Exercise-1

Marked Questions are for Revision Questions.

ONLY ONE OPTION CORRECT TYPE

SECTION - A # HEART AND CONDUCTION

1. The blood returning to the heart from lungs via pulmonary veins is rich in –
(1) Number of RBCs per ml of blood (2) Haemoglobin per ml of blood
(3) Oxygen per ml of blood (4) Nutrients per ml of blood

2. The nerve like modified muscle in the right atrial wall is –
(1) Lymph node (2) Atrio-ventricular node
(3) Pacemaker (4) Bulbus arteriosus

3. In heart of mammals, inpulses are initiated by SA node. This type of heart is called as –
(1) Cholinergic (2) Adrenergic (3) Neurogenic (4) Myogenic

4. Epinephrine is secreted by–
(1) Adrenal medulla and increases heart rate
(2) Adrenal medulla and decreases heart rate
(3) Adrenal cortex and increases heart rate
(4) Adrenal cortex and decreases heart rate

5. The innervation of heart by nerves, in the animals, is primarily meant for –
(1) Initiation of heart beat (2) Regulation of heart beat
(3) Release of acetylcholine only (4) Release of adrenaline only

6. The pericardium and the pericardial fluid help in –
(1) Protecting the heart from friction and shocks as well as keep it moist
(2) Pumping the blood
(3) Receiving the blood from various parts of the body
(4) None of the above

7. The valve that guards right atrioventricular aperture is–
(1) Coronary valve (2) Tricuspid valve
(3) Bicuspid valve (4) Semilunar valve

8. Heart beat is accelerated by –
(1) Cranial nerves and acetylcholine (2) Sympathetic nerves and acetylcholine
(3) Cranial nerves and adrenaline (4) Sympathetic nerves and epinephrine

9. The increased rate of heart beat is called–
(1) Bradycardia (2) Tachycardia (3) Leucopenia (4) Cardiac arrest

10. The blood vessel, which brings deoxygenated blood from the heart muscle, is –
(1) Coronary artery (2) Coronary vein (3) Pulmonary artery (4) Pulmonary vein

11. Which one of the following is the correct route through which impulse travels in the heart?

(1) SA node → Purkinje fibres → Bundle of His → AV node → Heart muscles

(2) AV node → SA node → Purkinje fibres → Bundle of His → Heart muscles

(3) AV node → Bundle of His → SA node → Purkinje fibres → Heart muscles

(4) SA node → AV node → Bundle of His → Purkinje fibres → Heart muscles

12. Which one of the following statements is false?

(1) Blood from right side of the heart is carried to the lungs by pulmonary arteries

(2) The term pleura refers to double layered covering of the kidney

(3) Pancreas is both exocrine and endocrine gland

(4) Scurvy is caused due to the deficiency of vitamin C

13. The chamber of human heart with thickest wall is –

(1) Right atrium (2) Left atrium

(3) Right ventricle (4) Left ventricle

14. The cardiac pacemaker in a patient fails to function normally. The doctors find that an artificial pace maker is to be grafted in him. It is likely, that it will be grafted, at the site of –

(1) Sinoatrial node (2) Atrioventricular node

(3) Atrioventricular bundle (4) Purkinje fibres

15. The wall of heart is made up of

(1) Epicardium (2) Myocardium

(3) Endocardium (4) All of the above

16. The postcaval collects blood from the –

(1) Hind limbs only (2) Hind limbs as well as organs of the body cavity

(3) Organs of the body cavity only (4) Kidneys

17. Interatrial septum in the embryonic stages has a/an –

(1) Foramen ovalis (2) Fenestra ovalis

(3) Fenestra rotunda (4) lnteratrial aperture

18. Bundle of His is a network of –

(1) Nerve fibres found throughout the heart

(2) Muscle fibres distributed throughout the heart walls

(3) Muscle fibres found only in the interventricular septum

(4) Nerve fibres distributed in the ventricles

19. Abnormally low rate of heart beat is called as

(1) Bradycardia (2) Tachycardia (3) Hyperpiesis (4) Tachypnoea

20. Which one of the following is a matching pair?

(1) Lubb - sharp closure of AV valves at the beginning of ventricular systole

(2) Dup - sudden opening of semilunar valves at the beginning of ventricular diastole

(3) Pulsation of the radial artery - valves in the blood vessels

(4) Initiation of the heart beat - Purkinje fibres

21. Match blood vessels of human heart listed under column-I with functions given under Column-II; Choose the answer which gives correct combination of the alphabets of two columns –

Column I (Blood Vessel)		Column II (Function)	
A	Superior vena cava	p	Carries deoxygenated blood to lungs
B	Inferior vena cava	q	Carries oxygenated blood to lungs
C	Pulmonary artery	r	Bring deoxygenated blood from lower parts of the body to the right atrium
D	Pulmonary vein	s	Brings oxygenated blood to the left atrium
		t	Brings deoxygenated blood from upper parts of the body into the right atrium

(1) A = t, B = p, C = r, D = q (2) A = t, B = r, C = p, D = s
(3) A = s, B = t, C = r, D = p (4) A = t, B = s, C = r, D = p

22. Which one of the following is not related to the clotting of blood?
(1) Fibrin (2) Fibrinogen (3) Ca^{++} (4) Na^{+}

23. Pacemaker of the heart is –
(1) SA node (2) AV node (3) AV septum (4) Interatrial septum

24^. Blood returns from lungs to the –
(1) Right atrium (2) Right ventircle (3) Left ventricle (4) Left atrium

25. Covering of the heart is called –
(1) Pericardium (2) Peritoneum (3) Perineurium (4) Periosteum

26. Chordeae tendineae are found in the –
(1) Ventricles of heart (2) Atria of heart (3) Joints (4) Ventricles of brain

27. Neurogenic heart is the characteristic of –
(1) Lower invertebrates (2) Humans (3) Rat (4) Rabbit

28. Papillary muscles are found in the mammalian –
(1) Atria (2) Ventricles (3) Pinnae (4) Eyes

29. At the time of interview, rate of heart beat increases, due to the secretion of –
(1) Corticotrophic hormone (2) Renin hormone
(3) Adrenaline hormone (4) ADH

30. An artifical pacemaker is implanted subcutaneously and connected to the heart in patients –
(1) Having 90% blockage of the three main coronary arteries
(2) Having high blood pressure
(3) With irregularity in the heart beat rhythm
(4) Suffering from arteriosclerosis

31. Systolic pressure of heart is higher than diastolic pressure because –
(1) Blood is forcefully pumped into arteries by the heart during systole and not during diastole
(2) Arteries offer resistance to the flow of blood during systole only
(3) Arteries contract during systole only
(4) Volume of blood in heart is greater during systole than that during diastole.

