



# BIOLOGY

## BOOKS - A2Z BIOLOGY (HINGLISH)

### BODY FLUIDS AND CIRCULATION

#### Section A Topicwise Questions Topic 1 Blood Plasma And Formed Elements

1. Fill in the blanks:

a. Simple organisms like sponges and

coelenterates circulate ...1... from their surroundings through their body cavities of facilitate the cells to exchange of  $O_2$ ,  $CO_2$ , nutrients and waste products.

b. More complex organisms used special fluids within their bodies to transport such materials. The ...2... is most commonly used body fluid by most of the higher organisms including humans for this purpose.

c. Another body fluid ...3... also helps in the transport of certain substances.

A. 1-lymph, 2-water, 3-blood

B. 3-lymph, 1-water, 2-blood

C. 2-lymph, 3-water, 1-blood

D. 2-lymph, 1-water, 3-blood

**Answer: B**



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2. Read the following statements and find out incorrect statements.

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

b. Plasma is a straw coloured, viscous fluid constituting nearly 90-92 percent of the blood.

c. 55 percent of plasma is water and proteins contribute 6-8 per cent of it.

d. Fibrinogen are needed for clotting or coagulation of blood.

(e) Factors for clotting of blood are present in the plasma in an inactive form.

A. a,b and c

B. b,c and d

C. c,d and e

D. a,b and e

**Answer: A**



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**3. Which of the following is not a constituent of formed elements?**

A. Erythrocytes

B. Leucocytes

C. Platelets

## D. Plasma

**Answer: D**



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**4. Match the columns I and II, and choose the correct combination from the options given.**

**Column I (WBCs)**

- a. Eosinophils
- b. Basophils
- c. Neutrophils
- d. Lymphocytes
- e. Monocytes

**Column II (Function)**

- 1. Involved in inflammatory reactions
- 2. Allergic reactions
- 3. Responsible for immune response
- 4. Phagocytic cells
- 5. Gas transport

A. a-4, b-5, c-1, d-2 ,e-3

B. a-2, b-1, c-4, d-3 ,e-5

C. a-1, b-2, c-3, d-4 ,e-3

D. a-2, b-1, c-4, d-3 ,e-4

**Answer: D**



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5. Which of the following leucocytes destroy foreign organisms entering the body?

a. Eosinophils, b. Basophils, c. neutrophils, d.  
Monocytes, e. Lymphocytes

A. a and b

B. b and c

C. c and d

D. d and e

**Answer: C**



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6. The most abundant and least abundant cells of the blood are

- A. RBCs and WBCs respectively
- B. WBCs and RBCs respectively
- C. RBCs and platelets respectively
- D. Platelets and eosinophils respectively

**Answer: A**



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7. Most abundant and least abundant WBCs are

A. Lymphocytes and monocytes respectively

B. Neutrophils and basophils respectively

C. Eosinophils and monocytes respectively

D. Neutrophils and eosinophils respectively

**Answer: B**



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8. Platelets are also called

A. Thromboplasts

B. Thromboblats

C. Thrombocytes

D. Megakaryocytes

**Answer: C**



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9. Platelets are the cell fragments produced from

- A. Thromboplasts
- B. Thromboblats
- C. Thrombocytes
- D. Megakaryocytes

**Answer: D**



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10. Recognise the figure and find out the correct matching



(a)



(b)



(c)



(d)

A. a-B lymphocyte, b-RBCs, c-monocyte, d-eosinophil

B. a-RBC, b-platelets, c-T lymphocyte, d-eosinophil

C. a-RBC, b-platelets, c-eosinophil, d-T lymphocyte

D. a-RBC, b-platelets, c-neutrophil, d-B  
lymphocyte

**Answer: C**



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**11. Megakaryocytes are present in**

A. Blood

B. Liver

C. Bone

D. Bone marrow

**Answer: D**



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**12.** A reduction in the number of platelets can lead to

A. Blood coagulation inside vessels

B. Clotting disorders

C. Excessive loss of blood from the body

D. Both B and C

**Answer: D**



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**13.** Blood grouping which is/are widely used all over the world are

