

BODY FLUIDS AND CIRCULATION

QUESTION FROM PREVIOUS EXAMS

1. **Which animal has most mixing of oxygenated and deoxygenated blood in the ventricle?** (Orissa JEE 2007)
a) Frog b) Shark c) Rabbit d) None of these
2. **Which of the following blood vessels in the circulatory system of frog has more oxygenated blood?** (AFMC 2006; JCECE 2007)
a) Precaval vein b) Pulmonary artery
c) Pulmocutaneous vein d) Pulmocutaneous artery
3. **Cardiac muscles are found in** (WB-JEE 2006; Orissa JEE 2011)
a) epicardium b) myocardium c) endocardium d) myocardium
4. **In mammals, the opening of post caval in the right auricle is guarded by** (CMC, Vellore 2007)
a) mitral valve b) bicuspid valve c) thebesian valve d) eustachian valve
5. **Eustachian valve is found in** (JIPMER 2004)
a) Middle ear b) internal ear c) right atrium of heart d) left ventricle of heart
6. **Tricuspid valve is present between the** (HPPMT 2006; Orissa JEE 2010)
a) Two atria b) two ventricles c) left atrium and ventricle d) right atrium and entricle
7. **The valve situated between the left atrium and left ventricle is called** (BHU 2007)
a) mitral valve b) bicuspid valve c) tricuspid valve d) Eustachian valve
8. **Mitral valve in mammals guards the opening between:** (PCS 2002; EAMCET 2010)
a) Left atrium and left ventricle b) right atrium and left ventricle
c) Left atrium and right ventricle d) right atrium and right ventricle

9. **Mitral valve is found between :** (VITEEE 2008; AFMC 2009)
- a) Left atrium and left ventricle b) left atrium and right ventricle
c) Right atrium and left ventricle d) right atrium and right ventricle
10. **The thick muscular projections on the walls of the ventricles are called:** (JIPMER 2005)
- a) columnae carneae b) conus arteriosus
c) chordae tendineae d) truncus arteriosus
11. **Papillary muscles are located in:** (Haryana. PMT 2007)
- a) Orbits of vertebrate eyes b) heart ventricles of rabbit
c) Dermis of mammalian skin d) pylorus of vertebrate stomach
12. **Chordae tendineae are found in:** (Kerala PMT 2010)
- a) Joints of legs b) atria of heart c) ventricles of heart d) ventricles of brain
13. **Which of the following has the thickest walls?** (Kerala PMT 2004; WB-JEE 2010)
- a) Left auricle b) Left ventricle c) Right auricle d) Right ventricle
14. **Systemic heart refers to:** (CBSE 2003; RPMT 2007)
- a) Entire heart in lower vertebrates
b) the two ventricles together in humans
c) Left auricle and left ventricle in higher vertebrates
d) The heart that contracts under stimulation from nervous system
15. **The heart is myogenic in:** (CPMT 2002; DPMT VMMC-Safdarjung 2007)
- a) Leech b) elephant c) cockroach d) all of these
16. **Which one of the following pairs, the two items mean one and the same thing?** (AIIMS 2004)
- a) Malleus - Anvil
b) SA node - Pacemaker
c) Leucocytes - Lymphocytes
d) Haemophilia - Blood cancer

17. **SA node is located in:** (DPMT 2005, 06; Har. PMT 2006)
- a) Upper lateral wall of left atrium b) lower lateral wall of left atrium
c) Lower lateral wall of right atrium d) upper lateral wall of right atrium
18. **The pacemaker of the heart is:**
- a) AV node b) SA node c) SV node d) Tricuspid valve
19. **The pacemaker in the vertebrate heart is:** (Kerala PMT 2001; Karnataka CET 2002; PCS 2004; Pb.PMT 2004; BHU 2004; BHU 2006; VMMC-Safdrjung 2008; Wardha 2008; MPPMT 2010; WB-JEE 2011)
- a) SA node b) AV node c) Purkinje fibre d) Bundle of His
20. **The impulse of heart beat originates from:** (CBSE 2002; Orissa JEE 2002; RPMT 2007)
- a) SA node b) AV node c) Vagus nerve d) Cardiac nerve
21. **Role of pacemaker is to:** (Orissa JEE 2004, 10; Pb.PMT 2008)
- a) Initiate heartbeat b) increase heartbeat
c) decrease heartbeat d) control blood supply to heart
22. **Impulses originating from sinoatrial node are transmitted to the:** (JIPMER 2002)
- a) Pacemaker b) Bundle of His c) Purkinje system d) Atrioventricular node
23. **What happens when the pacemaker is non functional:** (Kerala PMT 2005)
- a) Only ventricles will contract rhythmically
b) Only the auricles will contact rhythmically
c) The cardiac muscles do not contract in a coordinated manner rhythmically
d) Cardiac muscles will contract in a coordinated manner rhythmically
24. **Bundle of His is a network of:** (CBSE 2003; MH-CET 2006; MPPMT 2007; Har.PMT 2008; JIPMER 2008)
- a) Nerve fibres distributed in ventricles
b) nerve fibres found through the heart
c) Muscle fibres found only in the ventricle wall
d) Muscle fibres distributed throughout the heart walls

