

Unit 11: Human Circulatory System

Multiple Choice Questions

MULTIPLE CHOICE QUESTIONS (EXERCISE)

1. **Compared to vein an artery.**
 - (a) Has thinner walls
 - (b) Is located more superficially
 - (c) Carries blood away from an organ
 - (d) Has no internal valves

2. **Bicuspid valve guards the opening between**
 - (a) Stomach and intestine
 - (b) Pulmonary vein and left atrium
 - (c) Right atrium and right ventricle
 - (d) Left atrium and left ventricle

3. **What is the state of bicuspid and tricuspid valves at the end of the first heart sound?**
 - (a) Bicuspid is closed, tricuspid is open
 - (b) Bicuspid is open, tricuspid is closed
 - (c) Both are open
 - (d) Both are closed

4. **By beating at normal speed, our heart pumps how much blood per minute?**

(a) 2 liters	(b) 3 liters
(c) 5 liters	(d) 8 liters

5. Closure of tricuspid and bicuspid valves produces sound;
 - (a) Lubb
 - (b) Dubb
 - (c) First Lubb then Dubb
 - (d) None of these but – murmurs
6. SA-node initiates heartbeat in;
 - (a) Right atrium only
 - (b) Right atrium and partially left also
 - (c) Right and left both atria
 - (d) Left atrium and partially right also
7. Systolic pressure in young man is;
 - (a) 60 mm of Hg
 - (b) 80 mm of Hg
 - (c) 100 mm of Hg
 - (d) 120 mm of Hg
8. Blood pressure is highest in ____ and blood moves; most slowly in;
 - (a) Veins, capillaries
 - (b) Arteries, capillaries
 - (c) Capillaries, arteries
 - (d) Veins, arteries
9. Instead of normal lubb-dubb sound, a lubb-hiss, lubb-hiss sound indicates;
 - (a) Blocked coronary artery
 - (b) Damaged pacemaker
 - (c) Defective semilunar valve
 - (d) High blood pressure
10. In humans which one is the other system for the transport of materials, then blood circulatory system?
 - (a) Lymphatic system
 - (b) Digestive system
 - (c) Nervous system
 - (d) Respiratory system

SLO BASED MULTIPLE CHOICE QUESTIONS

Structure and Functioning of Heart

- ★ 11. In a healthy person, plasma constitutes about _____ by volume.
 - (a) 45%
 - (b) 55%
 - (c) 65%
 - (d) 90%
12. Which one of the following is not the part of human blood circulatory system?
 - (a) Lymph
 - (b) Arteries
 - (c) Heart
 - (d) Capillaries
13. Human heart is situated in the _____ of chest cavity.
 - (a) Upper part
 - (b) Middle
 - (c) Lower region
 - (d) Behind
14. The human heart is felt to be on the left side of chest because.
 - (a) It is located in left side
 - (b) It is present below the diaphragm
 - (c) It is located in right side
 - (d) The left side of heart is stronger and larger
15. The sac in which heart is enclosed:
 - (a) Myocardium
 - (b) Pericardium
 - (c) Endocardium
 - (d) Pleura
16. The inner layer of pericardium is called:
 - (a) Fibrous epicardium
 - (b) Serous pericardium
 - (c) Synovial membrane
 - (d) Endocardium
17. The space between parietal and visceral pericardium is called ____, having how many milliliter of pericardial fluid:
 - (a) Pleural, 100ml
 - (b) Peritoneal cavity, 50ml
 - (c) Oral cavity, 75ml
 - (d) Pericardial cavity, 50ml
18. Which one of the following is not related to heart wall?
 - (a) Pericardium
 - (b) Epicardium
 - (c) Myocardium
 - (d) Endocardium

