present

1. Which of the following cells does not exhibit phagocytotic activity

1. Monocytes 2. Neutrophil 3. Basophil 4. Macrophage

1. Which among the followings is correct during each cardiac cycle?

1. The volume of blood pumped out by the Rt and Lt ventricles is same.

2. The volume of blood pumped out by the Rt and Lt ventricles is different

3. The volume of blood received by each atrium is different

4. The volume of blood received by the aorta and pulmonary artery is different

1. Cardiac activity could be moderated by the autonomous neural system. Tick the correct answer:

1. The parasympathetic system stimulates heart rate and stroke volume

2. The sympathetic system stimulates heart rate and stroke volume

3. The parasympathetic system decreases the heart rate but increase stroke volume

4. The sympathetic system decreases the heart rate but increases stroke volume

1. During one circuit of blood from lungs to tissues and back through the circulatory system the percentage of haemoglobin giving the O2 is

1. 50% 2. 25% 3. 75% 4. 100%

1. Mark the pair of substances among the following which is essential for coagulation of blood.

1. Heparin and calcium ions 2. Calcium ions and platelet factors

3. Oxalates and citrates 4. Platelet factors and heparin

1. ECG depicts the depolarisation and repolarisation processes during the cardiac cycle. In the ECG

of a normal healthy individual one of the following waves is not represented.

1. Depolarisation of atria 2. Repolarisation of atria

3. Depolarisation of ventricles 4. Repolarisation of ventricles

1. Which of the following statements is incorrect?

1. A person of ‘O’ blood group has anti ‘A’ and anti ‘B’ antibodies in his blood plasma.

2. A person of ‘B’ blood group can’t donate blood to a person of ‘A’ blood group.

3. Blood group is designated on the basis of the presence of antibodies in the blood plasma.

4. A person of AB blood group is universal recipient.

1. Read the following statements and choose the correct option

Statement 1: Atria receive blood from all parts of the body which subsequently flows to ventricles.

Statement 2: Action potential generated at sino-atrial node passes from atria to ventricles.

1. Action mentioned in Statement 1 is dependent on action mentioned in Statement 2

2. Action mentioned in Statement 2 is dependent on action mentioned in Statement 1

3. Action mentioned in Statements 1 and 2 are independent of each other.

4. Action mentioned in Statements 1 and 2 are synchronous.

1. Which of the following statements is incorrect about transport of gases?

1. About 97 percent of O2 is transported by RBCS

2. 3 percent of O2 is carried in dissolved state in the plasma

3. 20-25 percent of CO2 is transported by RBCS

4. 70 percent carbon dioxide is carried in dissolved state in plasma

1. Agranulocytes responsible for immune responses of the body are

1. Basophils 2. Neutrophils 3. Eosinophils 4. Lymphocytes

1. Read the following statements and select the correct option

Statement 1: Prothrombin is essential for blood clotting

Statement 2: Prothrombin is synthesized in the liver in the presence of Ca++

1. Both statements 1 and 2 are correct and statement 2 is the correct explanation of statement 1

2. Both statements 1 and 2 are correct but statement 2 is not the correct explanation of statement 1

3. Statement 1 is correct and statement 2 is wrong 4. Both statements 1 and 2 incorrect

1. Which of the following can activate the chemosensitive area situated adjacent to the rhythm centre?

1. High CO2 Concentration, less hydrogen ion concentration

2. High CO2 and high hydrogen ion concentration

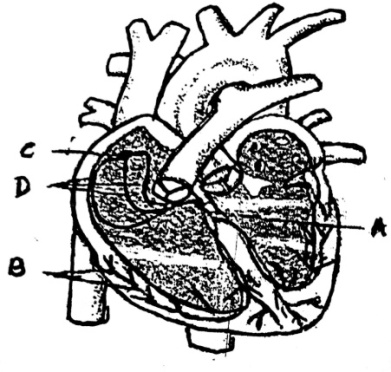
3. Less CO2,  high H+ ion concentration

4. Less CO2, less H+ ion concentration

1. If the systolic pressure is 120 mm Hg and diastolic pressure is 80mm Hg, the pulse pressure is \_\_\_

1. 120 × 80 = 9600mm Hg 2. 120+80 =200 mm Hg

3. 120-80=40mm Hg 4. 120/80 = 1.5mm Hg

1. In the diagram of the conducting system of the heart parts have been indicated by alphabets. Choose the answers with the right combination of alphabets.

1. A= Purkinje fibres, B= Conduction myofibres

C= SAN, D= Atrial pathways.

2. A= Bundle of His, B= Purkinje fibres

C= SAN, D= Internodal pathways.

3. A= Bundle of His, B= Purkinje fibres

C= SAN, D= Internodal pathways.