32. Mitral valve in mammals guards the opening between –
(1) Stomach and intestine (2) Pulmonary vein and left atrium
(3) Right atrium and right ventricle (4) Left atrium and left ventricle

33. Which one of the following organs is regarded as the "bloodbank"?
(1) Heart (2) Liver (3) Spleen (4) Lungs

34. A coronary sulcus is found on the –
(1) Surface of liver between right and left liver lobes
(2) Heart surface between right and left atria
(3) Heart surface between ventricle and atria
(4) Heart surface between right and left ventricles.

35. During allergic disorder there is increase in the number –
(1) Lymphocytes (2) Basophils (3) Eosinophils (4) Neutrophils

36. The vagus nerve, on stimulation, will cause heart rate to –
(1) Decrease (2) Increase (3) Remian unchanged (4) None of these

37. Rate of heart beat is highest in –
(1) Whale (2) Elephant (3) Mouse (4) Man

38. Which of the following is the anticoagulant used in the blood sample for the pupose of counting cell?
(1) Acetic acid (2) Formaldehyde (3) EDTA (4) $MgSO_4$

39. If a person is suffering from Christmas disease, then he is deficient in
(1) Factor IX (2) Homogentisic acid (3) Thrombin (4) Vitamin C

40. If due to some injury, the chordeae tendineae of the tricuspid valve of the human heart become non-functional, what will be the immediate effect?
(1) The flow of blood into the aorta will be slowed down
(2) The 'pacemaker' will stop working
(3) The blood will tend to flow back into the left atrium
(4) The flow of blood into the pulmonary artery will be reduced

41. An oval depression called fossa ovalis, is found in –
(1) Interatrial septum (2) Interventricular septum
(3) Right atrioventricular septum (4) Left atrioventricular septum

42. Cardiac output is determined by –
(1) Heart rate (2) stroke volume (3) blood flow (4) Both (1) and (2)

43. Which type of white blood cells are concerned with the release of histamine and heparin?
(1) Neutrophils (2) Basophils (3) Eosinophils (4) Monocytes

44. Which of the following sequences is truely a systemic circulation pathway?
(1) Right ventricle → Pulmonary aorta → Tissues → Pulmonary veins → left atrium
(2) Right ventricle → Left ventricle → Aorta → Tissues → Veins → Right atrium
(3) Left atrium → Left ventricle → Pulmonary aorta → Tissues → Right atrium
(4) Left ventricle → Aorta → Arteries → Tissues → Veins → Right atrium

45. The bundle of His sends electric impulse to the –
(1) AV node (2) SA node (3) Purkinje fibres (4) Atria

46. The pH of blood is –
(1) 7-8 (2) 2-4 (3) 12-14 (4) 4-7

47. Average life span of an RBC is
(1) 50 days (2) 70 days (3) 120 days (4) 220 days

SECTION - B # BLOOD VESSELES

1. Thrombosis occurs most frequently in–
(1) Right coronary artery (2) Left anterior descending artery
(3) Left circumflex coronary artery (4) Right circumflex coronary artery

2. The blood pressure is maximum found in
(1) Arteries (2) Veins (3) Capillaries (4) Veins of portal system

3. Blockage of arteries due to the deposition of fats and calcium is called –
(1) Arteriosclerosis (2) Atherosclerosis
(3) Emphysema (4) Myocardial infarction

4. The exchange of materials between blood and interstitial fluid occurs at the level of –
(1) Arterioles (2) Arteries (3) Capillaries (4) Veins

5. Blood vessels that contain valves are –
(1) Arteries (2) Veins (3) Capillaries (4) All of the above

6. Arteries are –
(1) Thin walled and blood flows under low pressure
(2) Thick walled and blood flows under high pressure
(3) Thick walled and blood flows under low pressure
(4) Thin walled and blood flows under high pressure

7. Blood clot formed in blood vessels blocking the flow of blood is called –
(1) Bolus (2) Pus (3) Ulcer (4) Thrombus

8. You are required to draw a blood sample from the patient and keep it in a test tube for counting the blood corpuscles. You are also provided with the following four tyes of test tubes. Which one of them, will you not use for the purpose?
(1) Test tube containing calcium bicarbonate (2) Chilled test tube
(3) Test tube containing heparin (4) Test tube containing sodium oxalate

9. Rh^- person donated blood to Rh^+ person for the second time, then –
(1) Rh^+ person will die (2) nothing happens to Rh^+ person
(3) Rh^- blood starts reacting with Rh^+ blood (4) Rh^- person will die

10. Haemoglobin molecule consists–
(1) One α -chain and one β-chain (2) Two α - chains and two β- chains
(3) Two α- chains and one β- chain (4) One α - chain and two β- chains

SECTION - C # BLOOD PRESSURE, ECG

1. Normal diastolic pressure in a healthy adult man is about –
(1) 20 mm Hg (2) 80 mm Hg (3) 100 mm Hg (4) 130 mm Hg

2. All of the following waves, in an electrocardiogram, are positive except –
(1) P (2) Q (3) R (4) T

3. In an average healthy adult, the respective values of systolic and diastolic pressures are–
(1) 80 mm Hg and 88 mm Hg (2) 80 mm Hg and 120 mm Hg
(3) 120 mm Hg and 80 mm Hg (4) 50 mm Hg and 80 mm Hg

4. Persons suffering from high blood pressure should take the following precaution to avoid excessive rise in their blood pressure–
(1) Sleep as much as possible (2) Avoid standing
(3) Increase their weight (4) Avoid emotional disturbances and excitement.

5. The difference between systolic and diastolic pressures in an adult healthy man is –
(1) 120 mm Hg (2) 80 mm Hg (3) 40 mm Hg (4) 200 mm Hg

6. A heart murmur is due to defective –
(1) Bundle of His (2) Heart valves (3) SA node (4) AV node

7. The normal level of haemoglobin per 100 ml of blood, in a woman, is–
(1) 24 g (2) 18 g (3) 12 g (4) 100 g

8. During blood coagulation, vitamin K helps in the –
(1) Formation of prothrombin (2) Formation of thromboplastin
(3) Conversion of fibrinogen into fibrin (4) Conversion of prothrombin into thrombin

9. CAD stands for–
(1) Carotid Arterial Dysfunction (2) Cerebral Artery Dysfunction
(3) Coronary Artery Disease (4) Calcium Activated Disease

SECTION - D # LYMPHATIC SYSTEM

1. T - Lymphocytes differentiate in–
(1) Thymus (2) Bone marrow (3) Liver (4) Spleen

2. If spleen is removed from the body of an adult man, then –
(1) Antibody production will be less (2) RBC production will be lowered
(3) WBC production will be lowered (4) Filtration of dead RBC will increase

