Unit :-V

Chapter-21. Body Fluids and Circulation

IMPORTANT POINTS

• The cells of every animals need O₂ and nutrients for performing different metabolic activities, and same way end of this process CO₂ and wastes are removed. Hence body fluid is flow throughout the body by blood and lymph.

Blood as a fluid connective tissue made of body corpuscles.

- In the composition of blood plasma, water, salts and proteins are included. It covers 55
 % of blood. RBC, WBC and platelets are included in blood corpuscles. It covers 45 %
 of blood.
- In human ABO and Rh blood groups are found. In which A, B, AB and O blood groups are included in ABO, while Rh^{+ve} and Rh^{-ve} included in Rh group.
- The major chemical defense against blood loss is the formation of blood clot. In it 13 factors are included. This process involves three phases
 - (i) Formation of thromboplastin
 - (ii) Formation of thrombin
 - (iii) Formation of fibrin
- The composition of lymph is similar to blood plasma. It flows in body through lymphatic vessels.
- Human having close circulation. In it blood vessels (artery, vein and capillaries) and heart are included.
- Human heart having four chambers, in which two auricles and two ventricles are included.
 Many valves are seen in the structure of heart. It regulates the direction of blood flow.
- Blood with O₂ and without O₂ flow separately in human, for that it is called double circulation.
- Hypertension, atherosclerosis and arteriosclerosis like diseases occurred due to abnormality in blood circulation.
- (1) Mammalian heart is (a) Neurogenic (b) Myogenic (c) Digenic (d) None of above (2) Granulocytes are (d) None of these (a) Acidophils (b) Lymphocytes (c) Monocytes (3) The largest corpuscle in the blood is (a) Basophils (b) Acidophils (c) Monocytes (d) Lymphocyte

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| (4) | Thrombokinase is p | produced in | | | | | |
|------|-------------------------------------|-------------------|-----------|-----------------|-----------|--------------|-----------|
| | (a) RBC | (b) WBC | | (c) Blood ve | essels | (d) blood | platelets |
| (5) | The chief difference | e between the e | rythrocy | tes of man an | d frog is | S | |
| | (a) Human erythroo | cytes have more | haemog | lobin | | | |
| | (b) Human erythroo | cytes have less h | aemoglo | bin | | | |
| | (c) Human erythroo | cytes have no nu | ıclei | | | | |
| | (d) Human erythro | cytes have more | nuclei | | | | |
| (6) | In mammals the op | pening of post c | anal in t | he right auric | le is gua | rded by | |
| | (a) Mitral valve | | (b) T | hebesius valve | e | | |
| | (c) Eustachian valve | e | (d) tr | ricuspid valve | | | |
| (7) | The volume of blo | od present in ar | adult h | uman is | | | |
| | (a) 1 liter | (b) 5 liters | (c) 2 | liters | (d) 10 |) liters | |
| (8) | The instrument use | d for measuring | blood p | oressure is kno | own as | | |
| | (a) ECG | | (b) Sto | ethoscope | | | |
| | (c) Sphygmomanom | neter | (d) EF | EG | | | |
| (9) | The heart murmur of heart is due to | | to | | | | |
| | (a) Coronary throm | lbosis | (b) De | efective leady | valve | | |
| | (c) Arterial pulse | | (d) un | der developed | atrium | | |
| (10) | Thromboplastin is 1 | produced by | | | | | |
| | (a) Damaged tissue | S | (b) Bl | ood platelets | | | |
| | (c) Both (a) and (| b) | (d) Pro | othrombin | | | |
| (11) | The thin membrane | around the hea | art is | | | | |
| | (a) Myocardium | (b) Pericardi | ım | | | | |
| | (c) Pleural membra | ne (d) Parietal p | eritoneu | m | | | |
| (12) | Three important pr | oteins present ii | n blood a | are | | | |
| | (a) Collagen, album | in, fibrinogen | | (b) Albumin, | globulin | , Actin | |
| | (c) Globulin, album | in, collagen | | (d) Albumin, | globulin | , fibrinogen | |
| (13) | QRS wave in ECC | represents | | | | | |
| | (a) Auricular systole | e (b) ve | entricula | r systole | | | |
| | (c) ventricular diast | ole (d) E | nd of ve | ntricular systo | le | | |
| (14) | Which protein help | s in disease res | istance ? | • | | | |
| | (a) Albumin | (b) Fibrinoge | n | | | | |
| | (c) globulin | (d) both (a) | and (b) | | | | |
| (15) | Play an important | ole in allergic r | eaction 1 | ру | | | |
| | (a) Neutrophils | (b) Lymphoc | ytes | (c) Basophils | 3 | (d) Mono | cytes |
| | | | | | | | |

