

BODY FLUID & CIRCULATION

1. Match the columns and pick out the correct answer :-

Column-I		Column-II	
(a)	Fishes	(i)	4 chambered heart
(b)	Amphibians	(ii)	3 chambered heart
(c)	Crocodile	(iii)	2 chambered heart
(d)	Mammals		

(1) (a)→(i), (b)→(ii), (c)→(ii), (d)→(iii)

(2) (a)→(iii), (b)→(ii), (c)→(ii), (d)→(i)

(3) (a)→(iii), (b)→(ii), (c)→(i), (d)→(i)

(4) (a)→(iii), (b)→(i), (c)→(i), (d)→(ii)

2. In amphibians and reptiles, the left atrium receives oxygenated blood from the gills/lungs/skin and the right atrium gets the deoxygenated blood from other body parts. However, they get mixed up in the single ventricle which pumps out mixed blood called:-

- (1) Incomplete single circulation
- (2) Complete single circulation
- (3) Incomplete double circulation
- (4) Complete double circulation

3. Heart is __a__ derived organ, is situated in the __b__ cavity, in between the two __c__ slightly tilted to the __d__:-

	a	b	c	d
(1)	Endodermally	Thoracic	lungs	left
(2)	Mesodermally	Thoracic	lungs	left
(3)	Mesodermally	Thoracic	lungs	right
(4)	Endodermally	Thoracic	lungs	left

4. Choose the wrong statement :-

- (1) Heart has the size of a clenched fist
- (2) Heart is protected by a double walled membranous bag, the pericardium
- (3) Human heart has four chambers, two relatively large upper chambers called atria and two smaller lower chambers called ventricles
- (4) The atrium and ventricle of the same side are separated by a thick fibrous tissue called the atrio-ventricular septum

5. The opening between the right atrium and the right ventricle is guarded by a valve called __x__, whereas __y__ guards the opening between 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

6. Which of the following is considered as pacemaker of human heart?

- (1) SA node
- (2) AV node
- (3) Purkinje fibres
- (4) Bundle of His

7. Which of the these has a double closed type of circulatory system ?

- (1) Cockroach, Fish
- (2) Fish, Frog
- (3) Earthworm, Human
- (4) Birds, Human

8. Role of pacemaker is :-

- (1) To initiate and maintain the rhythmic contractile activity of the heart
- (2) To initiate and maintain the arrhythmic contractile activity of the heart
- (3) To initiate and maintain the rhythmic contractile activity of blood vessels
- (4) To generate minimum action potentials for initiating and maintaining the rhythmic contractile activity of the heart

9. Duration of a cardiac cycle:-

- (1) 0.8 seconds
- (2) 1.2 seconds
- (3) 1.8 seconds
- (4) 2.0 seconds

10. The second heart sound "dub" is associated with :-

- (1) Opening of semilunar valves
- (2) Opening of AV valves
- (3) Closure of AV valves
- (4) Closure of the semilunar valves

11. A unique vascular connection exists between the digestive tract and liver called :-

- (1) Renal portal system
- (2) Hypophyseal portal system
- (3) Gastric portal system
- (4) Hepatic portal system

12. All arteries carry oxygenated blood except :-

- (1) Hepatic
- (2) Systemic
- (3) Coronary
- (4) Pulmonary

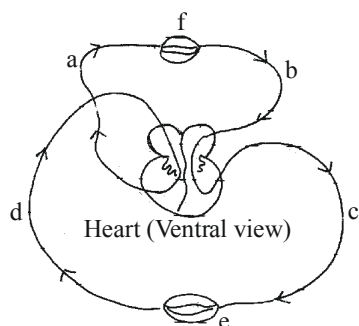
13. The volume of blood pumped out by each ventricle per minute and average 5ℓ in a healthy individual is called :-

- (1) Stroke volume
- (2) Joint diastole
- (3) Cardiac output
- (4) Ventricular diastole

14. Cardiac output is :-

- (1) Stroke volume x heart beat
- (2) Stroke volume - heart beat
- (3) Stroke volume + heart beat
- (4) Stroke volume ÷ heart beat

