

# CHAPTER 5

## Body Fluids and Circulation

### Blood and Lymph

1. Given below are two statements: (2022)

Statement I: The coagulum is formed of network of threads called thrombins

Statement II: Spleen is the graveyard of erythrocytes

In the light of the above statements, choose the most appropriate answer from the options given below.

- Statement I is incorrect but Statement II is correct
  - Both Statement I and Statement II are correct
  - Both statement I and statement II are incorrect
  - Statement I is correct but Statement II is incorrect
2. Which enzyme is responsible for the conversion of inactive fibrinogens to fibrins? (2021)
- Renin
  - Epinephrine
  - Thrombokinas
  - Thrombin
3. Persons with 'AB' blood group are called as "Universal recipients". This is due to: (2021)
- Absence of antigens A and B in plasma
  - Presence of antibodies, anti-A and anti-B, on RBCs
  - Absence of antibodies, anti-A and anti-B, in plasma
  - Absence of antigens A and B on the surface of RBCs

4. Match the following columns and select the correct option (2020)

Column-I		Column-II	
1.	Eosinophils	(i)	Immune response
2.	Basophils	(ii)	Phagocytosis
3.	Neutrophils	(iii)	Release histaminase, destructive enzymes
4.	Lymphocytes	(iv)	Release granules containing histamine

- (1) (2) (3) (4)
- (iv) (i) (ii) (iii)
  - (i) (ii) (iv) (iii)
  - (ii) (i) (iii) (iv)
  - (iii) (iv) (ii) (i)

5. Which of the following conditions cause erythroblastosis foetalis? (2020-Covid)

- Mother Rh<sup>-ve</sup> and foetus Rh<sup>+ve</sup>
- Both mother and foetus Rh<sup>-ve</sup>
- Both mother and foetus Rh<sup>+ve</sup>
- Mother Rh<sup>+ve</sup> and foetus Rh<sup>-ve</sup>

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

Column-I		Column-II	
A.	Fibrinogen	i.	Osmotic balance
B.	Globulin	ii.	Blood clotting
C.	Albumin	iii.	Defence mechanism

- a. A-iii B-ii C-i b. A-i B-ii C-iii  
c. A-i B-iii C-ii d. A-ii B-iii C-i

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

- They do not need to reproduce
  - They are somatic cells
  - They do not metabolise
  - All their internal space is available for oxygen transport
- Only (D)
  - Only (A)
  - (A), (C) and (D)
  - (B) and (C)

8. Serum differs from blood in: (2016 - II)

- Lacking clotting factors
- Lacking antibodies
- Lacking globulins
- Lacking albumins

9. Name the blood cells, whose reduction in number can cause clotting disorder, leading to excessive loss of blood from the body. (2016 - II)

- Neutrophils
- Thrombocytes
- Erythrocytes
- Leukocytes

10. Which one of the following is correct? (2015)

- Lymph = Plasma + RBC + WBC
- Blood = Plasma + RBC + WBC + Platelets
- Plasma = Blood - Lymphocytes
- Serum = Blood + Fibrinogen

11. Erythropoiesis starts in: (2015)

- Spleen
- Red bone marrow
- Kidney
- Liver

12. If you suspect major deficiency of antibodies in a person, to which of the following would you look for confirmatory evidences? (2015 Re)
- Serum albumins
  - Haemocytes
  - Serum globulins
  - Fibrinogen in plasma
13. Person with blood group AB is considered as universal recipient because he has: (2014)
- Both A and B antigens in the plasma but no antibodies
  - Both A and B antigens on RBC but no antibodies in the plasma
  - Both A and B antibodies in the plasma
  - No antigen on RBC and no antibody in the plasma
14. The most abundant intracellular cation is: [OS] (2013)
- $K^+$
  - $Na^+$
  - $Ca^{++}$
  - $H^+$

### Circulatory Pathways

15. Which one of the following statements is correct? (2022)
- Increased ventricular pressure causes closing of the semilunar valves
  - The atrio-ventricular node (AVN) generates an action potential to stimulate atrial contraction
  - The tricuspid and the bicuspid valves open due to the pressure exerted by the simultaneous contraction of the atria
  - Blood moves freely from atrium to the ventricle during joint diastole.
16. The QRS complex in a standard ECG represents: (2020)
- Depolarisation of auricles
  - Depolarisation of ventricles
  - Repolarisation of ventricles
  - Repolarisation of auricles
17. 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? (2019)
- 50 beats per minute
  - 75 beats per minute
  - 100 beats per minute
  - 125 beats per minute

18. Match the Column-I with Column-II (2019)

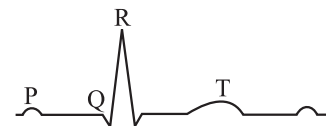
Column-I		Column-II	
A.	P - wave	i.	Depolarisation of ventricles
B.	QRS complex	ii.	Repolarisation of ventricle
C.	T - wave	iii.	Coronary ischemia
D.	Reduction in the size of T-wave	iv.	Depolarisation of atria
		v.	Repolarisation of atria

Select the correct option.

- A-iv B-i C-ii D-iii
  - A-iv B-i C-ii D-v
  - A-ii B-i C-v D-iii
  - A-ii B-iii C-v D-iv
19. Match the items given in Column-I with those in Column-II and select the correct option given below: (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-iii B-i C-ii
  - A-i B-iii C-ii
  - A-i B-ii C-iii
  - A-ii B-i C-iii
20. Blood pressure in the mammalian aorta is maximum during: (2015)
- Systole of the left ventricle
  - Diastole of the right atrium
  - Systole of the left atrium
  - Diastole of the right ventricle
21. Which one of the following animals has two separate circulatory pathways? (2015 Re)
- Lizard
  - Whale
  - Shark
  - Frog
22. Doctors use stethoscope to hear the sounds produced during each cardiac cycle. The second sound is heard when: (2015 Re)
- Ventricular walls vibrate due to pushing in of blood from atria
  - Semilunar valves close down after the blood flows into vessels from ventricles
  - AV node receives signal from SA Node
  - AV valves open up
23. The diagram given here is the standard ECG of a normal person. The P-wave represents the: (2013)



- End of systole
- Contraction of both the atria
- Initiation of the ventricular contraction
- Beginning of the systole

## Double Circulation & Regulation of Cardiac Activity

24. Which of the following is associated with decrease in cardiac output? (2020-Covid)
- Parasympathetic neural signals
  - Pneumotaxic centre
  - Adrenal medullary hormones
  - Sympathetic nerves

25. The hepatic portal vein drains blood to liver from (2017-Delhi)
- Heart
  - Stomach
  - Kidneys
  - Intestine

## Disorders of Circulatory System

26. Blood pressure in the pulmonary artery is: (2016 - I)
- Same as that in the aorta
  - More than that in the carotid
  - More than that in the pulmonary vein
  - Less than that in the vena cava

## Answer Key

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
a	d	c	d	a	d	a	a	b	b	b	c	b	a	d	b	c
18	19	20	21	22	23	24	25	26								
a	a	a	b	b	b	a	d	c								