| (16) | | Activator complex ' is IX + AHG + Phosph | | |
|------|------------------------|---|---------------------------------|----------------------|
| | (b) Christmas factor | r IX + AHG + Phosph | nolipid + Mg ²⁺ | |
| | (c) Activated christ | mas factor + AHG + I | Phospholipid + Ca ²⁺ | |
| | (d) Activated christ | mas factor + AHG + C | Glycolipid + Mg ²⁺ | |
| (17) | It converts fibrinoge | n into soluble fibrin | | |
| | (a) Thromboplastin | (b) Thrombin | (c) Prothrombin | (d) Ca ²⁺ |
| (18) | Which factor is dela | ying in blood clotting | | |
| | (a) Vit K | (b) Hirudin | (c) Heparin | (d) All of above |
| (19) | In pericardium doub | ole walled structure - o | outer layer and inner lay | yer are respectively |
| | (a) Serosa layer and | l fibrous layer | (b) Fibrosa layer and | l serous layer |
| | (c) Fibrous layer an | d Muscular layer | (d) Muscular layer ar | nd fibrous layer |
| (20) | Tricuspid valve is si | tuated in between | | |
| | (a) Left auricle and | left ventricle | (b) Right auricle and | left ventricle |
| | (c) Inter atrial septu | m | (d) Inter ventricular se | eptum |
| (21) | Blood is flowing in | pulmonary vein is | | |
| | (a) Oxygenated | (b) Deoxygenated | (c) Mixed | (d) None of above |
| (22) | Diastole of ventricle | s is | | |
| | (a) 0.30 sec | (b) 0.40 sec | (c) 0.70 sec | (d) 0.10 sec |
| (23) | The wave represent | ing of ventricles diastol | le is | |
| | (a) P | (b) Q | (c) R | (d) T |
| (24) | Heart is known as | double pump (circulation | on) because of | |
| | (a) the right chambe | er push blood into lung | gs | |
| | (b) left chambers pu | ash blood into the enti | re body | |
| | (c) Heart receives i | mpure blood from the | body | |
| | (d) both (a) and (b |) | | |
| (25) | Effect of Nicotine o | n blood circulation | | |
| | (a) it mixes with blo | ood | | |
| | (b) it contracts the | arterial wall | | |
| | (c) it decrease the | blood pressure | | |
| | (d) it decrease the o | carrying of oxygen to l | ungs | |
| (26) | It decreasing the car | rrying of oxygen of Ha | emoglobin | |
| | (a) Oxygen | (b) Carbon dioxide | (c) Carbon monoxide | (d) Nitrogen |
| (27) | Number of leucocyt | tes is 1 cubic mm | | |
| | (a) 5000 - 8000 | | (b) 2000 - 3000 | |
| | (c) 8000 - 13000 | 246 | (d) 1 - 5 million | |

| (28) | It shows pulmonary circulation: | | | | |
|------|--|--|--|--|--|
| | (a) Left atrium (Oxygenated blood) - Lungs (deoxygenated blood) - Right atrium | | | | |
| | (b) Left atrium (deoxygenated blood) - Lungs (oxygenated blood) - Right atrium | | | | |
| | (c) Left atrium (Oxygenated blood)- Lungs (deoxygenated blood)- Left atrium | | | | |
| | (d) Right atrium (deoxygenated blood) - Lungs (oxygenated blood) - Left atrium | | | | |
| (29) | Systolic pressure of heart | | | | |
| | (a) 80 mm Hg (b) 120 mm Hg (c) 40 mm Hg (d) 320 mm Hg | | | | |
| (30) | SA - Node is located at | | | | |
| | (a) Left upper corner of the left atrium | | | | |
| | (b) Left lower corner of the left atrium | | | | |
| | (c) Right upper corner of the right atrium | | | | |
| | (d) Righr lower corner of the right atrium | | | | |
| (31) | Pathway of myogenic impulse conduction is | | | | |
| | (a) SAN - AVN - Bundle of His - Purkinje fibers | | | | |
| | (b) SAN - AVN - Punkinje fibers - Bundle of His | | | | |
| | (c) AVN - SAN - Bundle of His - Purkinje fibers | | | | |
| | (d) AVN - Bundle of His - SAN - Pukinje fibers | | | | |
| (32) | In disease erythroblastosis foetalis | | | | |
| | (a) Destroy the baby's WBCs (b) A baby suffering from atherosclerosis | | | | |
| | (c) Destroy the baby's RBCs (d) An increasing in the number of RBCs | | | | |
| (33) | A person having both antigen A and antigen B on the surface of RBCs: | | | | |
| | (a) That person donot possess antibody in serum | | | | |
| | (b) He can donate the blood to only having AB blood group | | | | |
| | (c) He is universal recipient | | | | |
| | (d) All the above | | | | |
| (34) | responsible factor XI of blood clotting is | | | | |
| | (a) Antiheamophilic globulin (b) Plasma thromboplasin antecedent | | | | |
| | (c) Fibrin stabilizing (d) Hageman factor | | | | |
| (35) | It is an important method for checking the health related problems of the heart. | | | | |
| | (a) Xray (b) ECG (c) ELISA (d) CBC | | | | |
| (36) | Blood group is due to | | | | |
| | (a) Specific antigen on the surface of WBC | | | | |
| | (b) Specific antibodies on the surface of RBC | | | | |
| | (c) Specific antigen of the surface of RBC | | | | |
| | (d) Type of haemoglobin in blood | | | | |