25. Which of the following is the correct pathway for propagation of cardiac impulse? (Kerala PMT 2004, 05, 07, CMC Vellore 2008; WB-JEE 2011)
- a) SA node → AV node → Bundle of His → Purkinje fibres
 - b) AV node → Bundle of His → SA node → Purkinje fibres
 - c) SA node → Purkinje fibres → AV node → Bundle of His
 - d) Purkinje fibres → AV node → SA node → Bundle of His
26. The duration of cardiac cycle in a normal man is: (PCS 2004; WB-JEE 2006, 09, 10; JKCME 2008)
- a) 0.8 seconds
 - b) 80 seconds
 - c) 60 seconds
 - d) 72 seconds
27. Blood enters into the heart because muscles of: (Orissa JEE 2007, 09)
- a) Atria relax
 - b) atria contract
 - c) ventricles relax
 - d) ventricles contract
28. The function of vagus nerve innervating the heart to: (DUMET 2009)
- a) Maintain constant heartbeat
 - b) accelerate the heartbeat
 - c) Initiate the heartbeat
 - d) reduce the heartbeat
29. Which of the following hormones has no effect on heart beat? (Manipal 2004)
- a) Oxytocin
 - b) Thyroxine
 - c) Adrenaline
 - d) Noradrenaline
30. P wave of ECG indicates: (BHU 2007)
- a) Activation of SA node
 - b) Depolarization of atrial muscles
 - c) Spread of excitation from SA node to AV node
 - d) Repolarization of atria and depolarization of ventricles
31. In an ECG, the depolarization of atria is indicated by: (Kerala PMT 2007)
- a) P wave
 - b) Q wave
 - c) R wave
 - d) S wave
32. P wave of ECG occurs before the: (WB-JEE 2006)
- a) Beginning of arterial contraction
 - b) onset of ventricular ejection
 - c) End of arterial contraction
 - d) none of the above
33. The first heart sound is produced when: (JIPMER 2004; WB-JEE 2006)
- a) Diastole begins
 - b) semi lunar valve close quickly
 - c) interventricular pressure decreases
 - d) bicuspid and tricuspid valves close quickly

34. Which one of the following is a matching pair? (AIIMS 2003, 08)
- a) Lubb-Sharp closure of AV valves at the beginning of ventricular systole
 - b) Dupp-sudden opening of semilunar valves at the beginning of ventricular diastole
 - c) Pulsation of the radial artery-Valves in the blood vessels
 - d) Initiation of heartbeat – Purkinje fibres
35. A heart murmur indicates a defective: (Orissa JEE 2003; Har.PMT 2007)
- a) Heart valves
 - b) bundle of his
 - c) sinoatrial node
 - d) atrioventricular node
36. Cardiac output is determined by: (BHU 2004, 08)
- a) Heart rate
 - b) stroke volume
 - c) blood flow
 - d) both (a) and (b)
37. The instrument by which BP of man is determined: (BCECE 2002; DPMT 2003; MH-CET 2004;BV pune 2004; Orissa JEE 2010)
- a) BP meter
 - b) Ultrasound
 - c) Stethoscope
 - d) Sphygmomanometer
38. In adult man, normal blood pressure is: (MH-CET 2003; Har. PMT 2005)
- a) 80/120 mmHg
 - b) 100/80 mmHg
 - c) 120/30 mmHg
 - d) 100/120 mmHg
39. The difference of blood pressure between systolic and diastolic phase is: (AMU 2003; WB-JEE 2010; Karnataka CET 2010)
- a) 10 mmHg
 - b) 40 mmHg
 - c) 120 mmHg
 - d) 180 mmHg
40. Blood pressure increases and heart rate decreases in response to: (WB-JEE 2006)
- a) Exercise
 - b) haemorrhage
 - c) exposure to high altitude
 - d) increased intracranial pressure
41. Single heart circuit occurs in: (MH-CET 2007)
- a) Man
 - b) frogs
 - c) fishes
 - d) reptiles
42. How many times a red blood corpuscle will have to pass through the heart in its journey from hepatic artery to the aorta? (Karnataka CET 2005)
- a) Only once
 - b) two times
 - c) four times
 - d) several times
43. Carotid labyrinth contains: (CMPT 2002; BHU 2007)
- a) baroreceptors
 - b) phonoreceptors
 - c) chemoreceptors
 - d) olfactoreceptors
44. Pulmonary veins carry: (AMC 2010)
- a) Pure blood from heart to lungs
 - b) pure blood from lungs to heart
 - c) Impure blood from lungs to heart
 - d) impure blood from heart to lungs