3. Spleen is –
(1) Haemopoeitic (2) Lymphoid (3) Reproductive (4) Celluloid

4. The principal function of the lymph nodes is –
(1) Destruction of old RBCs
(2) Destruction of old WBCs
(3) Collection and destruction of pathogens in the blood
(4) Production of WBCs

5. Antibodies are produced by –
(1) B cells (2) T cells (3) NK cells (4) Plasma cells

6. Which one of the following will not be differentiated, in case of removal of thymus of an infant?
(1) T lymphocytes (2) B lymphocytes (3) Erythrocytes (4) Granulocytes

7. Lymph vessels are united to form –
(1) Lymph heart (2) Cisterna chyli (3) Thoracic duct (4) Jugular vein

8. Immunoglobulins are produced by –
(1) Lymphocytes (2) Spleen (3) Leucocytes (4) Monocytes

9. The lymph serves to –
(1) Transport O_2 to the brain
(2) Transport CO_2 to the lungs
(3) Return the interstitial fluid to the blood
(4) Return the WBCs and the RBCs to the lymph nodes

10. Antigens are present –
(1) Inside nucleus (2) On the cell surface
(3) Inside cytoplasm (4) On the nuclear membrane

11. The important function of spleen is/are–
(1) To produce lymphocytes
(2) To serve as haemopoietic organ in embryo
(3) To destruct dead RBCs
(4) All of the above

12. Serum refers to –
(1) Blood without corpuscles
(2) Blood without blood coagulation factors
(3) Blood without corpuscles and blood coagulation factors
(4) Plasma

13. Coagulation of blood, in an uninjured blood vessel, is prevented by –
(1) Prothrombin (2) Heparin
(3) Prothrombin and calcium (4) Plasminogen and calcium

SECTION - E # PORTAL SYSTEM

1. A portal vein –
(1) Starts from an organ and ends in heart
(2) Divides in an organ and restarts by the union of its capillaries
(3) Collects blood from the gut and pours it into the inferior vena cava
(4) Drains blood from an organ and pours it into another organ

2. Hypophyseal portal system starts from the –
(1) Kidney (2) Liver (3) Brain (4) Heart

3. Hepatic portal system starts from the –
(1) Digestive sysetm (2) Kidney (3) Liver (4) Lower limb

MISCELLANEOUS QUESTIONS

1. Heart of crocodile is –
(1) Single chambered (2) Two chambered (3) Three chambered (4) Four chambered

2. Which pair will be most important in initiating blood clotting?
(1) Ca and prothrombin (2) Prothrombin and thromboplastin
(3) Thrombin and fibrinogen (4) Prothrombin and fibrinogen

3. The conduction of impulse from SA node moves to –
(1) AV node (2) Bundle of His (3) Purkinje fibres (4) Cardiac muscles

4. Christmas disease is –
(1) Haemophilia A (2) AIDS (3) Haemophilia B (4) Haemolytic jaundice

5. Pulmonary artery carries
(1) Deoxygenated blood from heart to lungs (2) Deoxygenated blood from lungs to heart
(3) Oxygenated blood from heart to lungs (4) Oxygenated blood from lungs to heart

6. The most abundant granulocytes in human blood is –
(1) Basophils (2) Eosinophils (3) Neutrophils (4) Monocytes

7. Adrenaline directly affects –
(1) Islet of Langerhans (2) SA node
(3) Oxyntic cells of stomach (4) Dorsal root ganglia of spinal cord

8. One of the following vessel is without valves –
(1) Artery (2) Pulmonary artery (3) Vein (4) Aorta.

9. Fresh frozen plasma (FFP) does not contain –
(1) Frozen water (2) Platelets (3) Factor VII (4) Gamma globulins.

10. Which of the following corpuscle has kidney shaped nucleus?
(1) Eosinophils (2) Monocyte (3) Neutrophil (4) Lymphocyte

11. Which proteolytic enzyme induces lysis of fibrin during fibrinolysis?
(1) Plasmin (2) Fibrin (3) Thrombin (4) Platelets

12. Collection of WBC at a site of infection through capillaries is –
(1) Phagocytosis (2) Hemolysis (3) Diapedesis (4) None

13. Systemic heart refers to –
(1) The two ventricles together in humans
(2) The heart that contracts under stimulation from nervous system
(3) Left auricle and left ventricle in higher vertebrates
(4) Entire heart in lower vertebrates.

14. Identify the correct sequence of events in a cardiac cycle –
(1) Joint Diastole, atrial systole, ventricular diastole, ventricular systole
(2) Atrial systole, ventricular systole, Joint diastole, ventricular diastole
(3) Ventricular systole, ventricular diastole, Joint diastole, atrial systole
(4) Ventricular diastole, Joint diastole, ventricular systole, atrial systole.

15. Which is correct?
(1) Blood has WBC and lymph has RBC
(2) Blood has WBC, RBC and lymph has nothing
(3) Blood has RBC, WBC and lymph has WBC
(4) Lymph has WBC, RBC and blood has RBC.

16. In higher vertebrates, SA node helps in –
(1) Conduction of blood (2) Initiation of heart beat
(3) Opening of tricuspid valve (4) Opening of bicuspid valve.

17. 'Heart of Heart' is –
(1) SA node (2) AV node (3) Bundle of His (4) Purkinje fibres.

18. Which one of the following is phagocytic?
(1) monocyte (2) erythrocytes (3) eosinophil (4) basophil

19. How many times a red blood corpuscle will have to pass through the heart in its journey from hepatic artery to the aorta?
(1) Two times (2) Only once (3) Several times (4) Four times.

20. Which chamber of the human heart has the thickest muscular wall?
(1) Left auricle (2) Left ventricle (3) Right auricle (4) Right ventricle.