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| (37) | Leucopenia is the con- | dition where | | |
|------|-------------------------|----------------------|----------------------------|-------------------------|
| | (a) Leuocytes decreas | e below 5000 per d | ubic mm of blood (b) Bo | one marrow is destroyed |
| | (c) Total number of l | ymphocytes decrea | se from 2 % to 5 % | |
| | (d) Leucocytes increa | se above 6000 per | cubic mm | |
| (38) | Carbonic anhydrase en | nzyme present in | | |
| | (a) WBC | (b) RBC | (c) Blood plasma | (d) Platelets |
| (39) | The coagulation of ble | ood occurs due to | | |
| | (a) Destruction of RB | C (b) | Destruction of WBC | |
| | (c) Destruction of lym | ph (d) | Destruction of blood pla | telets |
| (40) | The valve present at t | he left auriculo - v | rentricular aperture is | |
| | (a) Tricuspid valve | (b) | Semilunar valve | |
| | (c) Mitral valve | (d) | Eustrachian valve | |
| (41) | Heart beat is | | | |
| | (a) Induced by hormo | nes | | |
| | (b) Voluntary process | | | |
| | (c) Dependent upon the | ne stimulation by n | erve complex | |
| | (d) Auto inducing | | | |
| (42) | At the time of auricul | o ventricular valve | shut, the sound is | |
| | (a) Lubb | (b) Dubb | (c) Lubb - dubb | (d) Dhak - Dhak |
| (43) | The systole is | | | |
| | (a) The relaxation of a | auricles (b) | The relaxation of ventric | les |
| | (c) Relaxation of char | mbers of heat (d) | Contraction of heart cha | ambers |
| (44) | Blood plasma is | | | |
| | (a) Acidic | (b) Basic | (c) Neutral | (d) Variable |
| (45) | A clot of blood conta | ins | | |
| | (a) Fibrinogen | (b) Prothrombin | (c) Thrombin | (d) Fibrin |
| (46) | Which one of the con | nmon anticoagulan | t is used for preserving l | blood ? |
| | (a) Sodium hydroxide | (b) | Sodium chloride | |
| | (c) Sodium oxalate | (d) | Sodium bicarbonate | |
| (47) | Arteries carry oxygena | ated blood except | | |
| | (a) Pulmonary | (b) Cardiac | (c) Hepatic | (d) Systemic |
| (48) | Increase in number of | leucocytes beyond | normal indicates | |
| | (a) Anemia | | | |
| | (b) Infection | | | |
| | (c) Increased defense | against pathogen | | |
| | (d) Non formation of | RBC | | |

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| (49) | Largest number of white | blood corpuscle | es are | |
|------|-----------------------------|--------------------|---------------------------|----------------------|
| | (a) Eosinophils (b) | Basophils | (c) Neutrophils | (d) Monocytes |
| (50) | Blood is red but RBC a | re absent in | | |
| | (a) Frog (b) | Man | (c) Rabbit | (d) Earthworm |
| (51) | Pace maker is | | | |
| | (a) Instrument for measu | ring heart beat | | |
| | (b) Instrument for measu | ring pulse rate | | |
| | (c) Auriculo - ventricular | node that provi | des impulse for heart b | eat |
| | (d) Sino - auricular node | that provides in | npulse for heartbeat | |
| (52) | Which has the thickest v | valls ? | | |
| | (a) Left ventricle | (b) I | Right ventricle | |
| | (c) Left auricle | (d) I | Right auricle | |
| (53) | Prothrombin required for | blood clotting is | s produced in | |
| | (a) Stomach (b) | Liver | (c) Spleen | (d) Pancreas |
| (54) | Contraction of right vent | ricle pumps bloo | d into | |
| | (a) Dorsal aorta (b) | Pulmonary arter | ry (c) Pulmonary vein | (d) Coronary artery |
| (55) | Dub sound is produced of | during closure of | | |
| | (a) Semilunar valves (b) | Bicuspid valve | (c) Tricuspid valve | (d) Both a & b |
| (56) | In circulatory system, val | lves occur in | | |
| | (a) Heart and blood vess | sels of both verte | ebrates and invertebrate | es |
| | (b) Both vertebrate and i | nvertebrate hear | ts | |
| | (c) Vertebrate heart only | | | |
| | (d) Invertebrate heart on | ly | | |
| (57) | In blood | | | |
| | (a) WBCs are more than | n RBCs (b) | RBCs are more than W | VBCs |
| | (c) RBCs are less than p | olatelets (d) | Platelets are less than V | WBCs |
| (58) | Pericardial fluid is secret | ed by | | |
| | (a) Myocardium | (b) I | Parietal peritoneum | |
| | (c) Visceral peritoneum | (d)] | None of the above | |
| (59) | Pulse pressure is | | | |
| | (a) Diastolic pressure | (b) S | Systolic pressure | |
| | (c) Difference between b | and a (d) l | Pressure in great veins | |
| (60) | Which one are granulocy | tes | | |
| | (a) Neutrophils, basophils | , lymphocytes | (b) Eosinophils, bas | ophils, monocytes |
| | (c) Basophils, monocytes | , lymphocytes | (d) Neutrophils, eos | sinophils, basophils |
| | | | | |

- (61) Lymph consists of
 - (a) RBCs, WBCs and plasma
 - (b) RBCs, proteins and platelets
 - (c) Alll components of blood except RBCs and some proteins
 - (d) WBCs and serum
- (62) Find the matching pair:
 - (a) Lubb- sharp closure of AV valves at beginning of ventricular systole
 - (b) Dub sudden opening of semilunar valves at the beginning of ventricular systole
 - (c) Pulsation of radial artery valves in blood vessels
 - (d) Initiation of heart beat Purkinje fibers
- (63) Valves which allow blood from ventricles into arteries and not in opposite direction are
 - (a) Aortic valve and mitral valve
- (b) AV valves and semilunar valves
- (c) Bicuspid and tricuspid valves
- (d) Semilunar valves and tricuspid valve
- (64) Bundle of His is a network of
 - (a) Muscle fibres distributed throughout heart walls
 - (b) Muscle fibres found only in ventricle wall
 - (c) Nerve fibres distributed in ventricles
 - (d) Nerve fibres found throughout the heart
- (65) Artificial pacemaker is usually implanted to correct the defect in
 - (a) AV node
- (b) SA node
- (c) Purkinje fibers
- (d) Mitral valve

- (66) Pulmonary vein carries oxygenated blood from
 - (a) Heart to its walls

(b) Heart to lungs

(c) Lungs to heart

- (d) Heart to all body parts
- (67) The sequence of cardiac cycle is
 - (a) Atrial systole ventricular systole joint diastole
 - (b) Atrial diastole Atrial systole ventricular diastole
 - (c) Atrial systole ventricular diastole ventricular systole
 - (d) ventricular diastole ventricular systole Atrial systole
- (68) The blood returning to the heart from lungs via pulmonary vein has more
 - (a) RBC per ml of blood (b) Haemoglobin per ml of blood
 - (c) Oxygen per ml of blood (d) Nutrient per ml of blood
- (69) Systemic heart refers to
 - (a) The two ventricles together in humans
 - (b) The heart that contracts under stimulation from nervous system
 - (c) Left auricle and left ventricle in higher ventebrates
 - (d) Entire heart in lower vertebrates

