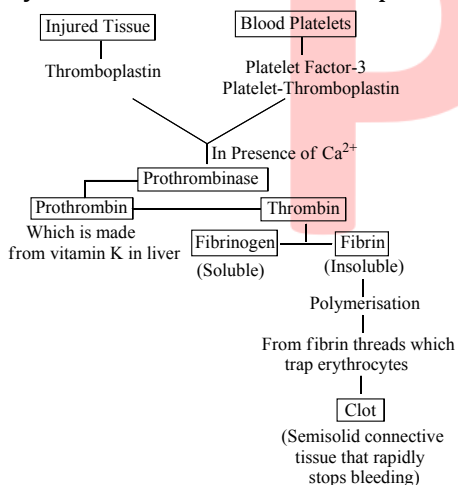


Topic :- Body Fluids And Circulation

- 1 (a)
Adrenal gland (a gland present on the medullary region of kidney) secretes emergency hormone like epinephrine, nor epinephrine, which increases the heart rate
- 2 (d)
Bundle of His is present in the intraventricular septum connected to AV bundle and its branches reach the Purkinje fibres in the ventricles. AV bundles provides the only route for the transmission of wave of excitation the from atria to ventricles

- 3 (b)
By the traumatised cell at the place of injury



- 4 (a)
Adrenal gland controls blood pressure.
- 5 (a)
Coronary heart disease.
Coronary Artery Disease (CAD) Often referred to as atherosclerosis, affects the vessels that supply blood to heart muscle. It is caused by the deposition of fat, cholesterol, calcium and fibrous tissue, which makes lumen of the arteries narrower
Angina It is also called 'angina pectoris'. A symptom of acute chest pain appears when no enough oxygen is reaching the heart muscle

Heart failure It means the state of heart when it is not pumping blood effectively enough to meet the needs of the body. It is sometimes called congestive heart failure because congestion of the lungs is one of the main symptoms of this disease

Cardiac-Arrest When the heart stops beating

Heart Attack When the heart muscles are suddenly damaged by an inadequate blood supply

6 **(a)**
In human body 98.5% of O_2 is transported by the respiratory pigment haemoglobin which is present in erythrocyte of blood. One molecule of haemoglobin can carry four molecules of O_2 .

7 **(c)**
The lower limit of blood pressure is normally 80 mm Hg and is developed at diastole of ventricle. It is also known as diastolic blood pressure.

9 **(d)**
During ventricular systole, oxygenated blood is pumped into the aorta and deoxygenated blood is pumped into the pulmonary artery.

10 **(b)**
Pacemaker or SA-node lies in the wall of right atrium near the opening of the superior vena cava.

11 **(c)**
Duration of Cardiac Cycle ($\cong 0.88$ sec)

(i)	Atrial systole	0.18 sec
(ii)	Atrial diastole	0.08 sec
(iii)	Ventricular systole	0.30 sec
(iv)	Ventricular diastole	0.32 sec

Various events occur during cardiac cycle

Phase	SL Valves	AV Valves	Atria	Ventricles
Iso-metric relaxation	Closed	Closed	Diastole	Diastole
Rapid-filling	Closed	Open	Diastole	Diastole
Diastasis	Closed	Open	Diastole	Diastole
Atrial systole	Closed	Open	Systole	Diastole

e				
Ejection	Open	Closed	Diastole	Systole

12 (c)

Blood groups and donor compatibility

S. No	Blood Groups	Antigen on RBC	Antibody in Plasma	Donor's Group
1.	A	A	Anti B	A, O
2.	B	B	Anti A	B, O
3.	AB	AB	Nil	AB, A, B, O
4.	O	Nil	Anti AB	O

13 (b)

This interstitial fluid is called the tissue fluid or lymph, which plays an important role in immunity against disease. It has the same mineral distribution as that of the plasma

14 (a)

Vitamin-K, also called anti-haemorrhagic factor, is a fat soluble vitamin and is essential for the formation of prothrombin in the liver.

15 (c)

A-vena cava, B-left atrium, C-right ventricle, D-left ventricle, E-right atrium, F-interventricular septum

16 (b)

The oxygenated blood from two lungs is collected by right and left pulmonary veins, which unite to form a common pulmonary vein (pulmocutaneous vein), which opens directly into the left auricle, on the dorsal side.

17 (b)

The atrioventricular opening between left atrium and left ventricle is guarded by bicuspid valve, while the right atrioventricular opening is guarded by tricuspid valve

18 (c)

The waves of contraction originating from SA-node, when reaches the AV-node (pace-setter), the latter is stimulated and excitatory impulses are rapidly transmitted from it to all parts of the ventricle *via* bundle of His and Purkinje fibres.

19 (c)

Open circulatory system.

In open circulatory system instead of capillaries, blood vessels join directly with the open sinuses. Blood is actually a combination of blood and interstitial fluid called haemolymph

which is forced from the blood vessels into the large sinuses, where it actually, bathes the internal organs

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

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