19. Inner visceral pericardium is closely attached to the underlying heart, and is also known as:
 (a) Fibrous pericardium
 (b) Epicardium
 (c) Parietal pericardium
 (d) Endocardium
20. Inner most layer of heart wall is called:
 (a) Endocardium
 (b) Pericardium
 (c) Myocardium
 (d) Epicardium
21. The left and right ventricles are separated by:
 (a) Interventricular septum
 (b) Intraventricular septum
 (c) Extraventricular septum
 (d) Atrioventricular valves
22. Mitral valve is present between:
 (a) Right atrium and right ventricle
 (b) Left atrium and left ventricle
 (c) Right ventricle and left ventricle
 (d) Left atrium and right atrium
23. The valves which prevent backflow of blood into atria are;
 (a) Atrioventricular valves
 (b) Semilunar valves
 (c) Aortic valve
 (d) Pulmonary valve
24. Identify the marked structure:
 (a) Tricuspid valve
 (b) Bicuspid valve
 (c) Aortic valve
 (d) Pulmonary valve
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25. The thickness of left ventricle is about _____ times more than right ventricle.
 (a) 3
 (b) 5
 (c) 10
 (d) 12
26. The vessels which bring oxygenated blood from lungs to the heart are:
 (a) Pulmonary arteries
 (b) Pulmonary capillaries
 (c) Pulmonary veins
 (d) Thoracic duct
27. Aorta supply oxygenated blood to all parts of body except:
 (a) Pancreas
 (b) Spleen
 (c) Brain
 (d) Lungs
28. During ventricular systole blood is pumped to:
 (a) Pulmonary arteries
 (b) Aorta
 (c) Both (a) and (b)
 (d) Pulmonary veins
29. The longest phase of cardiac cycle is _____ and lasts about:
 (a) Ventricular systole, 0.3 sec
 (b) Atrial systole, 0.4 sec
 (c) Diastole, 0.4 sec
 (d) Atrial systole, 0.1 sec
30. "Dubb" heart sound is produced when:
 (a) Semilunar valves are close
 (b) Semilunar valves are open
 (c) AV-valves are open
 (d) AV-valves are close
31. If the heart valves are not fully closed, turbulence is created, sounds like hiss is called:
 (a) Lubb
 (b) Dubb
 (c) Murmur
 (d) Both (a) and (b)
32. Sinoatrial node (SA node) is embedded in the upper wall of ____:
 (a) Right atrium
 (b) Right ventricle
 (c) Left atrium
 (d) Left ventricle
33. Small cluster of cardiac muscle cells, located at the lower portion of interatrial septum is:
 (a) SA node
 (b) AV-node
 (c) Bundle of his
 (d) Purkinje fibres
34. A battery-operated device, which emits electrical signals that trigger normal heart beats is called:
 (a) Natural pace maker
 (b) Artificial pace maker
 (c) Dialyzer
 (d) Stent

★35. The average heart rate of an adult is about _____ times per minute.

- (a) 60 (b) 80
(c) 70 (d) 100

36. In an adult human _____ litres of blood move through blood vessels every day.

- (a) 800 (b) 8000
(c) 80,000 (d) 5

37. In an adult about 8000 litres of blood move _____ of blood vessels daily.

- (a) 96 km (b) 960 km
(c) 9600 km (d) 96000 km

38. The device / machine that records electrical signals generated by cardiac impulses is called:

- (a) Electrocardiogram
(b) Electroencephalogram
(c) Electrocardiograph
(d) Echocardiogram

39. The component of ECG-wave form that shows beginning of atrial depolarization is

- (a) P-wave (b) T-wave
(c) QRS (d) PR-segment

40. The component of ECG wave form; from the beginning of QRS complex to the end of T-wave is:

- (a) PR-segment (b) ST-segment
(c) P-wave (d) QT interval

41. ST-segment of ECG-wave form lasts for about:

- (a) 0.12 sec (b) 0.20 sec
(c) 0.08 sec (d) 0.40 sec

42. Ventricular abnormalities can be diagnosed when ECG shows abnormal

- (a) P-wave (b) PR-segment
(c) QRS-complex (d) QT-interval

★43. The temporary channel between embryonic pulmonary artery and aorta is:

- (a) Foramen magnum
(b) Interatrial foramen
(c) Thoracic duct
(d) Ductus arteriosus

★44. Tunica media of arteries is made up of:

- (a) Connective tissue
(b) Elastic tissue
(c) Muscular tissue and elastic fibres
(d) Endothelium and connective tissue

45. The blood vessels which carry blood away from heart are:

- (a) Arteries (b) Veins
(c) Capillaries (d) Venules

46. The walls of capillaries are made up of:

- (a) Muscular tissue
(b) Elastic fibres
(c) Connective tissue
(d) Endothelial cells

47. The internal diameter of a capillary is about:

- (a) 8 μ m (b) 4mm
(c) 16 nm (d) 26 μ m

48. Which of the following is not a part of interstitial fluid?

- (a) RBCs (b) Hormones
(c) Water (d) Gases

49. The middle layer of veins is relatively thinner than that of arteries because:

- (a) They do not have muscular tissue
(b) They lack elastic fibres
(c) They do not have to withstand high blood pressure
(d) They have endothelium

50. The back flow of blood in veins is prevented by the presence of:

- (a) Semilunar valves
(b) AV-valves
(c) Sphincter of oddi
(d) Cardiac sphincter

51. The sphincters that regulate the amount of blood flowing through capillaries are:

- (a) Pre-capillary sphincters
- (b) Post-capillary sphincters
- (c) Inter-capillary sphincters
- (d) Intra-capillary sphincters

52. When metabolic activity in a tissue rises, oxygen decreases and CO₂ increases in its interstitial fluid. How does homeostatic feedback respond to this situation?

- (a) Vasodilation
- (b) Vasoconstriction
- (c) Both (a) and (b)
- (d) Stimulation of Vagus nerve

53. The velocity of blood flow in capillaries is:

- (a) 450-500 mm/sec
- (b) 01 mm/sec
- (c) 250mm/sec
- (d) 300 mm/sec

54. The systemic circulation supplies oxygenated blood to all (the cells, tissues and organs) systems of the body EXCEPT:

- (a) Respiratory system
- (b) Hepatic-portal system
- (c) Immune system
- (d) Nervous system

55. Small coronary veins drain directly into:

- (a) Left atrium (b) Right atrium
- (c) Left ventricle (d) Right ventricle

56. The hepatic portal vein collects blood from:

- (a) Spleen
- (b) Alimentary canal
- (c) Reproductive system
- (d) Both (a) and (b)

Blood Pressure

57. The flow of blood creates rhythmical throbbing of arteries. Which is called:

- (a) Pulse (b) Anaphylaxis
- (c) Blood pressure (d) Spurt

58. The receptors which detect/monitor ups and down in blood pressure are:

- (a) Baroreceptors
- (b) Nociceptors
- (c) Thermoreceptors
- (d) Pacinian corpuscles

59. Baroreceptors/pressure receptors are present in:

- (a) Carotid arteries (b) Aortic arch
- (c) Juglar vein (d) Both (a) and (b)