A. ABO grouping

B. Rh grouping

C. Both A and B



D. None of the above

**Answer: C**



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**14. Match the column I and II, and choose the correct combination from the options given.**

<b>Column I</b>		<b>Column II</b>	
a. Eosinophils	1.	0.5 – 1%	
b. Basophils	2.	2 – 3%	
c. Neutrophils	3.	6 – 8%	
d. Lymphocytes	4.	20 – 25%	
e. Monocytes	5.	60 – 65%	

A. a-1, b-2, e-3, c-4,d-5

B. b-1, a-2, e-3, d-4,c-5

C. c-1, a-2, b-3, e-4,d-5

D. b-1, c-2, d-3, c-4,e-5

**Answer: B**



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**15. Haemoglobin value for a healthy adult male is**

A. 10g/100 ml

B. 11g/100ml

C. 12g/100 ml

D. 12-16 g/100 ml

**Answer: D**



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**16.** Find the correct descending order of percentage proportion of leucocytes in human blood.

A. Neutrophils → Basophils →

Lymphocytes → Acidophils →

monocytes

B. Neutrophils → Monocytes →

Lymphocytes → Acidophils →

Basophils

C. Neutrophils → Lymphocytes →

Monocytes → Acidophils →

Basophils

D. Neutrophils → Acidophils →

Basophils → Lymphocytes →

Monocytes

**Answer: C**



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**17.** Which leucocytes release histamine ,  
serotonin and heparin ?

A. Acidophil

B. Monocyte

C. Basophil

D. Neutrophil

**Answer: C**



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**18.** Cell fragments of megakaryocytes yield

A. Erythrocytes

B. Granulocytes

C. Agranularocytes

D. Blood platelets

**Answer: D**



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**19.** Which among the following statements are correct and which are wrong ?

1. Plasma constitutes 45 % of blood.

2. Albumin is plasma protein involved in osmotic balance,

3. Blood clotting factors are present in blood.
4. Plasma without clotting factors is serum.
5. Minerals are not found in blood

A. 1-4 correct,5 wrong

B. 1-2 correct, 3,4,5 wrong

C. 2,3,4 correct, 1 and 5 wrong

D. 2 and 4 correct, 1,3,5 wrong

**Answer: C**



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20. Allergic responses are regulated by

A. Eosinophils

B. Neutrophils

C. Basophils

D. Monocytes

**Answer: A**



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21. Osmotic pressure is maintained by blood colloid

A. Albumin

B. Thrombin

C. Fibrinogen

D. Globulin.

**Answer: A**



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22. Kidney-shaped nucleus occurs in

A. Neutrophil

B. Eosinophil

C. Monocyte

D. Lymphocyte

**Answer: C**



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23. Mammalian RBCs are enucleated so that

A. Nucleus is non-essential for RBC

B. RBCs cannot divide

C. RBCs can carry more Hb

D. Nucleus does not show lathal effect

**Answer: C**



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**24. In leucopenia**

A. Leucocytes increase above 6000

B. Leucocytes decrease below 5000

C. Bone marrow is destroyed

D. Total number of lymphocytes decrease

from 2 % to 0.5 %

**Answer: B**



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**25.** Match the column I and II, and choose the correct combination from the options given.

**Column I**  
(Formed elements)

**Column II**  
(Number)

- |                 |                                       |
|-----------------|---------------------------------------|
| a. Erythrocytes | 1. 5–5.5 millions $\text{mm}^{-3}$    |
| b. Leucocytes   | 2. 6000-8000 $\text{mm}^{-3}$         |
| c. Platelets    | 3. 1,50,000-3,50,000 $\text{mm}^{-3}$ |

A. a-1,b-2,c-3

B. a-2,b-1,c-3

C. a-3,b-2,c-1

D. a-1,b-3,c-2

**Answer: A**



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**26.** Which of the following statements are incorrect ?

- (i) Leucocytes disintegrate in spleen and liver
- (ii) RBCs, WBCs and blood platelets are produced by bone marrow
- (iii) Neutrophils bring about destruction and detoxification of toxins of proteins origin
- (iv) Important function of lymphocytes is to produce antibodies.