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| (70) | In the heart of mammals the bicuspid val- | ve is situated between | |
|------|--|------------------------|---------------------|
| | (a) Left auricle and left ventricle | (b) Post caval and a | right caval |
| | (c) Right auricle and left auricle | (d) Right ventricle a | nd pulmonary aorta |
| (71) | The auriculo ventricular node in human he | eart was discovered by | |
| | (a) Hiss (b) Lewis | (c) Ringer | (d) William Harvey |
| (72) | The beating of heart of man is heard on | the left side because | |
| | (a) The left ventricle is toward the left signal | de | |
| | (b) Both the ventricles are towards the le | eft side | |
| | (c) Entire heart is on the left side | | |
| | (d) The aorta is on the left side | | |
| (73) | Purkinje's fibres are special types of | | |
| | (a) Muscle fibres located in heart | | |
| | (b) Nerve fibres located in cerebrum | | |
| | (c) Connective tissue fibers joining one be | one to another bone | |
| | (d) Sensory fibers extending from retina in | nto optic nerve | |
| (74) | The pericardium and the pericardial fluid | help in | |
| | (a) Protecting the heart from friction, sho | cks and keeps it moist | |
| | (b) Pumping the blood | | |
| | (c) Receiving the blood from various par | ts of the body | |
| | (d) None of the above | | |
| (75) | For reaching left side of heart, blood must | st pass through | |
| | (a) Liver (b) Kidneys | (c) Lungs | (d) Brain |
| (76) | The posterior venacava | | |
| | (a) Divides into the hepataic portal veins | (b) Opens into the l | eft auricle |
| | (c) Commences at the kidney | (d) Begins at the hi | nd end of abdomen |
| (77) | Open circulatory system is present in | | |
| | (p) Arthropods (q) Annelids | | |
| | (R) Chordates (S) Molluscs (except cepha | llopods) | |
| | (a) P (b) P & Q | (c) P & S | (d) S & R |
| (78) | 'Heart of heart' is | | |
| | (a) SA - Node (b) AV - Node | (c) Bundle of His | (d) Purkinje fibres |
| (79) | An oval depression called fossa ovalis is | seen on | |
| | (a) Inter atrial septum | (b) Inter ventricular | septum |
| | (c) Right auriculo - ventricular septum | (d) Left auriculo - v | entricular septum |
| | | | |

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| (80) | Which of the following statements is related to starling's law of heart (a) Greatar the stroke volume greater is the heart rate | | | | |
|--|--|-------------------------|-----------------------|-------------------|--|
| | | E | | of contraction of | |
| heart | (b) Greater the intial length | of the cardiac muscle | note, more the force | of contraction of | |
| | (c) Greater the minute volu | me, greater is the hear | rt rate | | |
| | (d) Lesser the length of car | | | traction of heart | |
| (81) | An artificial pace - maker is | _ | | | |
| (-) | (a) Having 90 % blockage | • | • | r | |
| | (b) Having a very high block | | , | | |
| | (c) With irregularity in the h | - | | | |
| | (d) Suffering from arterioscl | - | | | |
| (82) | The pace - setter in the he | | | | |
| (-) | (a) Purkinje fibres | (b) SA - Node | (c) Papillary muscle | (d) AV - Node | |
| (83) | Cardiac output is determine | ` ' | | | |
| () | (a) Heart rate | (b) Stroke volume | (c) Blood flow | (d) Both a & b | |
| (84) Which of the following blood vessles has wide lumen | | | | , | |
| ` / | (a) Renal vein | (b) Post vena | | | |
| | (c) Renal artery | , , | monary artery | | |
| (85) | In haemodialysis, patient's l Blood is purified and it is | | | _ | |
| | X Y | X | Y | | |
| | (a) Heparin, Anti heparin | (b) Prothrom | bin, Thrombin | | |
| | (c) antiheparin , Heparin | (d) Prothrom | bin, Heparin | | |
| (86) | Wave 'T' is representing in | ECG as: | | | |
| | (a) Diastole of both atria ar | nd ventricles | | | |
| | (b) Systole of right atria and left ventricle | | | | |
| | (c) Systole of the left atria | and right ventricle | | | |
| | (d) Systole of both atria an | d ventricles | | | |
| (87) | Which one of the following | vein breaks up into ca | apillaries | | |
| | (a) Renal vein (b) H | Tepatic vein (c) Pe | elvic vein (d) Pu | ulmonary vein | |
| (88) | Serotonin in the blood | | | | |
| | (a) Relaxes blood vessels | (b) Prevents | clotting of the blood | | |
| | (c) Helps in clotting of blo | od (d) Constrict | s blood vessels | | |
| (89) | The artery can be distinguis | shed from the vein in h | naving | | |
| | (a) Thicker walls | (b) More blood cell | s | | |
| | (c) More plasma | (d) Larger cavity | | | |
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| (90) | The pulse beat is me | easured by the | | |
| | (a) Artery | (b) Capillary | (c) Vein | (d) None |
| (91) | Carotid artery carries | S | | |
| | (a) Impure blood fro | m brain | | |
| | (b) Oxygenated bloo | d to anterior region of | of body or to brain | |
| | (c) Impure blood to | kidney | | |
| | (d) Oxygenated bloo | d to heart | | |
| (92) | Blood vessels carrying | ng blood from lungs to | o heart | |
| | (a) Pulmonary artery | (b) Pulmonary vein | (c) Carotid artery | (d) Coronary artery |
| (93) | The diaphragm is su | pplied blood by | | |
| | (a) Cardiac artery | (b) Phrenic artery | (c) Lingual artery | (d) Lumber artery |
| 94) | Iliac artery carries bl | ood to the | | |
| | (a) Lungs | (b) Ileum | (c) Hind limb | (d) Brain |
| 95) | The structure of whi | ch of the following co | onsist of a layer of sin | ngle cell thickness |
| | (a) Blood capillary | (b) Artery | (c) Venule | (d) Arteriole |
| 96) | Make correct pairs. | | | |
| | Column I | Column II | Column III | |
| | P. Basophils | T. 1 To 40 % | i. Kill micro organis | sm |
| | Q. Lymphocytes | U. 40 to 70 % | ii. Active phaagoacy | rtes |
| | R. Neutrophils | V. 20 to 45 % | iii. Allergens] | |
| | S. Acidophils | W. 0 to 1 % | iv. Immunity | |
| | (a) (P-W-ii), (Q-V-iv), (R-U-ii),(S-T-i) | | | |
| | (b) (P-T-ii),(Q-U-iv), | (R-V-iii), (S-W-i) | | |
| | (c) (P-W-ii),(Q-V-iii), | (R-T-i),(S-U-iv) | | |
| | (d) (P-V-i),(Q-U-iii),(| R-W-iv),(S-T-ii) | | |
| 97) | Make correct pairs : | | | |

