

Body Fluids and Circulation

I. Select the correct answer from the following questions:

Question 1.

Heart is incompletely 4 chambered in

- (a) Amphibian
- (b) Birds
- (c) Fishes
- (d) Reptiles

▼ [Answer](#)

Answer: (d) Reptiles

Question 2.

Blood will lose maximum O_2 while passing through

- (a) Left atrium
- (b) Arteries
- (c) Tissue capillaries
- (d) Alveolar capillaries

▼ [Answer](#)

Answer: (c) Tissue capillaries

Question 3.

Ventricular systole is stimulated by

- (a) S-A node
- (b) A-V aperture
- (c) A-V node
- (d) A-V valve

▼ [Answer](#)

Answer: (c) A-V node

Question 4.

Lymph lacks

- (a) Erythrocytes
- (b) Plasma proteins
- (c) Platelets
- (d) All of these

▼ [Answer](#)

Answer: (d) All of these

Question 5.

The sound dupp in heart is produced by

- (a) Closure of semilunar valves
- (b) Closure of A-V valves
- (c) Opening of A-V Valves
- (d) Opening of semilunar valves

▼ [Answer](#)

Answer: (a) Closure of semilunar valves

Question 6.

Heart beat initiates from

- (a) Bundle of his
- (b) Purkinje fibres
- (c) Sinuauricular node
- (d) Auriculoventricular node

▼ [Answer](#)

Answer: (c) Sinuauricular node

Question 7.

Pulmonary vein carries

- (a) Pure blood from heart
- (b) Impure blood from lungs
- (c) Pure blood from lungs
- (d) Impure blood from heart

▼ [Answer](#)

Answer: (c) Pure blood from lungs

Question 8.

Blood and lymph differ in

- (a) Blood has cells while lymph is without cells
- (b) Blood has RBCs which are absent in lymph
- (c) Blood has several inorganic substances which are absent in lymph
- (d) Blood has WBCs which are absent in lymph

▼ [Answer](#)

Answer: (b) Blood has RBCs which are absent in lymph

Question 9.

Blood platelets are source of

- (a) Calcium
- (b) Fibrinogen
- (c) Haemoglobin
- (d) Thrombolastin

▼ [Answer](#)

Answer: (d) Thromboplastin

Question 10.

Pacemaker of the heart is

- (a) A-V node
- (b) I-A septum
- (c) S-A node
- (d) A-V septum

▼ [Answer](#)

Answer: (c) S-A node

Question 11.

Valves are found in veins to check the back flow of the blood, flowing under

- (a) Low pressure
- (b) High pressure
- (c) Very high pressure
- (d) No pressure

▼ [Answer](#)

Answer: (a) Low pressure

Question 12.

The vessel carrying blood to Bowman's capsule is

- (a) Efferent arteriole
- (b) Afferent arteriole
- (c) Pulmonary vein
- (d) Renal vein

▼ [Answer](#)

Answer: (b) Afferent arteriole

Question 13.

Thrombin occurs in vertebrates in

- (a) Blood and important for clotting
- (b) Liver and initiates secretion
- (c) Stomach and digests proteins
- (d) Blood and imparts red colour

▼ [Answer](#)

Answer: (a) Blood and important for clotting

Question 14.

The blood pressure is measured by the instrument

- (a) Stethoscope
- (b) Echocardiograph
- (c) Sphygmomanometer
- (d) Electrocardiograph

▼ [Answer](#)

Answer: (c) Sphygmomanometer

Question 15.

Which of the following carries oxygenated blood from the lungs to the heart

- (a) Pulmonary veins
- (b) Renal vein
- (c) Hepatic vein
- (d) Jugular vein

▼ [Answer](#)

Answer: (a) Pulmonary veins

Question 16.

A pacemaker is meant for

- (a) Transplanting heart
- (b) Transplanting liver
- (c) Regulation of blood flow
- (d) Initiation of heart beats

▼ [Answer](#)

Answer: (d) Initiation of heart beats

Question 17.