A. a and b only

B. a and d only

C. a and c only

D. b and c only

**Answer: C**



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**27.** Recognise the figure and find out the correct matching



(a)



(b)



(c)



(d)



A. a-basophil, c-neutrophil, d-B lymphocyte,

b-monocyte

B. c-basophil, d-neutrphil, a-B lymphocyte,

b-monocyte

C. b-basohil, a-neutrophil, c-B lymphocyte,

d-monoocyte

D. c-basophil, d-neutrophil, b-B lymphocyte,

a-monocyte

**Answer: D**



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**28.** Abnormal fall in total count of WBCs in the human blood is called

A. Anaemia

B. Polycythemia

C. Leukopenia

D. Leukaemia

**Answer: C**



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**29. Plasma proteins perform**

- A. Nutritive function
- B. Physicochemical function
- C. Transport function
- D. All of the above

**Answer: D**



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**30. Which one secretes anticoagulant?**

A. Mast cells

B. Nerve cells

C. Adipose cells

D. Plasma cells

**Answer: A**



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**31.** Largest corpuscles in human blood are

A. Lymphocytes

B. Basophils

C. Erythrocytes

D. Monocytes

**Answer: D**



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**32.** The ratio of RBC to WBC in human is

A. 6 : 1

B. 60 : 1

C. 600 : 1

D. 6000 : 1

**Answer: C**



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**33.** Which is correct about leucocytes?

A. They are red coloured

B. They can cross capillaries

C. They are enucleate

D. Decrease in their number causes  
leukemia

**Answer: B**



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34. If a sample of blood shows clumping with antiserum 'A' but not with antiserum 'B', then it is :

A. O

B. A

C. B

D. Ab

**Answer: B**



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**35.** Match the column I and II, and choose the correct combination from the options given.

<b>Column I</b>	<b>Column II</b>
a. Eosinophils	1. Coagulation
b. RBC	2. Universal Recipient
c. AB group	3. Resist infection
d. Platelets	4. Contraction of Heart
e. Systole	5. Gas transport

A. a-1, b-5, c-2, d-1,e-4

B. a-5, b-1, c-3, d-4,e-2

C. a-3, b-1, c-2, d-5,e-4

D. a-3, b-5, c-2, d-4,e-1

**Answer: A**



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**36.** Donor X and recipient Y belong to same blood group. Transfusion has led to RBC agglutination because

A. X is  $Rh^+$ , Y is  $Rh^-$

B. X is  $Rh^-$ , Y is  $Rh^+$

C. Both are  $Rh^+$

D. Both are  $Rh^-$

**Answer: A**



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**37. Thrombocytes have a life of**

A. 3-4 weeks

B. 4-5 weeks

C. 3-4 days

D. None of the above

**Answer: C**



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**38.** PH of blood in arteries and veins is

- A. Higher in arteries and lower in veins
- B. Higher in veins and lower in arteries
- C. Same in both
- D. Variable in both

**Answer: A**



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**39.** Cells froms in bone marrow include

- A. RBCs only
- B. RBC and leucocytes
- C. Leucocytes only
- D. Lymphocytes only

**Answer: B**



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## Section A Topicwise Questions Topic 2 Blood Groups

1. Chemicals that can induce immune response are called

- A. Antigen
- B. Antibody
- C. Antiserum
- D. Antitoxin

**Answer: A**





2. Fill in the blanks:

Blood groups	Antigens on RBCs	Antibodies in plasma
A	A	...1...
B	B	...2...
AB	...3...	...4...
O	...5...	anti—A, B

A. 1-anti-A,2-anti-B,3-nil,4-anti-B,5-A,B

B. 1-anti-A,2-anti-B,3-A,B,4-nil,5-nil

C. 1-anti-B,2-anti-A,3-A,B,4-nil,5-nil

D. 1-anti-B,2-anti-A,3-nil,4-anti-B,5-A,B

**Answer: C**



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**3. How many individuals are Rh positive (Rh+ve)?**

A. 80 %

B. 20 %

C. 33 %

D. 67 %



**Answer: A**



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4. Which of the following is true for erythroblastosis foetalis?