53. Which of the following consist of a layer of single cell thickness? (Gujarat CET 2007)
a) Artery b) venule c) capillary d) arteriole
54. Which one is odd combination? (COMEDK's 2007)
a) leydig cells - Testis b) HCI - Oxyntic cells
c) Peyer's patches - Lymphatic gland
d) Blood capillary wall - connective tissue
55. Which one is absent in man? (CPMT 2006)
a) Hypophyseal-hypothalamic tract b) Hepatic portal vein
c) Renal portal vein d) None of the above
56. Hepatic portal system stars from: (Pb.PMT 200; BHU 2007)
a) liver to heart b) kidney to liver c) liver to kidney d) digestive system to liver
57. Lymph: (BV Pune 2007; Manipal 2008)
a) Transports CO₂ to lungs b) transports oxygen to brain
c) Returns interstitial fluid to blood d) returns RBCs and WBCs to lymph nodes
58. Which of the following is first to receive lymphatic duct from legs? (Gujarat CET 2007)
a) Left subclavian vein b) Right subclavian vein
c) Right lymphatic duct d) Thoracic lymphatic duct
59. Which one indicates hypertension? (MH-CET 2007)
a) 90/60 b) 120/85 c) 110/70 d) 140/100
60. The term 'CPR' often used in first aid stands for: (AIIMS 2006)
a) Chemo-prophylaxis response b) Cardio-pulmonary resuscitation
c) Chemical prevention of rhinitis d) Clinic for pulmonary rehabilitation
61. 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)
a) It is coronary artery which has a cancerous growth that is being removed
b) It is coronary vein in which the defective valves are being opened
c) It is coronary vein blocked by a parasite (blood fluke) that is being removed
d) It is coronary artery which is blocked by a plaque and the same is being cracked

62. In which of the following disorders, blood has a defective hemoglobin? (Karnataka CET 2006)
- a) Haematuria anemia b) Haematoma c) Haemophilia d) Sickle-cell
63. Which one of the following has an open circulatory system? (AFMC 2008)
- a) Pheretima b) Periplaneta c) Hirudinaria d) Both (b) and (c)
64. Open circulatory system is present in: (Kerala PMT 2008)
- A. arthropods B. annelids C. chordates D. molluscs
- a) C only b) C and B c) A and D d) D only
65. The cardiac pacemaker in a patient fails to function normally. The doctors find that an artificial pacemaker is to be grafted in him. It is likely that it will be grafted at the site of: (AFMC 2008)
- a) Purkinje system b) Sinu-atrial node c) Atrioventricular node d) Atrioventricular bundle
66. To which of the following, bundle of His passes stimulus for contraction? (Gujarat CET 2008)
- a) Atrium b) AV node c) SA node d) Purkinje fibres
67. Which of the following statements is related to Frank-Starling's law of heart? (WB-JEE 2008)
- a) Greater the stroke volume greater is the heart rate
- b) The stroke volume of the heart increases in responses to an increase in the volume of blood filling the heart.
- c) Greater the minute volume; greater is the heart rate
- d) Lesser the length of cardiac muscle fibre greater is the force of contraction of contraction of heart
68. Endothelium of blood vessels is made up of simple: (JKCMEE 2008)
- a) Cuboidal epithelium b) squamous epithelium
- c) Columnar epithelium d) non-ciliated columnar epithelium

77. Which statement is true about the venous blood vessels of frog? (AMU 2010)
- a) Lingual and submandibular unite to form internal jugular
 - b) Musculocutaneous and brachial unite to form the subclavian
 - c) The ventral abdominal vein drains into the posterior vena cava
 - d) The pelvic veins unite to form the renal portal vein
78. Which of the following is not a major organ of lymphatic system? (MPPMT 2010)
- a) Spleen
 - b) Kidney
 - c) Thymus
 - d) Lymph nodes
79. Foramen ovale: (CBSE 2011)
- a) Is a condition in which the heart valves do not completely close
 - b) Is a connection between the pulmonary trunk and the aorta in the foetus
 - c) Is a shallow depression in the interventricular septum
 - d) Connects the two atria in the foetal heart
80. Congestion of the lungs is one of the main symptoms in: (DUMET 2011)
- a) Angina
 - b) hypotension
 - c) heart failure
 - d) atherosclerosis
 - e) Coronary artery disease
81. The volume of blood each ventricle pumps out during a cardiac cycle is about: (Kerala PMT 2011)
- a) 7L
 - b) 40mL
 - c) 70mL
 - d) 5000mL
 - e) 1200mL
82. Wall of blood capillary is formed (CBSE 1001)
- a) Haemocytes
 - b) Parietal cells
 - c) Endothelial cells
 - d) Oxyntic cells
83. Pulmonary artery develops from (KCET 1994; AIIMS 1996, EAMCET 1999)
- a) Left ventricle
 - b) right ventricle
 - c) right auricle
 - d) left auricle
84. Mitral/Bicuspid valve connects (BHU 1986, 2000, dpmt 1986)
- a) Left atrium and left ventricle
 - b) left atrium and right ventricle
 - c) Right atrium and left ventricle
 - d) Right
85. Systole causes (MPPMT 1995)
- a) Entry of blood into lungs
 - b) Entry of blood into heart
 - c) Exit of blood from heart
 - d) Exit of blood from ventricles