| P. wa | iter | i. Immunity | | | | | | | | |
|-------|--------|-------------|--------------------------|----------|-------|-----|----|-----|---|--|
| Q. Fi | brogen | ii. So | ii. Solvent of substance | | | | | | | |
| R. Al | bumin | iii. B | lood clo | otting | | | | | | |
| S. Gl | obulin | iv. R | egulatio | on of os | mosis | | | | | |
| P | Q | R | S | | P | Q | R | S | | |
| (a) | ï | iii | iv | i | (b) | i | iv | iii | ï | |
| (c) | ïi | iii | i | iv | (d) | iii | ïi | iv | i | |

Column II

Column I

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| | | | |

(98)Make the correct pairs.

| Colui | mn I | Colu | ımn II | | | | | | |
|-----------------------|--------------------------|-------|----------|--------|-----|-----|----|---|----|
| Facto | r | Ident | tity | | | | | | |
| P. IX | | i. Pr | oaccelei | rin | | | | | |
| Q. XII ii. Fibrinogen | | | | | | | | | |
| R. V | R. V iii. Chrimas factor | | | | | | | | |
| S. I | | iv. H | lagman | factor | | | | | |
| P | Q | R | S | | P | Q | R | S | |
| (a) | iv | ü | i | iii | (b) | iii | i | ü | iv |
| (c) | ii | iv | iii | i | (d) | iii | iv | i | ii |

(99)Make the correct pairs.

Column I

- P. Tricuspid valve
- Q. Mitral valve
- R. atrial semilunar valve
- S. pulmonary semilunar valve
 - P Q R S
- (a) iii iv
- (c) iii iv

Column II

- i. Right ventricle pulmonary trunk
- ii. Left ventricle arota
- iii. Right atrium right ventricle
- iv. Left atrium left ventricle
- P O R S iii (b) ï
- (d) iv
- (100) Make the correct pairs.

P

Column I Time Column II PROCESS

- P. 0.40 Sec i. Blood of atrium flows in to ventricle
- Q. 0.10 Sec ii. Blood of ventricle flows into truncusarterious
- R. 0.30 Sec iii. Phase of atrium and ventricle systole

S

S. 0.80 Sec iv. Total time of one cardiac cycle

| | P | Q | R | S | | P | Q | R | S |
|-----|-----|---|----|---|-----|-----|---|---|----|
| (a) | iii | i | iv | ü | (b) | iii | i | ä | iv |
| | | | | | | | | | |

(c) iv (d) iii iii iv

$$(TRUE = T; FALSE = F)$$

MORE THAN ONE TRUE OR FALSE STATEMENTS TYPE QUESTION

- (101) According to statements find the correct option:
 - 1. The composition of lymph is very much like that of the blood.
 - 2. Lymph is resposible for immunity.
 - 3. Lymphocytes added when lymph passes through small capillaries
 - 4. Lymph is contain less fibrinogen than blood plasma

- (a) FTFT
- (b) TTFT
- (c) TTTT
- (d) TTTF
- (102) According to statements find the correct option:
 - 1. Blood connects every cells, tissue and organs of body.
 - 2. Blood is known as connective tissue proper.
 - 3. Blood plasma constituted about 45 % of blood.
 - 4. Blood is light yellow coloured and slightly viscous extra cellular fluid.
 - (a) TFTT
- (b) TTTT
- (c) TFFT
- (d) TTFF
- (103) According to statements find the correct option:
 - 1. Stuart factors are activated by : IX, VIII, IV and Phospholipid
 - 2. Intitiated factors of this system are derived from the blood plasma
 - 3. In intrinsic pathway blood clotting stats
 - 4. PTA is activated by XIIa
 - (a) FTTF
- (b) TFFT
- (c) FTTT

(P) ?