60. Long-term regulation of blood pressure is done through:

- (a) Enzymes (b) Hormones
- (c) Neurotransmitters (d) Cerebrum

61. The hormone which stimulates kidneys to retain more water in blood, excreting less in urine is:

- (a) ANH (b) ADH
- (c) ACTH (d) TSH

62. Which of the following hormones, is secreted by heart?

- (a) ANH (b) Corticosterone
- (c) Prolactin (d) Adrenaline

Cardiovascular Disorders

63. Hardening of arterial walls as a result of calcium deposition in arterial walls is termed as:

- (a) Thrombosis
- (b) Atherosclerosis
- (c) Arteriosclerosis
- (d) angiogenesis

64. X-ray examination of blood vessels or chambers of heart to create x-ray pictures is called:

- (a) Angiogram
- (b) Angioplasty
- (c) Angiography
- (d) Echocardiography

65. The causes of thrombosis are:
 (a) Reduced rate of blood flow
 (b) Infection of lining of blood vessels
 (c) Pneumonia T.B
 (d) All of above
66. Thrombosis in the vessels of brain causes:
 (a) Hemorrhage (b) Stroke
 (c) Myocardial infraction (d) Epilepsy
67. The death of heart muscles due to lack of oxygen and nutrients is called:
 (a) Myocardial infarction
 (b) Myocardial infection
 (c) Myocarditis
 (d) All of above
68. If life styles changes and medication fails to relieve the symptoms of heart attack, how will you proceed?
 (a) Preform ECG
 (b) Go for bypass surgery
 (c) Consult a cardiologist for angioplasty
 (d) Both (b) and (c)
69. The procedure which involves taking a healthy blood vessel from leg, arm, chest or abdomen and attaching the ends of blood vessel above or below the blocked coronary artery is called:
 (a) Angioplasty
 (b) Angiography
 (c) Bypass surgery
 (d) Stenting
70. The procedure that opens a blocked or narrowed artery is called:
 (a) Angioplasty (b) Angiography
 (c) Stenting (d) Bypass surgery
71. An expandable stainless steel mesh tube, mounted on a balloon catheter, during angioplasty is called:
 (a) Fistula (b) Cannula
 (c) Catheter (d) Stent

72. A chronic elevation in blood pressure which consistently remain above 140/90 mmHg is called:
 (a) Thromboembolism
 (b) Hypertension
 (c) Congestive heart failure
 (d) Hemorrhage

Lymphatic System of Humans

73. The branches of lymph capillaries in villi are called:
 (a) Lymphatic ducts
 (b) Thoracic duct
 (c) Lacteals
 (d) Lymphoid masses
74. The ultimate flow of lymph is always from body tissues towards:
 (a) Lymph nodes
 (b) Thoracic duct
 (c) Thoracic capillaries
 (d) Lymphoid masses
75. The veins that drain blood from arms and shoulders to the heart are called:
 (a) Pulmonary veins
 (b) Thoracic veins
 (c) Subclavian veins
 (d) Coronary veins
76. Blood filtration through its macrophages and lymphocytes, storage of RBCs belongs to:
 (a) Spleen (b) Bone marrow
 (c) Liver (d) Thymus
77. Several afferent lymph vessels enter a lymph node and the lymph is drained by _____ lymph vessel/vessels.
 (a) Single efferent
 (b) Several afferent
 (c) Single afferent
 (d) All of above
78. Which one of the following is not larger lymphoid mass?
 (a) Spleen (b) Thymus
 (c) Adenoids (d) Lymph nodes
79. The velocity of blood is highest in:
 (a) Inferior vena cava
 (b) Superior vena cava
 (c) Aorta
 (d) Thoracic duct

ANSWER KEY

1.	d	2.	d	3.	d	4.	c	5.	A	6.	c	7.	d	8.	b
9.	c	10.	a	11.	b	12.	a	13.	b	14.	d	15.	b	16.	b
17.	d	18.	a	19.	b	20.	a	21.	a	22.	b	23.	a	24.	c
25.	a	26.	c	27.	d	28.	c	29.	c	30.	a	31.	c	32.	a
33.	b	34.	b	35.	c	36.	b	37.	d	38.	c	39.	a	40.	d
41.	c	42.	c	43.	d	44.	c	45.	a	46.	d	47.	a	48.	a
49.	c	50.	a	51.	a	52.	a	53.	b	54.	a	55.	b	56.	d
57.	a	58.	a	59.	d	60.	b	61.	b	62.	a	63.	c	64.	c
65.	d	66.	b	67.	a	68.	d	69.	c	70.	a	71.	d	72.	b
73.	c	74.	b	75.	c	76.	a	77.	a	78.	d	79.	c		



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