

Topic :- Body Fluids And Circulation

- 1 (d)
Monocytes are the largest agranular leucocytes and are phagocytic, while mast cells of connective tissues continuously release, is blood plasma, a conjugated polysaccharide, named heparin
- 2 (d)
Lymphoid Organs The organs which secretes lymph are called lymphoid organs. Beside the lymph nodes, tonsils, thymus gland. Payer's patches, liver and spleen are the other lymphoid organs which secretes lymph
- 3 (c)
Interstitial fluid
- 5 (a)
Tricuspid valve consists of three flaps, situated between the right atrium and the right ventricle of the mammalian heart.
- 6 (a)
Red bone marrow.
Erythrocytes or RBC are the most abundant of the three types of blood cells. They have a count of about 5-5.5 million per cubic mm of the blood in an adult male and 4.5-5 million/mm³ in females. They are formed in the red bone marrow in the adults
- 7 (a)
The heart wall of frog composed of epicardium, myocardium and endocardium. The myocardium is composed of branched and striated yet involuntary cardiac muscles, which contracts and relax rhythmically at a fixed rate. The fibres of the self excitatory and conducting muscle of the heart are of three types –nodal fibres, transitional fibres and Purkinje fibres.
- 8 (a)
Types of Valve
(i) **Atrioventricular Valve** *These are two types*
1. **Bicuspid valve** It also called mitral valve which is present on the left side between

the left atrium and left ventricle. It consists of two cups of flaps

2. **Tricuspid valve** It consists of three flaps or cups present between the right atrium and right ventricle

(ii) **Semilunar Valve** It is present where the arteries leaves heart. They are of two types (a) Pulmonary valve (b) Aortic valve, which are present at the base of pulmonary artery and aorta, respectively.

The pulmonary and aortic valves are virtually identical through aortic valve consists of thicker fibrous structure than the pulmonary valve

9 (c)

During the 1970s, researcher discovered that umbilical cord blood could supply the same kinds of blood-forming (haematopoietic) stem cells as a bone marrow donor and so, umbilical cord blood began to be collected and stored. Cord blood stem cells also have the potential to give rise to other cell types in the body.

10 (d)

Heart failure means the state of heart when it is not pumping blood effectively enough to meet the needs of body. It is sometimes called congestive heart failure because congestion of the lungs is one of the main symptoms of this. Heart failure is not the same as cardiac arrest or a heart attack. In cardiac arrest, heart stops beating while in a heart attack, the heart muscle is suddenly damaged by an inadequate blood supply.

11 (c)

Electrocardiograph is a type of machine used to obtain an ECG (electrocardiogram)

12 (a)

Arteries convey the blood (oxygenated) away from the heart. In arteries, blood flows at high pressure. The wall of arteries is made up of three layers.

13 (d)

All of the above.

Blood is a liquid, mobile connective tissue consisting of fluid matrix, plasma and formed elements

14 (d)

I-True, II-False.

Double circulation consists of two parts

(i) **Pulmonary circulation** In this the movement of blood take place from heart to lung and then from lung to heart

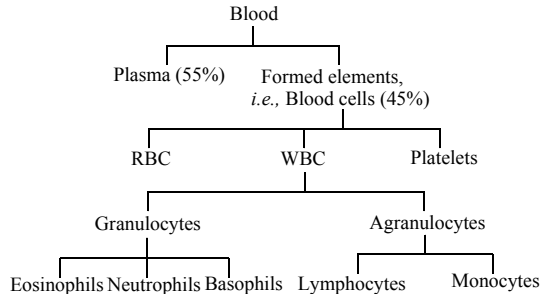
Right Auricle
↓ → Deoxygenated blood
Lungs
↓ → Oxygenated blood
Left Auricle

(ii) **Systemic Circulation** In this the movement of blood take place between heart and different part of body except lungs. It has arterial and venous system

15

(a)

A-I, II, III, B-IV, V.



16

(d)

To obtain a standard ECG a patient is connected to a machine with three electrical leads (one to each wrist and one to left ankle) that continuously monitor the heart activity. For detailed evaluation of the heart's function, multiple leads are attached to the chest region

17

(b)

RBCs are circular, biconcave and enucleated in mammals (except camel where they are oval and nucleated). It is biconcave so as to increase the surface area (For O₂ transfer) and allows easy passage through blood vessel

18

(d)

RBCs in mammals are formed in red bone marrow.

19

(a)

Vena cava (great veins) are of two major types

(i) **Superior vena cava** which collects the deoxygenated blood from the cephalic head region of the body.

(ii) **Inferior vena cava** which collects the deoxygenated blood from the lower portion of the body.

The vena cava drains deoxygenated blood to the right auricle

20

(b)

Artery	Supplies Blood to
Intercostal	Intercostal muscles
Inferior phrenic	Lower surface of diaphragm
Coeliac	
1.Left gastric artery	Stomach Pancreas, gall

2.Common hepatic artery	bladder, liver, etc
3.Splenic artery	Pancreas, stomach, spleen
Superior mesenteric	Various parts of small intestine
Inferior mesenteric	Most part of colon, rectum and anal canal

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ANSWER-KEY										
Q.	1	2	3	4	5	6	7	8	9	10
A.	d	d	c	a	a	a	a	a	c	d
Q.	11	12	13	14	15	16	17	18	19	20
A.	c	a	d	d	a	d	b	d	a	b

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