21. The Barr body is observed in –
(1) Basophil of male (2) Neutrophil of female
(3) Basophil of female (4) Eosinophils

22. What will happen when pacemaker becomes non functional?
(1) Only the auricles will contract rhythmically
(2) The cardiac muscles do not contract in a coordinated manner rhythmically
(3) Only ventricles will contract rhythmically
(4) Cardiac muscel will contract in a coordinated manner rhythmically

23. Which of the following statement(s) is/are wrong?
(i) Leucocytes disintegrate in the spleen and liver.
(ii) RBC, WBC and blood platelets are produced by bone marrow.
(iii) Neutrophils bring about destruction and detoxification of toxins of protein origin.
(iv) The important function of lymphocytes is to produce antibodies.
(1) (i) and (ii) only (2) (iii) and (iv) only (3) (i) and (iii) only (4) (ii) and (iii) only

24. Rhythmic heart beat is maintained by a highly specialized excitatory and conductive system. The correct sequence of events will be –
(1) AV node - bundle of His - SA node - Purkinje fibers
(2) Punkinje fibres - AV node - SA node -Bundle of His
(3) AV node - SA node- bundle of His - Purkinje fibres
(4) SA node - AV node - bundle of His - Purkinje fibres

25. Universal donor blood group is –
(1) O (2) AB (3) A (4) B

26. An accident results great loss of blood and there is no time to analyse the blood group of injured person. Which blood can be safely transfused?
(1) O and Rh negative (2) O and Rh positive
(3) AB and Rh negative (4) AB and Rh positive

27. Which of the following substances, if introduced into the blood stream, would cause coagulation of blood at the site of its introduction?
(1) Fibrinogen (2) Thromboplastin (3) Heparin (4) Prothrombin

28. The process of formation of blood corpuscles is called –
(1) Haemopoiesis (2) Haemolysis (3) Haemozoin (4) None of these

Exercise-2

1. Blood cells that increase in number during allergic colditions like asthma are –
(1) Neutrophils (2) Basophils (3) Eosinophils (4) lymphocytes

2. The main function of white blood cells in the human immune system is to –
(1) Combat and destroy antigenic particles
(2) Produce antigens to combat antibodies
(3) Carry oxygen around the body
(4) Trasnsport antigens to B memory cells in the lymph nodes

3. In an undamaged blood vessel, conversion of prothrombin to thrombin is prevented by–
(1) Fibrinogen (2) Ca^{++} (3) Factor VII (4) Heparin

4. In mammals, which of the following contains blood with the highest oxygen content?
(1) Right atrium (2) Jugular vein (3) Pulmonary artery (4) Left ventricle

5. Nucleus of the neutrophil is –
(1) 2 lobed (2) Spindle shaped (3) 3 lobed (4) spherical

6. If a cardiac output of 5250 ml per minute with 75 heartbeats per minute, the stroke volume is –
(1) 70 ml (2) 80 ml (3) 355 ml (4) 460 ml

7. The volume of blood pumped out by ventricle during each beat is known as stroke volume. If a healthy adult has a pulse rate of 72 and stroke volume of 70 ml, then the cardiac output is – **(KVPY_2007_SB)**
(1) 70 ml/min. (2) 72 ml/min (3) 5040 ml/min (4) 140 ml/min

8. Arteries do not have valves but veins do, because – **(KVPY 2008 SA)**
(1) Arteries have a narrower lumen than veins
(2) Arteries have thicker walls than veins
(3) Arteries carry oxygenated blood whereas veins carry deoxygenated blood
(4) Valves prevent backflow of blood in veins

9. One difference between blood and lymph is that – **(KVPY_2009_SB)**
(1) Blood contains WBC and lymph contains RBC
(2) Blood contains RBC and WBC and lymph contains only WBC
(3) Blood contains RBC and lymph contains WBC
(4) Blood is liquid while lymph is solid

10. Saturated dietary fats increase the risk of heart disease by – **(KVPY 2009 SA)**
(1) Widening arteries by thinning their walls
(2) Narrowing veins by carbohydrate deposition
(3) Narrowing arteries by fat deposition
(4) Narrowing arteries by carbohydrate deposition

11. An individual has O blood group if his/her blood sample– **(KVPY 2009 SA)**
(1) Clumps only when antiserum A is added
(2) Clumps only when antiserum B is added
(3) Clumps when both antiserum A and antiserum B are added
(4) Does not clump when either antiserum A or antiserum B is added

12. Although blood flows through large arteries at high pressure, but the pressure decreases when it reaches to small capillaries – **(KVPY_2011_SB)**
(1) the valves in the arteries regulate the rate of blood flow into the capillaries
(2) the volume of blood in the capillaries is much lesser than that in the arteries
(3) the total cross-sectional area of capillaries arising from an artery is much greater than that of the artery
(4) elastin fibers in the capillaries help to reduce the arterial pressure

13. The fluid part of blood flows in and out of capillaries in tissues to exchange nutrients and waste materials. Under which of the following conditions will fluid flow out from the capillaries into the surrounding tissue? **(KVPY_2010_SB)**
(1) When arterial blood pressure exceeds blood osmotic pressure
(2) When arterial blood pressure is less than blood osmotic pressure
(3) When arterial blood pressure is equal to blood osmotic pressure
(4) Arterial blood pressure and blood osmotic pressure have nothing to do with the outflow of fluid from capillaries

14. The heart of an amphibian is usually– **(KVPY_2012_SA)**

(1) Two chambered (2) Three chambered

(3) Four chambered (4) Three and half chambered

15. A smear of blood from a healthy individual is stained with a nuclear stain called hematoxylin and then obseved under a light microscope. Which of the following cell type would be highest in number? **(KVPY_2012_SA)**

(1) Neutrophils (2) Lymphocytes (3) Eosinophils (4) Monocytes

Exercise-3

PART - I : NEET / AIPMT QUESTION (PREVIOUS YEARS)

1. Which type of white blood cells are concerned with the release of histamine and the natural anticoagulant heparin? **(AIPMT 2008)**

(1) Monocytes (2) Neutrophils (3) Basophils (4) Eosinophils.

2. The most active phagocytic white blood cells are– **(AIPMT 2008)**

(1) Neutrophils and monocytes (2) Neutrophils and Eosinophils

(3) Lymphocytes and macrophages (4) Eosinophils and Lymphocytes.

3. In human, blood passes from the post caval to the diastolic right atrium of heart due to

(1) Pressure difference between the post caval and atrium **(AIPMT 2008)**

(2) Pushing open of the venous valves

(3) Suction pull

(4) Stimulation of the sinoatrial node.