4. A= Bundle of His, B= Purkinje fibres

C= AVN, D= Internodal pathways.

1. Tick mark the incorrect statement

1. Every 100 ml of deoxygenated blood delivers approximately 4 ml of CO2 to the alveoli

2. Carbonic anhydrase is present in very high concentration in RBC

3. High pCO2and low pO2in tissue help in binding of carbon dioxide

4. CO2 is carried in haemoglobin as carboxyhaemoglobin

1. Which of the following statements is incorrect w.r.t mechanism of breathing?

1. Movement of air into and out of the lungs is carried out by creating a pressure gradient between the lungs and the atmosphere

2. Inspiration is initiated by contraction of diaphragm which increases the the volume of thoracic chamber

3. The contraction of external interocostal muscles lifts up the ribs and the sternum causing decrease in the volume of thoracic chamber

4. On an average, a healthy human breathes 12 -16 times / minute

1. Which of the following statements is incorrect?

1. Erythrocytes / RBCs are least abundant of all the cell in blood

2. The number of RBCs in adult man per mm3 of blood is 5 million to 5.5 million

3. RBCs are formed in the red bone marrow in the adults

4. RBCs are enucleated in most of the mammals

1. Which of the following match is correct?

|  |  |  |  |
| --- | --- | --- | --- |
|  | Structure | Percentage | Function |
| a    b  c.  d. |  | 0.3  0.5-1.0  30- 40  30- 40 | Phagocytic    Secrete histamine and serotonin  Defence against parasites  Allergic reactions |

1. In the following table of human ABO blood groups, fill up blanks (i), (ii), (iii) and (iv) from the below

|  |  |  |  |
| --- | --- | --- | --- |
| Blood group | Antigens on RBCs | Antibody in Plasma | Donor groups |
| A | A | Anti -B | A,O |
| B | B | Anti - A | B,O |
| AB | AB | (ii) | A, B, AB, O |
| O | (i) | (iii) | (iv) |

(i) (ii) (iii) (iv) (i) (ii) (iii) (iv)

1. Nil Nil Nil O 2. Nil Nil Anti –A, B AB

3. Nil Anti –A, B Nil O 4. Nil Nil Anti –A, B O

1. Statement 1: The SA node acts as pacemaker

Statement 2: The SA node is located in the wall of the right atrium near the interatrial septum

1. Both statements 1 and 2 are correct and statement 2 is the correct explanation of statement 1

2. Both statements 1 and 2 are correct but statement 2 is not the correct explanation of statement 1

3. Statement 1 is correct and statement 2 is wrong 4. Both statements 1 and 2 are incorrect

1. Which of the following statement is correct?

1. The T – wave in an ECG represents excitation of ventricles

2. The sum of P and T waves in a given time period can determine the heart beat rate of an individual

3. The end of the P-wave marks the end of the systole

4. In a standard ECG, a person is connected to the machine with three electrical leads

1. Choose the schematic diagram which properly represents pulmonary circulation in humans

1. Left auricle Deoxygenated blood → lungs Oxygenated blood → Right ventricle

2. Left auricle Oxygenated blood → lungs Deoxygenated blood → Right ventricle

3. Right ventricle Deoxygenated blood → lungs Oxygenated blood → Left auricle

4. Right ventricle Oxygenated blood → lungs Deoxygenated blood → Left auricle

1. During ventricular systole

1. Oxygenated blood is pumped into the pulmonary artery and deoxygenated blood is pumped into the aorta

2. Oxygenated blood is pumped into the aorta and deoxygenated blood is pumped into the pulmonary vein

3. Oxygenated blood is pumped into the pulmonary vein and deoxygenated blood is pumped into the pulmonary artery

4. Oxygenated blood is pumped into the aorta and deoxygenated blood is pumped into the pulmonary artery

1. Wheezing sound is produced in

1. Asthma 2. Emphysema 3. Silicosis 4. Pneumonia

1. Assertion : Double circulation is incomplete in amphibians and reptiles

Reason: Unlike in birds and mammals, in amphibian and reptiles, the left atrium receives oxygenated blood and right atrium receives deoxygenated blood

1. Both Assertion and Reason are true and the reason is the correct explanation of the assertion

2. Both Assertion and Reason are true but the reason is not the correct explanation of the assertion

3. Assertion is true but Reason is false

4. Both assertion and reason are false

1. Match Column –I with Column II and select the correct option from the codes given below

|  |  |  |  |
| --- | --- | --- | --- |
|  | Column -I |  | Column -II |
| A | Heart failure | (i) | Heart muscle is suddenly damaged by an inadequate blood supply |
| B | Cardiac arrest | (ii) | Chest pain due to inadequate O2 reaching the heart muscle |
| C | Heart attack | (iii) | Atherosclerosis |
| D | Coronary artery disease | (iv) | Heart not pumping blood effectively enough to meet the needs of the body |
| E | Angina pectoris | (v) | Heart stops beating |