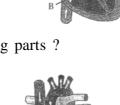
(d) TTTT

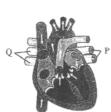
Thrombine

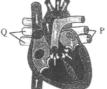
Fibrin

Ca²⁺

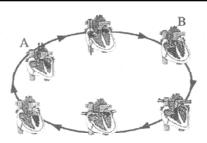
- (104) What P and Q indicate in the given figure?
 - (a) Thromboplast, Proaccelerin
 - (b) Prothrombin, Fibrinogen
 - (c) Globulin, FSF
 - (d) Plasma thromboplastin, Fibrin stabilizing
- (105) What P and Q indicate in the given figure?
 - (a) Pulmonary artery, pulmonary vein
 - (b) Anterior vena cava, Dorsal aorta
 - (c) Pulmonary artery, Vena cava
 - (d) Pulmonary vein, Dorsal aorta
- (106) Mention the name of A and B in the given figure:
 - (a) Right ventricle, Left ventricle
 - (b) Aorta valve, Right atrium
 - (c) Bicuspid valve, Tricuspid valve
 - (d) Left atrium, Right ventricle
- (107) Which type of blood flows in P and Q indicating parts?
 - (a) Oxygenated in both
 - (b) Deoxygenated in both
 - (c) Oxygenated, Deoxygenated
 - (d) Deoxygenated, Oxygenated

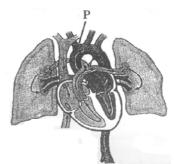


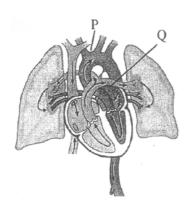




- (108) A and B in the figure indicate which state?
 - (a) Ventricle systole, Atrium systole
 - (b) Ventricle diastole, Atrium diastole
 - (c) Filling of blood in ventricle, Atrium systole
 - (d) Ventricle systole, Blood flow out
- (109) Mention the name of P in the given figure:
 - (a) Deoxygenated blood enters into lungs
 - (b) Oxygenated blood flows outside the lungs
 - (c) Oxygenated blood flows toward the body
 - (d) Deoxygenated blood flows from the body
- (110) Mention the name of P in the given figure.







- (a) Deoxygenated blood flows from the body
- (b) Oxygenated blood flows from the lungs
- (c) Oxygenated blood flows toward the body
- (d) Deoxygenated blood enters into lungs
- (111) What is the life span of RBC in humans?

(AFMC - 90)

- (a) 120 days
- (b) 210 days
- (c) 220 days
- (d) 200 days
- (112) What is found in the surrounding of wall of heart?

(AFMC - 93)

- (a) Pericardial cavity (b) Perineural cavity
- (c) Pericardium
- (d) None of the above
- (113) By which cause Dubb sound arises ?

(CBSC-94)

- (a) Closing of semilunar valve
- (b) Closing of bicuspid valve
- (c) Closing of tricuspid valve
- (d) Both b and c
- (114) Which is the pacemaker heart?

(CBSC - 94)

- (a) AV Node
- (b) SA Node
- (c) Purkinje fiber
- (d) Bundle of His muscle

| (115) | Where granular WE | (DPMT-95) | | | | | |
|--------|--|--------------------------|--------------------------|------------------------|--|--|--|
| | (a) Kidney | (b) Liver | (c) Small interstine | (d) Bone marrow | | | |
| (116) | Which type of WBO | Cs are found in maxim | mum number ? | | | | |
| | (a) Monocytes | (b) Basophils | (c) Acidophils | (d) Neutrophils | | | |
| (117) | Which of the follow | ing is not useful in bl | ood clotting. | (AFMC-96) | | | |
| | (a) Fibrin | (b) Calcium | (c) Platelets | (d) Bilirubin | | | |
| (118) | In which of the follo | owing close circulatio | n is found? | (CBSC-94) | | | |
| | (a) Cockroach | (b) Mosquito | (c) Housefly | (d) Tadpole | | | |
| (119) | The wall of which | part of the heart is v | ery thich ? | (AiiMS-99) | | | |
| | (a) Left atrium | (b) Left ventricle | (c) Right atrium | (d) Right ventricle | | | |
| (120) | What is right for al | l veins ? | | (CBSC-2000) | | | |
| | (a) They carry oxyg | enated blood | (b) They carry Deo | xygenated blood | | | |
| | (c) They directly op | en into vena cave | (d) None of the ab | ove | | | |
| (121) | How lymph differs | from blood ? | | (CPMT - 73,84) | | | |
| | (a) More RBC and | less WBC | (b) Less RBC and | more WBC | | | |
| | (c) RBC absent and | d less RBC | (d) RBC absent an | d more WBC | | | |
| (122) | Which type of WBO | Cs are found in maxim | mum number ? (CPN | MT-88, DPMT -96) | | | |
| (a) Eo | siophil (b) N | utrophil (c) A | Acidophil (d) N | Monocyte | | | |
| (123) | What is pacemaker | ? | | | | | |
| | (a) Instrument measu | uring Heartbeats | | | | | |
| | (b) Instrument measure | uring big arteries | | | | | |
| | (c) Atrio - ventricular node, which provides stimulation for heart beating | | | | | | |
| | (d) Artificial syno - | auricular node, which | provides stimulation for | or heart beating | | | |
| (124) | Which of the follow | ing statement is corre | ect ? | (BHU-93) | | | |
| | (a) All veins carry d | leoxygenated blood | | | | | |
| | (b) All arteries carry | deoxygenated blood | 1 | | | | |
| | (c) All veins carry of | leoxygenated blood e | xcept one | | | | |
| | (d) All arteries carry | y deoxygenated blood | l except one | | | | |
| (125) | Regulation and initia | ation of heartbeat is in | ndicated by (karr | nataka - 94, CBSE- 95) | | | |
| | (a) AV Node - bun | dle of His muscule - | SA node - purkinje f | iber | | | |
| | (b) SA Node - pur | kinje fiber - AV Nod | e - Bundle of His mu | scle | | | |
| | (c) Purkinje fiber - | AV Node - SA node | e - Bundle of His mus | scle | | | |
| | (d) SA Node - AV | Node - Bundle of H | His muscle - Purkinje f | fiber | | | |