In which animal haemoglobin is dissolved

- (a) Earthworm
- (b) Frog
- (c) Cockroach
- (d) Rabbit

▼ [Answer](#)

Answer: (a) Earthworm

Question 18.

Blood circulation was first discovered by

- (a) Hiss
- (b) Darwin
- (c) Lantestiner
- (d) Harvey

▼ [Answer](#)

Answer: (d) Harvey

Question 19.

Average heart beat/pulse rate in adult human being is

- (a) 80/ minute
- (b) 72/minute
- (c) 100/minute
- (d) 60/minute

▼ Answer

Answer: (b) 72/minute

Question 20.

Normal blood pressure in an adult human beings is

- (a) 200/110
- (b) 120/80
- (c) 100/60
- (d) 150/100

▼ Answer

Answer: (b) 120/80

II. Fill in the blanks:

Question 1.

..... is the most commonly used body fluid by most of the higher organisms including for this purpose.

▼ Answer

Answer: Blood, humans

Question 2.

Another body fluid, also helps in the transport of certain substances.

▼ Answer

Answer: lymph

Question 3.

Blood is a special connective tissue consisting of a fluid matrix, and formed elements.

▼ Answer

Answer: plasma

Question 4.

....., and are the major proteins.

▼ Answer

Answer: Fibrinogen, globulins, albumins

Question 5.

Plasma is a coloured, viscous fluid constituting nearly percent of the blood.

▼ Answer

Answer: straw, 55

Question 6.

Plasma also contains small amount of minerals like etc.

▼ Answer

Answer: Ca^{++} , Mg^{++} , HCO_3^- Cl^-

Question 7.

RBCs are formed in the in the adults.

▼ Answer

Answer: red bone marrow

Question 8.

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

▼ Answer

Answer: 12-16

Question 9.

..... are also known as white blood cells.

▼ Answer

Answer: Leucocytes

Question 10.

Both are responsible for immune responses of the body.

▼ Answer

Answer: B and T lymphocytes

Question 11.

Platelets also called are cell fragments produced from (special cells in the bone marrow).

▼ Answer

Answer: thrombocytes, megakaryocytes

Question 12.

The distribution of antigens and antibodies in the four groups of blood.,, and are given

▼ Answer

Answer: A, B, AB, O

Question 13.

Such individuals are called and those in whom this antigen is absent are called

▼ Answer

Answer: Rh positive (Rh+ve), Rh negative (Rh-ve)

Question 14.

A specialised cardiac musculature called the is also distributed in the heart.

▼ Answer

Answer: nodal tissue

Question 15.

These branches give rise to minute fibres throughout the ventricular musculature of the respective sides and are called

▼ Answer

Answer: purkinje fibres

III. Mark the statements True (T) or False (F):

Question 1.

The SAN can generate maximum number of action potentials i.e., 70-75 per minute and is responsible for initiating and maintaining the rhythmic contractile activity of the heart. Therefore, it is called the pacemaker.

▼ Answer

Answer: True

Question 2.

Ventricular systole increases the ventricular pressure causing the closure of tricuspid and bicuspid valves due to attempted backflow of blood into the atria.

▼ [Answer](#)

Answer: True

Question 3.

Our heart normally beats 50-60 times in a minute.

▼ [Answer](#)

Answer: False

Question 4.

During a cardiac cycle, each ventricle pumps out approximately 70 ml of blood which is called the stroke volume

▼ [Answer](#)

Answer: True

Question 5.

The cardiac output of an athlete will be much higher than that of an ordinary man

▼ [Answer](#)

Answer: True

Question 6.

During each cardiac cycle two prominent sounds are produced which can be easily heard through a stethoscope

▼ [Answer](#)

Answer: True

Question 7.