1. A – (iv), B- (v), C-(i), D- (iii), E-(ii) 2. A- (v), B- (iv), C- (i), D- (iii), E-(ii)

3. A – (iv), B- (v), C-(i), D- (ii), E-(iii) 4. A- (v), B- (iv), C- (ii), D- (iii), E-(i)

1. Given below are four statements (i –iv) regarding human circulatory system

1. Arteries are thick – walled and have narrow lumen as compared to veins

2. Angina is acute chest pain when the blood circulation to the brain is reduced

3. Persons with blood group AB can donate blood to any person with any blood group under AB system

4. Calcium ions play a very important role in blood clotting

Which of the above statements are correct?

1. 1and 4 2. 1 and 2 3. 2 and 3 4. 3 and 4

1. In recent years, some athletes have tempted to try blood doping. In this procedure, the blood cells are removed from the body, stored for a month and then reinjected a few days an athletic event. This practice is dangerous because

1. It increase oxygen carrying capacity of the blood

2. Viscosity of the blood rises, which increases the work load of heart

3. Polycythemia decreases blood pressure

4. The athlete is not tired and can win the race

1. Select the total number of organism from the following which respire through their body surface. Sycon, Spongilla, Admsia, Taenia, Laccifer, Pila, Antedon, Gorgonia, Jelly fish

1. 4 2. 5 3. 6 4. 8

1. Refer to the diagrammatic representation of standard ECG and select the option with correct matching

Diagrammatic presentation of a standard ECG

|  |  |  |  |
| --- | --- | --- | --- |
|  | P - wave | QRS complex | T -wave |
| 1 | Repolarisation of atria | Depolarisation of ventricles | Repolarisation of ventricles |
| 2. | Excitation of atria | Marks the end of systole | Marks the end of systole |
| 3. | Depolarisation of atria | Depolarisation of ventricles | Repolarisation of ventricles |
| 4. | Repolarisation of atria | Repolarisation of ventricles | Marks the end of systole |

1. Read the following statements

1. It is double layered and covers the lungs 2. Outer layer is in contact with thoracic wall

3. Fluid is present between these layers 4. Inner layer is in contact with the lungs

The above feature refers to

1. Pericardium 2. Peritoneum 3. Perichondrium 4. Pleura

**Topic: Digestion and absorption, Breathing and exchange of gases and Body fluids and circulation**

**Unit: B-08**

**ANSWER KEY**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Q. No.** | **Ans.** | **Q. No.** | **Ans.** | **Q. No.** | **Ans.** | **Q. No.** | **Ans.** | **Q. No.** | **Ans.** |
| 1 | **3** | 2 | **4** | 3 | **3** | 4 | **4** | 5 | **1** |
| 6 | **1** | 7 | **1** | 8 | **3** | 9 | **4** | 10 | **3** |
| 11 | **4** | 12 | **2** | 13 | **4** | 14 | **3** | 15 | **2** |
| 16 | **3** | 17 | **2** | 18 | **3** | 19 | **3** | 20 | **4** |
| 21 | **4** | 22 | **1** | 23 | **4** | 24 | **3** | 25 | **3** |
| 26 | **3** | 27 | **3** | 28 | **3** | 29 | **2** | 30 | **3** |
| 31 | **2** | 32 | **2** | 33 | **1** | 34 | **1** | 35 | **1** |
| 36 | **3** | 37 | **1** | 38 | **2** | 39 | **4** | 40 | **3** |
| 41 | **1** | 42 | **1** | 43 | **4** | 44 | **4** | 45 | **1** |
| 46 | **4** | 47 | **2** | 48 | **2** | 49 | **2** | 50 | **3** |
| 51 | **2** | 52 | **4** | 53 | **2** | 54 | **2** | 55 | **2** |
| 56 | **2** | 57 | **2** | 58 | **4** | 59 | **4** | 60 | **3** |
| 61 | **1** | 62 | **2** | 63 | **2** | 64 | **2** | 62 | **2** |
| 66 | **3** | 67 | **2** | 68 | **4** | 69 | **4** | 70 | **3** |
| 71 | **2** | 72 | **3** | 73 | **2** | 74 | **4** | 75 | **3** |
| 76 | **1** | 77 | **2** | 78 | **4** | 79 | **2** | 80 | **4** |
| 81 | **3** | 82 | **4** | 83 | **1** | 84 | **3** | 85 | **1** |
| 86 | **1** | 87 | **1** | 88 | **3** | 89 | **3** | 90 | **4** |