| | Que | stionbank Biology | | | | | |
|---------------------------------------|--|--|----------------|--|--|--|--|
| (126) | | | | | | | |
| (126) | Where Mitral valve is located and | | MANUBAL OS | | | | |
| | | (BHU-86, 2000, DPMT-86 | ,MANIPAL-95) | | | | |
| | (a) Left atrium and left ventricle | (b) Left atrium and Right ventricle | | | | | |
| (105) | (c) Right atrium and Left ventricle | (d) Right atrium and Right ventricle | | | | | |
| (127) | What is responsible for systole? | (BHU-86,2000,DPMT-86,M | ANIPAL-95) | | | | |
| | (a) Entry of blood in lungs | (b) Entry of blood in heart | | | | | |
| (100) | (c) Blood flow out of heart | (d) Blood flow out of vein | (2.555.55 | | | | |
| (128) | What is the function of lymph? | | (MPPMT-95) | | | | |
| | (a) Transport of O ₂ into brain (b) Transport of CO ₂ into lungs | | | | | | |
| | | (d) Bring RBC and WBC in lymph r | | | | | |
| (129) | Which is the correct statement for | | (APMEE - 96) | | | | |
| | (a) WBC is more than RBC | (b) RBC is more than WBC | | | | | |
| | (c) RBC is less than platelets | (d) Platelets is less than RBC | | | | | |
| (130) | Hepatic portal system starts from | | | | | | |
| | (a) Digestive system to liver | (b) Kidney to liver | | | | | |
| | (c) Liver to heart | (d) Liver to Kidney | | | | | |
| (131)2010) | Blood circulation that stats in capil | laries and ends in capaillaries is calle | d (J & K CET | | | | |
| | (a) Portal circulation | (b) Hepatic circulation | | | | | |
| | (c) Cardic circulation | (d) None of these | | | | | |
| (132) | Which of the following carries gluc | ose from digestive tract to liver | | | | | |
| | | (CBSE PMT- | 1999,BHU 2001) | | | | |
| | (a) Hepatic artaery | (b) Hepatic portal vein | | | | | |
| | (c) Pulmonary vein | (d) None of these | | | | | |
| (133) | Lymph (nodes) glands form | | | | | | |
| | (a) Hormones (b) Lymphs | (c) Antigens | (d) Antibodies | | | | |
| (134) | Which of the following is not a ma | ajor organ of lymphatic system (MP | PMT 2010) | | | | |
| | (a) Lymph nodes (b) Thymus | (c) Kidney | (d) Spleen | | | | |
| (135) | Lymph is colourless because | (MP | PMT 1999) | | | | |
| | (a) WBC are absent (b) WBC are absent | present (c) Heamoglobin is absent | (d) RBC are | | | | |
| (136) | Immunoglobulins are produced by | (CBSE 1996) | | | | | |
| | (a) Lymphocytes (b) Spleen | (c) Leucocytes | (d) Monocytes | | | | |
| (137) | Which one of the following human | organs is often called the "graveyard | !"? | | | | |

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(c) Globulin

(b) Serum amylase

(a) Albumin

(AIPMT 2012-M)

(d) Fibrinogen

| | | | Questionba | nk Biology | | | | |
|---|--|--|---|------------------------------|-------------|-------------------------------|--|--|
| (138) | Which of the following human organs is often called the "graveyard" of RBC ? | | | | | | | |
| (150) | Which of the folio | wing nama | organis is | often canca the gr | <u>*</u> | (AIIPMT 2012-M) | | |
| | (a) Spleen | (b) kidn | ey | (c) Pancreas | (d) Li | • | | |
| (139) | There is no DNA | ` ′ | | . , | . , | | | |
| , , | (a) Mature RBCs | | (b) I | Mature spermatozoa | | | | |
| | (c) Hair root | | (d) (| Ovum | | | | |
| (140) | In the ABO system group of the indivi | _ | - | h antigens are prese | | tibody, the blood MT 2011) | | |
| | (a) B | (b) O | | (c) AB | (d) A | | | |
| (141) | Make correct pairs | s : | | | | | | |
| | Column - | I | Col | umn - II | | | | |
| | P. Anterior vena cava | | (i) Transport deoxygenated blood into lungs | | | | | |
| | Q. Posterior vena | cava (| (ii) Transport the oxygenated blood outside the lungs | | | | | |
| R. Pulmonary Artery (iii) Bring deoxygenate to right atrium | | | | | from lower | part of the body | | |
| | S. Pulmonary vein | (| iv) Bring d to right | leoxygenated blood atrium | from upper | part of the body | | |
| | (a) P-ii, Q-iv, R-iii | i, S-i | | | | | | |
| | (b) P-iv, Q-i, R-ii, | S-iii | | | | | | |
| | (c) P-iv, Q-iii, R-ii, S-i | | | | | | | |
| | (d) P-iii, Q-iv, R-i | i, S-i | | | | | | |
| (142) | Which of the follo | Which of the following is correct for all veins? | | | | | | |
| | (a) All veins transp | ort deoxyge | enated bloo | d | | | | |
| | (b) All veins transp | ort oxygen | ated blood | | | | | |
| | (c) They transport | (c) They transport blood from organs to heart | | | | | | |
| | (d) They transport | blood from | heart to o | organs | | | | |
| (143) | Who much diastol | ic pressure | is? | | | | | |
| | (a) 120 mmHg | (b) 80m | mHg | (c) 120/80mmH | [g | (d) 40mmHg | | |
| (144) | Which of the follo | wing are gr | anular WB | Cs? (Manipal | - 2002) | | | |
| | (a) Neutrophils, Bas | ophils, Lym | phocytes | (b) Eosinophil, B | asophil, Mo | onocytes | | |