86. In circulatory system, valves occur in (CBSE 1995)
- a) Heart and blood vessels of vertebrates and invertebrates as well as vertebrate lymphatics
 - b) Both vertebrate and invertebrate hearts
 - c) Vertebrate heart only
 - d) both vertebrate and invertebrate heart and their blood vessels
87. During high blood pressure, regulations of heart beat and circulation are controlled by (AIIMS 1999)
- a) Vasodilator and vasoconstrictor centers
 - b) Cardio-stimulatory and vasoconstrictor centres
 - c) Cardio-inhibitory and vasoconstrictor centers
 - d) Cardio-inhibitory and vasodilator centers
88. In ECG deflection wave's ventricular systole occurs during (Har. PMT 2001)
- a) PQ
 - b) PQR
 - c) QRS
 - d) T
89. ECG is employed for study of (MHTCET 2008)
- a) Lung ailments
 - b) Brain defects
 - c) Heart problems
 - d) Kidney defects
90. What is correct about ECG? (CBSE 2009)
- a) P-depolarisation of atria
 - b) R-Repolarisation of ventricles
 - c) T-start of systole
 - d) T-end of diastole
91. Angina pectoris is a major symptom of (COMEDK 2011)
- a) cyanosis
 - b) low blood pressure
 - c) high blood pressure
 - d) myocardial infraction
92. The QRS complex of a standard ECG represents (MPPMT 2011)
- a) Excitation or depolarisation of the atria
 - b) Depolarisation of ventricles
 - c) Repolarisation of ventricles
 - d) None of the above

94. To obtain standard ECG the patient is connected to the machine with three electrodes (DUMET 2004)
- a) One to each ankle and to the left wrist
 - b) One to each wrist and to the left ankle
 - c) One to each wrist and to the left chest region
 - d) One to each ankle and to the left chest region
95. Largest single mass of lymphoid tissue in the body is (DUMET 2009)
- a) Lung
 - b) Spleen
 - c) Liver
 - d) kidney
96. Blood vascular system of hemichordates is (JCECE 2007)
- a) Open
 - b) Closed
 - c) Reduced
 - d) Absent
97. The blood circulation which starts and ends into capillaries is (CPMT 2006, BCECE2008, Orissa JEE 2010)
- a) Portal circulation
 - b) Renal circulation
 - c) Hepatic circulation
 - d) Lymphatic circulation
98. ECG is a measure of (BCECE 2006)
- a) Rate of heart beat
 - b) ventricular contraction
 - c) Volume of blood pumped
 - d) difference in electric potential
99. Which of the following carries blood rich in food material such as glucose, amino acids from the intestine to liver? (BHU 2001)
- a) Dorsal aorta
 - b) Mesenteric artery
 - c) Renal portal vein
 - d) Hepatic portal vein
100. Slowing of heart beat is called (AFMC2002)
- a) Tachycardia
 - b) cardiac arrest
 - c) bradycardia
 - d) angina pectoris

Key:

1.a	2.c	3.b	4.d	5.c	6.d	7.b	8.c	9.a	10.a
11.b	12.c	13.b	14.c	15.b	16.b	17.b	18.a	19.a	20.a
21.a	22.c	23.c	24.c	25.a	26.a	27.c	28.d	29.a	30.b
31.a	32.a	33.d	34.a	35.a	36.d	37.d	38.b	39.b	40.d
41.c	42.b	43.a	44.b	45.b	46.c	47.c	48.b	49.c	50.a
51.c	52.d	53.c	54.d	55.c	56.d	57.c	58.d	59.d	60.b
61.d	62.d	63.b	64.c	65.b	66.d	67.b	68.b	69.c	70.c
71.b	72.b	73.d	74.c	75.a	76.c	77.b	78.b	79.d	80.c
81.c	82.c	83.b	84.a	85.d	86.d	87.d	88.c	89.c	90.c
91.d	92.b	93.b	94.b	95.b	96.a	97.a	98.d	99.d	100.c