4. The haemoglobin of a human foetus – **(AIPMT 2008)**

(1) Has a higher affinity for oxygen than that of an adult

(2) Has a lower affinity for oxygen than that of an adult

(3) Its affinity for oxygen is the same as that of an adult

(4) Has only 2 protein subunit instead of 4

5. If heart becomes partially nonfunctional due to enjury in chordae tendinae of tricuspid valve, the immediate effect will bes– **(AIPMT 2010)**

(1) The pacemaker will stop working

(2) The blood will tend to flow into the left atrium

(3) The flow of blood into the pulmonary artery will be reduced

(4) The flow of blood into the aorta will be slowed down

6. The kind of epithelium which forms the inner walls of blood vessels is – **(AIPMT 2010)**

(1) Columnar epithelium (2) Ciliated columnar epithelium

(3) Squamous epithelium (4) Cuboidal epithelium

7. ABO blood groups in human are controlled by the gene I. It has three alleles - I^A, I^B, and i. Since there are three different alleles, six different genotypes are possible. How many phenotyes can occur? **(AIPMT 2010)**

(1) One (2) Four (3) Two (4) Three

8. The haemoglobin content per 100 ml of blood of a normal healthy adult is **(AIPMT 2010)**

(1) 12 - 16 g (2) 5 - 11g (3) 25 - 30 g (4) 17 - 20 g

9. Given below are four statements (a-d) regarding human blood circulatory system –

(a) Arteries are thick-walled and have narrow lumen as compared to veins

(b) Angina is acute chest pain when the blood circulation of the brain is reduced

(c) Persons with blood group AB can donate blood to any person with any blood group under ABO system

(d) Calcium ions play a very important role in blood clotting

The correct statements are **(AIPMT 2010)**

(1) (c) and (d) (2) (a) and (d) (3) (a) and (b) (4) (b) and (c)

10. 'Bundle of His' is a part of which one of the following organs is humans? **(AIPMT 2011)**

(1) Brain (2) Heart (3) Kidney (4) Pancreas

11. Arteries are best defined as the vessels which – **(AIPMT 2011)**

(1) Supply oxygenated blood to the different organs

(2) Supply blood to visceral organs away from heart

(3) Break up into capillaries which reunite to form a vein

(4) Carry blood from one visceral organs to another visceral organ

12. Which one of the following statements is correct regarding blood pressure? **(AIPMT 2011)**

(1) 130/90 mmHg is considered high and requires treatment

(2) 100/55 mmHg is considered an ideal blood pressure

(3) 105/50 mmHg is makes one very active

(4) 190/110 mmHg may harm vital organs like brain and kidney

13. In a road accident, the injured person patient with unknown blood group needs immediate blood transfusion. One of his friends at once offers his blood. What was the blood group of the donor? **(AIPMT Pre 2012)**

(1) Blood group B (2) Blood group AB (3) Blood group O (4) Blood group A

14. A patient brought to hospital with myocardial infarction is normally given immediately – **(AIPMT Pre 2012)**

(1) Penicillin (2) Streptokinase (3) Cyclosporin-A (4) Statins

15. Compared to those of humans, the erythrocytes in frog are – **(AIPMT Pre 2012)**

(1) Without nucleus but with haemoglobin (2) nucleated and with haemoglobin

(3) very much smaller and fewer (4) nucleated and without haemoglobin.

16. Person with blood group AB is considered as universal recipient because he has: **(AIPMT 2014)**

(1) Both A and B antigens on RBC but no antibodies in the plasma.

(2) Both A and B antibodies in the plasma.

(3) No antigen on RBC and both antibodies in the plasma

(4) Both A and B antigens in the plasma but no antibodies

17. Blood pressure in the mammalian aorta is maximum during – **(AIPMT 2015)**

(1) Diastole of the right ventricle (2) Systole of the left ventricle

(3) Diastole of the right atrium (4) Systole of the left atrium

18. Erythropoiesis starts in – **(AIPMT-2015)**

(1) Liver (2) Spleen (3) Red bone marrow (4) Kidney

19. Doctors use stethoscope to hear the sounds produced during each cardiac cycle. The second sound is heard when– **(Re-AIPMT-2015)**

(1) Ventricular walls vibrate due to gushing in of blood from atria

(2) Semilunar valves close down after the blood flows into vesels from ventricles

(3) AV node receives signal from SA node

(4) AV valves open up

20. Which one of the following animals has two separate circulatory pathways? **(Re-AIPMT-2015)**

(1) Lizard (2) Whale (3) Shark (4) Frog

21. Blood pressure in the pulmonary artery is – **(NEET-1-2016)**

(1) Less than that in the venae cavae (2) Same as that in the aorta

(3) More than that in the carotid (4) More than that in the pulmonary vein

22. Name the blood cells, whose reduction in number can cause clotting disorder, leading to excessive loss of blood from the body – **(NEET-2-2016)**

(1) Thrombocytes (2) Erythrocytes (3) Leucocytes (4) Neutrophils

23. Serum differs from blood in – **(NEET-2-2016)**

(1) Lacking antibodies (2) Lacking globulins

(3) Lacking albumins (4) Lacking clotting factors

24. The hepatic portal vein drains blood to liver from **(NEET-2017)**

(1) Heart (2) Stomach (3) Kidneys (4) Intestine

25. Adult human RBCs are enucleate. Which of the following statement (s) is/are most appropriate explanation for this feature? **(NEET-2017)**

(a) They do not need to reproduce

(b) They are somatic cells

(c) They do not metabolize

(d) All their internal space is available for oxygen transport

(1) only (d) (2) Only (a) (3) (a), (c) and (d) (4) (b) and (c)

26. Match the items given in **Column-I** with those in **Column-II** and select the ***correct*** option given below: **(NEET-2018)**

Column I		**Column II**	
a.	Fibrinogen	i.	Osmotic balance
b.	Globulin	ii.	Blood clotting
c.	Albumin	iii.	Defence mechanism

	a.	**b.**	**c.**
(1)	iii	ii	i
(2)	ii	iii	i

(3)	i	iii	ii
(4)	i	ii	iii

27. Match the items given in Column I with those in Column II and select the *correct* option given below: **(NEET-2018)**

Column I	**Column II**
a. Tricuspid valve	i. Between left atrium and left ventricle
b. Bicuspid valve	ii. Between right ventricle and pulmonary artery
c. Semilunar valve	iii. Between right atrium and right ventricle

	a	**b**	**c**
(1)	iii	i	ii
(2)	ii	i	iii
(3)	i	ii	iii
(4)	i	iii	ii

28. Match the Column-I with Column–II **(NEET-1-2019)**

Column-I	**Column-II**
(a) P-wave	(i) Depolarisation of ventrlcles
(b) QRS complex	(ii) Repolarisation of ventrlcles
(c) T-wave	(iii) Coronary ischemia
(d) Reduction in the size of T- wave	(iv) Depolarisation of atria
	(v) Repolarisation of atria

Select the correct option :

	(a)	(b)	(c)	(d)
(1)	(ii)	(iii)	(v)	(iv)
(2)	(iv)	(i)	(ii)	(iii)
(3)	(iv)	(i)	(ii)	(v)
(4)	(ii)	(i)	(v)	(iii)

29. What would be the heart rate of a person if the cardiac output is 5 L, blood volume in the ventricles at the end of diastole is 100 mL and at the end of ventricular systole is 50 mL ? **(NEET-1-2019)**

(1) 125 beats per minute (2) 50 beats per minute

(3) 75 beats per minute (4) 100 beats per minute

30. All the components of the nodal tissue are autoexcitable. Why does the SA node act as the normal pacemaker? **(NEET-2-2019)**

(1) SA node has the lowest rate of depolarisation.