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(d) Neutrophils, Eosinophils, Basophils

INDIAN SCHOOL MUSCAT

(b) Starting of atrium systole

(d) Starting of ventricle systole

(c) Basophils, Monocytes, Lymphocytes

(145) What P indicates in ECG? (Wardha - 2003)

(a) End of atrium systole

(c) End of ventricle systole

| Question | bank | c Bi | iol | logy |
|----------|------|------|-----|------|
| | | | | |

ASSERTION TYPES OUESTIONS

| | <u>ASS</u> | ERTION TIPES QU | <u>JESTIONS</u> | |
|--------|-----------------------------|---|-----------------------------|------------------|
| | ASSERTION (A) AN | ND REASON (R) TYPES | <u>QUESTIONS</u> | |
| | (a) Both A and R are | true and R is correct expla | nation of A | |
| | (b) Both A and R are | true but R is not correct e | xplanation of A | |
| | (c) A is true but R is | not true | | |
| | (d) A is not true but | R is true | | |
| (146) | • • | is 'dubb' while second heart | t sound is 'lubb' | |
| ` / | | sing of auriculoventricular va | | ue to closing of |
| | (a) | (b) | (c) | (d) |
| (147) | A: All the arteries of | human have oxygenated blo | od. | |
| | R : In human left part | s of heart is caring oxygena | ted blood. | |
| | _ | (b) | (c) | (d) |
| (148) | A: In body oxygenate | ed and deoxygenated blood t | ransported in different | vessels. |
| , , | R : Atria and ventricle | es are separated by AV valve | es. | |
| | | (b) | (c) | (d) |
| (149) | • • | on the cardiac cycle occurs a | • | nute |
| ` | | takes about 0.8 second. | • | |
| | • | (b) | (c) | (d) |
| (150) | | nt method for checking the h | • • | |
| (/ | heart | 6 | | 1 |
| | R : Function of valves | s is checked by ECG: | | |
| | (a) | (b) | (c) | (d) |
| (151) | A: SAN initiates the | heart beat | | |
| | | fibres increase the cardiac a | ctivity. | (1) |
| (152) | (a) A : In healthy arteries | , , | (C) | (d) |
| (152) | • | , the innermost layer of the diastolic pressure is 120 mm | | |
| | · · | (b) | (c) | (d) |
| (153) | A: Atherosclerosis is | known as hardening of arter | ies | |
| | | ecome thick and inelastic due | to deposition of cholest | erol and calcium |
| | salts | (b) | (a) | (d) |
| (154) | ` ' | (b) on cardiac output of healthy j | (c) person is 5000ml/min | (d) |
| (10.1) | | on volume stroke is 70 ml. | | |
| | (a) | (b) | (c) | (d) |
| (155) | • | is characteristic of human ble | ood | |
| | R: Each erythrocytes | - | (a) | (4) |
| | (a) | (b) | (c) | (d) |

Answers

| | | | Allowers | | |
|-----|-------|--------|----------|---------|---------|
| (1 | l) b | (35) b | (69) c | (103) d | (137) d |
| (2 | 2) a | (36) b | (70) b | (104) b | (138) a |
| (3 | 3) c | (37) a | (71) b | (105) c | (139) a |
| (4 | l) d | (38) b | (72) d | (106) c | (140) c |
| (5 | 5) c | (39) d | (73) a | (107) a | (141) c |
| (6 | 6) c | (40) b | (74) a | (108) c | (142) c |
| (7 | 7) b | (41) d | (75) c | (109) c | (143) b |
| (8 | 3) c | (42) a | (76) d | (110) c | (144) d |
| (9 | 9) b | (43) c | (77) c | (111) a | (145) b |
| (1 | (0) c | (44) b | (78) a | (112) c | (146) d |
| (1 | 1) b | (45) d | (79) a | (113) a | (147) d |
| (1 | 2) d | (46) c | (80) b | (114) b | (148) a |
| (1 | 3) b | (47) a | (81) c | (115) d | (149) a |
| (1 | 4) c | (48) b | (82) d | (116) d | (150) c |
| (1 | 5) c | (49) c | (83) d | (117) d | (151) b |
| (1 | (6) c | (50) d | (84) b | (118) d | (152) c |
| (1 | 7) b | (51) d | (85) a | (119) b | (153) b |
| (1 | 8) d | (52) a | (86) a | (120) d | (154) a |
| (1 | 19) b | (53) b | (87) b | (121) c | (155) b |
| (2 | 20) b | (54) b | (88) d | (122) b | |
| (2 | 21) a | (55) a | (89) a | (123) d | |
| (2 | 22) b | (56) a | (90) a | (124) d | |
| (2 | 23) T | (57) b | (91) b | (125) d | |
| (2 | 24) d | (58) c | (92) b | (126) a | |
| (2 | 25) c | (59) c | (93) b | (127) a | |
| (2 | 26) c | (60) d | (94) c | (128) c | |
| (2 | 27) a | (61) d | (95) a | (129) b | |
| (2 | 28) d | (62) c | (96) a | (130) a | |
| (2 | 29) c | (63) b | (97) a | (131) a | |
| (3 | 80) c | (64) b | (98) d | (132) b | |
| | , | (65) b | (99) c | (133) d | |
| · · | | (66) c | (100) b | (134) c | |
| | | (67) a | (101) a | (135) c | |
| (3 | 34) b | (68) c | (102) c | (136) a | |
| | | | | | |

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