15. Identify a, b, c, d and e in the diagram given below-



a	b	c	d	e
(1) Pulmonary artery	Pulmonary vein	Ventral aorta	Vena cava	Body parts
(2) Pulmonary artery	Pulmonary vein	Dorsal aorta	Vena cava	Body parts
(3) Pulmonary vein	Pulmonary artery	Dorsal aorta	Vena cava	Lungs
(4) Pulmonary vein	Pulmonary artery	Dorsal aorta	Vena cava	Body parts

16. Match the columns and choose the correct answer :-

Column-I	Column-II	Column-III
a ₁ . Blood pressure	b ₁ . Blood pressure	c ₁ . 120/80 mmHg higher than normal
a ₂ . Hypertension	b ₂ . Blood pressure	c ₂ . 140/90 mmHg lower than normal
a ₃ . Hypotension	b ₃ . Pressure applied by	c ₃ . 100/70 mmHg flowing blood on the walls of arteries

(1) a₁b₃c₁ , a₂b₂c₂, a₃b₁c₃

(2) a₁b₃c₁, a₂b₁c₂, a₃b₂c₃

(3) a₁b₂c₂, a₂b₃c₃, a₃b₁c₁

(4) a₁b₁c₁, a₂b₂c₂, a₃b₃c₃

17. In humans, blood passes from the ventricles to the pulmonary artery and aorta due to :-

- (1) Increase in atrial pressure
- (2) Increase in ventricular pressure
- (3) Decrease in ventricular pressure
- (4) Suction pull

18. Cause of closure of semilunar valves in human heart is :-

- (1) Ventricular diastole and increase in ventricular pressure
- (2) Ventricular systole and increase in ventricular pressure
- (3) Ventricular diastole and decrease in ventricular pressure
- (4) Atrial diastole and decrease in atrial pressure

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

(1) Left atrium $\xrightarrow{\text{Oxygenated blood}}$ Lungs $\xrightarrow{\text{Deoxygenated blood}}$ Right ventricle

(2) Left atrium $\xrightarrow{\text{Deoxygenated blood}}$ Lungs $\xrightarrow{\text{Oxygenated blood}}$ Right ventricle

(3) Right ventricle $\xrightarrow{\text{Deoxygenated blood}}$ Lungs $\xrightarrow{\text{Oxygenated blood}}$ Left atrium

(4) Right ventricle $\xrightarrow{\text{Oxygenated blood}}$ Lungs $\xrightarrow{\text{Deoxygenated blood}}$ Left atrium

20. During each cardiac cycle two prominent sounds are produced which can be easily heard through a :-

- (1) Electro cardiograph
- (2) Stethoscope
- (3) Sphygmomanometer
- (4) Galvanometer

- 21.** Acute chest pain when no enough oxygen is reaching the heart muscle is called :-

 - (1) Heart failure
 - (2) Heart attack
 - (3) Cardiac arrest
 - (4) Angina pectoris

22. Which of the following is not a function of sympathetic nervous system ?

 - (1) Increase the rate of heart beat
 - (2) Decrease the rate of heart beat
 - (3) Increase the cardiac output
 - (4) Increase the strength of ventricular contraction

23. Which one of the statements is incorrect ?

 - (1) Factors for blood clotting present in blood plasma found in an inactive form
 - (2) Plasma without clotting factor is called serum
 - (3) Basophils are involved in inflammatory reactions
 - (4) Neutrophils are the most and eosinophils are the least among leucocytes

24. Which of the following statements are true ?

 - (1) Albumin helps in osmotic balance.
 - (2) Plasma without the clotting factors is called serum.
 - (3) Globulins are involved in defence mechanism.
 - (4) All of these

25. A healthy individual has gms of haemoglobin in every 100 ml of blood.

 - (1) 12-16 gm
 - (2) 16-20 gm
 - (3) 10-12 gm
 - (4) 9-12 gm

26. are the most abundant cells of the total WBCs and are the least among them.

 - (1) Acidophils, Basophils
 - (2) Basophils, Neutrophils
 - (3) Neutrophils, Monocyte
 - (4) Neutrophils, Basophils

ANSWERS KEY

Que.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Ans.	3	3	2	3	4	1	4	1	1	4	4	4	3	1	2	2	2	3	3	2
Que.	21	22	23	24	25	26														
Ans.	4	2	4	4	1	4														