(2) SA node is the only component to generate the threshold potential.

(3) Only SA node can convey the action potential to the other components.

(4) SA node has the highest rate of depolarisation.

31. A specialised nodal tissue embedded in the lower corner of the right atrium, close to Atrio-ventricular septum, delays the spreading of impulses to heart apex for about 0.1 sec. **(NEET-2-2019)**
This delay allows -
(1) blood to enter aorta.
(2) the ventricles to empty completely.
(3) blood to enter pulmonary arteries.
(4) the atria to empty completely.

PART - II : AIIMS QUESTION (PREVIOUS YEARS)

1. Granules are not present in – **(AIIMS-2002)**
(1) Monocytes (2) Neutrophils (3) Basophils (4) Eosinophils

2. Which one of the following is a matching pair? **(AIIMS-2003)**
(1) Lub - sharp closure of AV valves at the begining of ventricular systole.
(2) Dup - sudden opening of semilunar valves at the begining of ventricular diastole.
(3) Pulsation of the radial artery-valves in the blood vessels.
(4) Initiation of the heart beat-Purkinje fibres.

3. The given figure shows an angiogram of the coronary blood vessel. Which one of the following statements correctly describes, what is being done? **(AIIMS-2006)**

(1) It is coronary artery which has a cancerous growth that is being removed
(2) It is coronary artery which is blocked by a plaque and the same is being cracked
(3) It is coronary vein in which the defective valves are being opened
(4) It is coronary vein blocked by a parasite (blood fluke) that is being removed

4. The component of blood which prevents its coagulation in the blood vessels is **(AIIMS-2007)**
(1) Haemoglobin (2) Plasma (3) Thrombin (4) Heparin

5. Thickening of arteries due to cholesterol depositions is – **(AIIMS-2007)**
(1) Atherosclerosis (2) Rheumatic heart (3) Blood pressure (4) Cardiac arrest

6. You are required to draw blood from a patient and to keep it in a test tube for analysis of blood corpuscles and plasma. You are also provided with the following four types of test tubes. Which of these will you not use for the purpose? **(AIIMS-2008)**
(1) Test tube containing calcium bicarbonate
(2) Chilled test tube
(3) Test tube containing heparin
(4) Test tube containing sodium oxalate

7. What is diapedesis? **(AIIMS-2009)**
(1) A kind of amoeboid movement
(2) The process of filtration of urea in kidney
(3) A type of locomotion found in *Hydra*
(4) Migration of WBCs into the tissue spaces from blood capillaries

8. Which one is correct regarding electrocardiogram (ECG)? **(AIIMS-2010)**

(1) P-wave represents the electrical excitation of the ventricle.

(2) QRS complex represents repolarisation of the ventricles.

(3) T-wave represents repolarisation of the atria.

(4) by counting the number of QRS complexes one can determine the pulse rate.

9. Which of the following is an incorrect statement? **(AIIMS-2011)**

(1) Blood group 'O' person have A and B antigens on RBCs.

(2) Eosinophils resist infections and are associated with allergic infection.

(3) RBC's contain carbonic anhydrase.

(4) T wave of normal ECG represent of repolarization of ventricle.

10. The first heart sound occurs due to **(AIIMS-2017)**

(1) opening of semilunar valve

(2) closing of semilunar valve

(3) onset of auricular systole

(4) sudden closure of AV valves

Answers

EXERCISE - 1

SECTION - A

1.	(3)	**2.**	(3)	**3.**	(4)	**4.**	(1)	**5.**	(2)	**6.**	(1)	**7.**	(2)
8.	(4)	**9.**	(2)	**10.**	(2)	**11.**	(4)	**12.**	(2)	**13.**	(4)	**14.**	(1)
15.	(4)	**16.**	(2)	**17.**	(1)	**18.**	(3)	**19.**	(1)	**20.**	(1)	**21.**	(2)
22.	(4)	**23.**	(1)	**24.**	(4)	**25.**	(1)	**26.**	(1)	**27.**	(1)	**28.**	(2)
29.	(3)	**30.**	(3)	**31.**	(1)	**32.**	(4)	**33.**	(3)	**34.**	(3)	**35.**	(3)
36.	(1)	**37.**	(3)	**38.**	(3)	**39.**	(1)	**40.**	(4)	**41.**	(1)	**42.**	(4)
43.	(2)	**44.**	(4)	**45.**	(3)	**46.**	(1)	**47.**	(3)				

SECTION - B

1.	(2)	**2.**	(1)	**3.**	(2)	**4.**	(3)	**5.**	(2)	**6.**	(2)	**7.**	(4)
8.	(1)	**9.**	(2)	**10.**	(2)								

SECTION - C

1.	(2)	**2.**	(2)	**3.**	(3)	**4.**	(4)	**5.**	(3)	**6.**	(2)	**7.**	(3)
8.	(1)	**9.**	(3)										

SECTION - D

1.	(1)	**2.**	(1)	**3.**	(2)	**4.**	(3)	**5.**	(4)	**6.**	(1)	**7.**	(3)
8.	(1)	**9.**	(3)	**10.**	(2)	**11.**	(4)	**12.**	(3)	**13.**	(2)		

SECTION - E

1.	(4)	**2.**	(3)	**3.**	(1)

MISCELLANEOUS QUESTIONS

1.	(4)	**2.**	(2)	**3.**	(1)	**4.**	(3)	**5.**	(1)	**6.**	(3)	**7.**	(2)
8.	(1)	**9.**	(2)	**10.**	(2)	**11.**	(1)	**12.**	(3)	**13.**	(3)	**14.**	(2)
15.	(3)	**16.**	(2)	**17.**	(1)	**18.**	(1)	**19.**	(1)	**20.**	(2)	**21.**	(2)
22.	(2)	**23.**	(3)	**24.**	(4)	**25.**	(1)	**26.**	(1)	**27.**	(2)	**28.**	(1)

EXERCISE - 2

PART- I

1.	(3)	**2.**	(1)	**3.**	(4)	**4.**	(4)	**5.**	(3)	**6.**	(1)	**7.**	(3)
8.	(4)	**9.**	(2)	**10.**	(3)	**11.**	(4)	**12.**	(3)	**13.**	(1)	**14.**	(2)
15.	(1)												