ECG is a graphical representation of the electrical activity of the heart during a cardiac cycle

▼ [Answer](#)

Answer: True

Question 8.

To obtain a standard ECG, a patient is connected to the machine with three electrical leads (one to each wrist and to the left ankle) that continuously monitor the heart activity

▼ [Answer](#)

Answer: True.

Question 9.

The T-wave represents the electrical excitation (or depolarisation) of the atria, which leads to the contraction of both the atria.

▼ [Answer](#)

Answer: False

Question 10.

The P-wave represents the return of the ventricles from excited to normal state (repolarisation).

▼ [Answer](#)

Answer: False

Question 11.

A special coronary system of blood vessels is present in our body exclusively for the circulation of blood to and from the cardiac musculature.

▼ [Answer](#)

Answer: True

Question 12.

Adrenal medullary 7 hormones can also increase the cardiac output.

▼ [Answer](#)

Answer: True

Question 13.

Hypertension is the term for blood pressure that is higher than normal (120/80). High blood pressure leads to heart diseases and also affects vital organs like brain and kidney.

▼ [Answer](#)

Answer: True

Question 14.

Coronary Artery Disease, often referred to as atherosclerosis, affects the vessels that supply blood to the heart muscle.

▼ [Answer](#)

Answer: True

Question 15.

Heart failure means the state of heart which is not pumping blood effectively enough to meet the needs of the body.

▼ Answer

Answer: True

IV. Match the items of Column I with the items of Column II

Column I	Column II
(a) Angina pectoris	1. Systolic
(b) 120 mm Hg (milimetres of mercury pressure)	2. Diastolic
(c) 80 mm Hg (milimetres of mercury pressure)	3. myogenic
(d) Heart is called	4. A symptom of acute chest pain appears when enough oxygen is not reaching the heart muscle.
(e) Plasma is a	5. Water and proteins contribute 6-8 percent of it.
(f) 90-92 percent of plasma is	6. against the Rh antigens
(g) Erythrocytes or	7. White blood cells (WBC)
(h) Leucocytes	8. Straw coloured
(i) Thrombocytes	9. called 'Universal donors'
(j) 'O' group individuals are	10. Red blood cells (RBC)
(k) AB group	11. Called 'Universal recipients'
(l) An Rh-ve person if exposed to Rh+Ve blood will form specific antibodies	12. Platelets
(m) Lymph is a colourless fluid containing specialised lymphocytes	13. Which are responsible for the immune responses of the body.
(n) Annelids and chordates have a	14. Closed circulatory system.
(o) Rh antigens of the foetus do not get exposed to the Rh-ve blood of	15. the mother in the first pregnancy as the two bloods are well separated by the placenta.

▼ Answer

Answer:

Column I	Column II
(a) Angina pectoris	4. A symptom of acute chest pain appears when enough oxygen is not reaching the heart muscle.
(b) 120 mm Hg (milimetres of mercury pressure)	1. Systolic
(c) 80 mm Hg (milimetres of mercury pressure)	2. Diastolic
(d) Heart is called	3. myogenic

(e) Plasma is a	8. Straw coloured
(f) 90-92 percent of plasma is	5. Water and proteins contribute 6-8 percent of it.
(g) Erythrocytes or	10. Red blood cells (RBC)
(h) Leucocytes	7. White blood cells (WBC)
(i) Thrombocytes	12. Platelets
(j) 'O' group individuals are	9. called 'Universal donors
(k) AB group	11. Called 'Universal recipients
(l) An Rh-ve person if exposed to Rh+Ve blood will form specific antibodies	6. against the Rh antigens
(m) Lymph is a colourless fluid containing specialised lymphocytes	13. Which are responsible for the immune responses of the body.
(n) Annelids and chordates have a	14. Closed circulatory system.
(o) Rh antigens of the foetus do not get exposed to the Rh-ve blood of	15. the mother in the first pregnancy as the two bloods are well separated by the placenta.