EXERCISE - 3

PART- I

1.	(3)	**2.**	(1)	**3.**	(1)	**4.**	(1)	**5.**	(3)	**6.**	(3)	**7.**	(2)
8.	(1)	**9.**	(2)	**10.**	(2)	**11.**	(2)	**12.**	(4)	**13.**	(3)	**14.**	(2)
15.	(2)	**16.**	(1)	**17.**	(2)	**18.**	(1)	**19.**	(2)	**20.**	(2)	**21.**	(4)
22.	(1)	**23.**	(4)	**24.**	(4)	**25.**	(1)	**26.**	(2)	**27.**	(1)		
28.	(2)	**29.**	(4)	**30.**	(4)	**31.**	(4)						

PART- II

1.	(1)	**2.**	(1)	**3.**	(2)	**4.**	(4)	**5.**	(1)	**6.**	(1)	**7.**	(4)
8.	(4)	**9.**	(1)	**10.**	(4)								

Self Practice Paper (SPP)

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

(1) Left Atrium $\xrightarrow[\text{Blood}]{\text{Oxygenated}}$ Lung $\xrightarrow[\text{blood}]{\text{Deoxygenated}}$ Right ventricle

(2) Left Atrium $\xrightarrow[\text{blood}]{\text{Deoxygenated}}$ Lung $\xrightarrow[\text{Blood}]{\text{Oxygenated}}$ Right Ventricle

(3) Right Ventricle $\xrightarrow[\text{blood}]{\text{Deoxygenated}}$ Lung $\xrightarrow[\text{Blood}]{\text{Oxygenated}}$ Left Atrium

(4) Right Ventricle $\xrightarrow[\text{Blood}]{\text{Oxygenated}}$ Lung $\xrightarrow[\text{blood}]{\text{Deoxygenated}}$ Left Atrium

2. In Amphibians and Reptiles, the left atrium receives oxygenated blood from the gills/lungs/skin and the right atrium receives the deoxygenated blood from other body parts. However, they get mixed up in the single ventricle which pumps out mixed blood. This type of circulation is called–

(1) Incomplete single circulation (2) Complete single circulation

(3) Incomplete double circulation (4) Complete double circulation

3. The blood vessel which brings oxygenated blood from lungs towards the heart is –

(1) Pre caval vein (2) Post caval vein

(3) Pulmonary vein (4) Pulmonary artery

4. Highly active scavenger cells are –

(1) Macrophages and Eosinophils (2) Macrophages and Basophils

(3) Lymphocytes and neutrophils (4) Neutrophils and monocytes

5. The process of formation of blood corpuscles is called –

(1) Haemopoiesis (2) Haemolysis (3) Haemozoin (4) None of these.

6. Which of the following statements are wrong?

(i) Leucocytes disintegrate in the spleen and liver.

(ii) RBC, WBC and blood platelets are produced by bone marrow.

(iii) Neutrophils bring about destruction and detoxification of toxins of protein origin.

(iv) The important function of lymphocytes is to produce antibodies.

(1) (i) and (ii) only (2) (iii) and (iv) only

(3) (i) and (iii) only (4) (ii) and (iii) only

7. Which of the following corpuscle has kidney shaped nucleus?

(1) Eosinophils (2) Monocyte (3) Neutrophil (4) Lymphocyte

8. Arteries do not have valves but veins do, because:
(1) Arteries have a narrower lumen than veins
(2) Arteries have thicker walls than veins
(3) Arteries carry oxygenated blood whereas veins carry deoxygenated blood
(4) Valves prevent backflow of blood in veins

9. In an undamaged blood vessel, conversion of prothrombin to thrombin is prevented by –
(1) Fibrinogen (2) Ca^{++} (3) Factor VII (4) Heparin

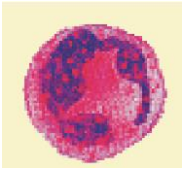
10. Which of the following elements is found in haemoglobin and myoglobin?
(1) Iron (2) Copper (3) Magnesium (4) Iodine

11. The exchange of materials between blood and interstitial fluid takes place –
(1) Arterioles (2) Arteries (3) Capillaries (4) Veins

12. Which of the following has no muscular wall?
(1) Artery (2) Vein (3) Arteriole (4) Capillary

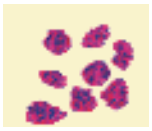
13. For reaching left side of heart, blood must pass through s–
(1) Liver (2) Kidneys (3) Lungs (4) Brain

14. Identify the blood cells on the behalf of their shape and nucleus –

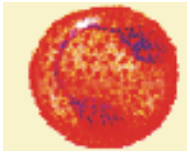


(A)

(B)



(C)



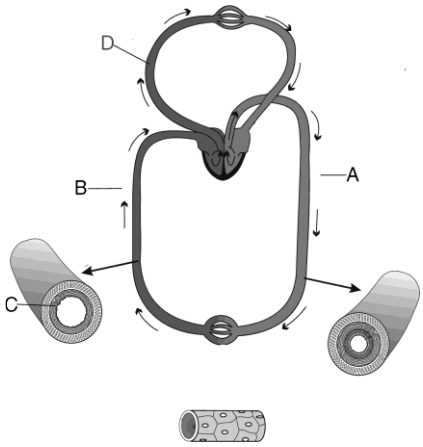
(D)

(1) A = Thrombocyte B = Eosinophil C = Monocyte D = R.B.C
(2) A = Neutrophils B =Monocyte C = Thrombocyte D = Eosinophil
(3) A = B-Lymphocyte, B = T-lymphocyte C = Monocyte C = Thrombocyte
(4) A = Platelet B = Neutrophil C = Thrombocyte D = Clumped R.B.C

15. Systemic heart refers to –
(1) Entire heart in lower vertebrates
(2) The two ventricles together in humans
(3) Left auricle and left ventricle in higher vertebrates
(4) The heart that contracts under stimulation from nervous system

16. Which ion participates in blood clotting?
(1) K^+ (2) Na^+ (3) Ca^{2+} (4) Cl^-

17. Label the diagram given below –



(1) A→ Dorsal Aorta, B → Vena cavae, C → Pulmonary Artery, D → Smooth muscle

(2) A→ Dorsal Aorta, B → Smooth muscle, C → Vena cavae, D → Pulmonary Artery

(3) A→ Vena cavae, B → Dorsal Aorta, C → Smooth muscle, D → Pulmonary Artery

(4) A→ Dorsal Aorta, B → Vena cavae, C → Smooth muscle, D → Pulmonary Artery

18. In mammals, veins differs from arteries in having –

(1) thicker walls (2) deeply present

(3) carry blood away (4) internal valves

19. Collection of WBC at a site of infection through capillaries is ७

(1) Phagocytosis (2) Hemolysis (3) Diapedesis (4) None

20. In sun light the face becomes reddish due to ७

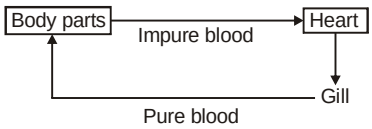
(1) Effect of light

(2) Expansion of blood capillaries

(3) Breakup of RBC and release of haemoglobin

(4) Irritation of skin

21. In fishes, the blood circulation is represented as७



The above blood flow indicates

(1) Double circulation (2) Single circulation

(3) Incomplete single circulation (4) Incomplete double circulation

22. Which one of the following organs can be called a sort of "blood bank" ?

(1) Heart (2) Liver (3) Spleen (4) Lungs

23. Haemoglobin contains७

(1) Fe^{+} (2) Fe^{2+} (3) Fe^{3+} (4) Any of them

24. Read carefully the statements given below –

I. Proteins contributes 6 - 8% of the blood plasma.
II. Plasma contains very high amount of platelets
III. Plasma without the clotting factors is called serum.
IV. Glucose, amino acids, lipids, etc, also present in the plasma.
In the above statements
(1) All are correct (2) Only II is false (3) Only I is correct (4) All are false

25. Match List I with List II and select the correct option

	List I (Plasma protein)		**List II (Functions)**
I.	Fibrinogen	**A.**	Defence mechanism
II.	Globulins	**B.**	Osmotic balance
III.	Albumins	**C.**	Coagulation of blood

(1) I-C, II-A, III-B (2) I-A, II-C, III-B (3) I-C, II-B, III-A (4) I-B, II-A, III-C

26. Correct statement/s regarding open circulatory system is/are
(1) There is no need of blood vessels
(2) There is no distinction between blood and tissue fluid
(3) There are no open spaces or sinuses in the body
(4) All of the above

27. How many double circulation are normally completed by the blood in human body in one minute?
(1) 8 (2) 16 (3) 36 (4) 72

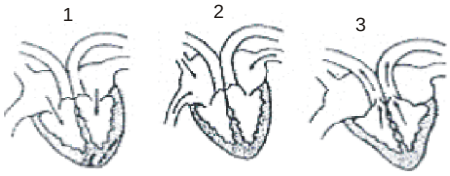
28. Universal blood donors & universal blood acceptors are respectively
(1) A^+ ; O^- (2) O^-; AB^+ (3) O^-; AB^- (4) O^+; AB^-

29. The opening between the right atrium and the right ventricle is guarded by a valve called___X __,whereas ___Y___ guards the opening of the left atrium and the left ventricle –
(1) X is bicuspid valve, Y is tricuspid valve
(2) X is semilunar valve, Y is tricuspid valve
(3) X is bicuspid valve, Y is semilunar valve
(4) X is tricuspid valve, Y is bicuspid

30. The important function of spleen is/are
(1) To produce lymphocytes.
(2) During embryonic stage act as haemopoietic organ.
(3) It destroys dead RBC's.
(4) All of the above

31. Select incorrect statement about lymph
(1) Lymph is also an important carrier for nutrients, hormones.
(2) Fats are absorbed into lymph in the lacteals present in the intestinal villi.
(3) Lymph is a colourless fluid
(4) all are correct.

32. The accompanying diagram shows three stages in the cardiac cycle



Which of the following sequence is correct?

(1) 2, 3, 1 (2) 1, 2, 3 (3) 2, 1, 3 (4) 3, 1, 2

33. The pericardium and the pericardial fluid help in

(1) Protecting the heart from friction and shocks

(2) Pumping the blood

(3) Receiving the blood from various parts of the body

(4) None of above

34. In electrocardiogram, all of the following are positive waves except –

(1) P (2) Q (3) R (4) T

35. A symptom of acute chest pain, when no enough oxygen is reaching the heart muscle is called –

(1) Angina Pectoris (2) Heart Failure

(3) Atherosclerosis (4) None of these

36. Match the column –

Column I	**Column II**
(i) Eosinophil	(a) Kidney shaped Nucleus
(ii) Basophil	(b) S-shaped Nucleus
(iii) Monocyte	(c) Associated with Allergic reactions

(1) (i) - c ; (ii) - b ; (iii) - a (2) (i) - a ; (ii) - b ; (iii) - c

(3) (i) - a ; (ii) - c ; (iii) - b (4) (i) - c ; (ii) - a ; (iii) - b

37. VIII factor of blood clotting is –

(1) Calcium (2) Fibrinogen

(3) Antihaemophilic factor (4) Hageman factor

38. Oxygenated blood is present in –

(1) Pulmonary arteries (2) Pulmonary veins (3) All the arteries (4) All the veins

39. What happens when the pacemaker is non functional?

(1) Only the auricles will contract rhythmically

(2) The cardiac muscles do not contract in a coordinated manner rhythmically

(3) Only ventricles will contract rhythmically

(4) Cardiac muscle will contract in a coordinated manner rhythmically

40. The pulse pressure refers to the

(1) Difference between systolic and diastolic pressure

(2) Systolic pressure

(3) Pressure in the great veins

(4) Diastolic pressure

41. A typical artery differs from a typical vein in the –

(1) Absence of endothelium (2) Presence of strong valves

(3) Absence of tunica externa (4) Presence of thicker muscular walls

42. Pick up a pair of synonymous terms–

(1) Plasma – Serum (2) Atrioventricular node – Pacemaker

(3) Leucocytes – Lymphocytes (4) Mitral valve – Bicuspid valve

43. Carbonic anhydrase is found in high concentration in–

(1) Leucocytes (2) Blood plasma (3) Erythrocytes (4) Lymphocytes

44. Serum is–

(1) Plasma (-) Blood coagulation factors (2) Blood (-) Fibrinogen

(3) Lymph (-) Corpuscles (4) Blood (-) Corpuscles and Fibrinogen

45. QRS is related to –

(1) Ventricular systole (2) Atrial systole

(3) Ventricular diastole (4) Atrial diastole

SPP Answers

1.	(3)	**2.**	(3)	**3.**	(3)	**4.**	(4)	**5.**	(1)	**6.**	(3)	**7.**	(2)
8.	(4)	**9.**	(4)	**10.**	(1)	**11.**	(3)	**12.**	(4)	**13.**	(3)	**14.**	(2)
15.	(3)	**16.**	(3)	**17.**	(4)	**18.**	(4)	**19.**	(3)	**20.**	(2)	**21.**	(2)
22.	(3)	**23.**	(2)	**24.**	(2)	**25.**	(1)	**26.**	(2)	**27.**	(4)	**28.**	(2)
29.	(4)	**30.**	(4)	**31.**	(4)	**32.**	(3)	**33.**	(1)	**34.**	(2)	**35.**	(1)
36.	(1)	**37.**	(3)	**38.**	(2)	**39.**	(2)	**40.**	(1)	**41.**	(4)	**42.**	(4)
43.	(3)	**44.**	(1)	**45.**	(1)								