- A. This could cause severe anemia
- B. This could cause jaundice
- C. This could be fatal to the foetus
- D. All of the above

**Answer: D**



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5. Erythroblastosis foetalis can be avoided by administering ...a... to the ...b... immediately after the delivery of the ...c... child.

- A. a-Rh antibodies, b-child, c-first
- B. a-Rh antibodies, b-mother, c-second
- C. a-anti-Rh antibodies, b-mother, c-second
- D. a-anti-Rh antibodies, b-mother, c-first

**Answer: D**



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6. Rh-ve person donated blood to Rh+ve person for the second time. Then

A. Rh (-ve) blood starts reacting to Rh (-ve)

blood

B. Rh (+ve) person will die

C. Rh (-ve) person will die

D. Nothing happens to Rh (+ve) person

**Answer: D**



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7. Rh factor is concentrated to species of monkey

A. *Macaca radiata*

B. *Presbytes rhesus*

C. *Macaca rhesus*

D. *Macaca mulatta*

**Answer: C**



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**8. Rh factor occurs in**

A. All reptiles

B. Man and Rhesus Monkey

C. All mammals

D. All vertebrates

**Answer: B**



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9. Factors present on the surface of RBCs which are related to heredity are

A. Blood groups

B. Antigens

C. Antibodies

D. Haemoglobin

**Answer: B**



**10.** For safe blood transfusion

- A. Donor's RBC should not contain antibodies against recipient's serum
- B. Recipient's serum should not contain antigens against donor's antibodies
- C. Recipient's serum should not contain antibodies against RBC of donors

D. Recipient's RBC should not contain antibodies against donor's antigens

**Answer: C**



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**11. Blood groups were discovered by**

A. Harvey

B. Landsteiner

C. Miller



D. Hippocrates

**Answer: B**



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**12.** A doctor suggested to a couple not to have more than one child because of

A.  $Rh^+$  male and  $Rh^-$  female

B.  $Rh^+$  male and  $Rh^+$  female

C.  $Rh^+$  male and  $Rh^+$  female

D.  $Rh^-$  male and  $Rh^-$  female

**Answer: A**



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**13.** Blood group is due to :

- A. Specific antigens on the surface of WBC
- B. Specific antibodies on the surface of RBC
- C. Specific antigens on the surface of RBC
- D. Type of haemoglobin

**Answer: C**



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**14.** Most common blood group in India and World is

A. AB

B. A

C. B

D. O

**Answer: D**



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**15.** A person with blood group A possesses

- A. Antigen A and antibodies b
- B. Antigen A and antibodies a
- C. No antigen but antibodies a and b
- D. Antigen A and B but no antibodies

**Answer: A**



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16. A person with blood group A required blood. The blood group which can be given is

A. A and B

B. A and AB

C. A and O

D. A,B, AB and O.

**Answer: C**



17. The disease erythroblastosis foetalis of human baby is due to

A. Incompatibility of blood groups of the couple

B. Incompatibility of blood groups of embryo and mother

C. Maladjustment of Rh factor

D. All of the above

**Answer: D**



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**18.** Child death may occur in the marriage of

- A.  $Rh^+$  man and  $Rh^+$  women
- B.  $Rh^+$  man and  $Rh^-$  women
- C.  $Rh^-$  man and  $Rh^+$  women
- D.  $Rh^-$  man and  $Rh^-$  women

**Answer: B**



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19. An  $Rh^{-}$  individual receives  $Rh^{+}$  blood. The recipient becomes :

- A. Sterile
- B. Dead
- C. No reaction
- D. iso-immunised

**Answer: D**





20. Rh factor is named after

A. Monkey

B. Drosophila

C. Rat

D. Man

**Answer: A**



Section A Topicwise Questions Topic 3  
Coagulation Of Blood And Tissue Fluid Lymph

1. A dark reddish brown scum formed at the site of cut or an injury over a period of time which is called

A. Clot

B. Scar

C. Coagulum

D. Both A and C

**Answer: D**



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2. An enzyme complex which is formed by a series of linked enzymic reactions (cascade process) is called

- A. Thrombin
- B. Prothrombin
- C. Thrombokinase
- D. Fibrinogen

**Answer: C**



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**3.** Clot is formed mainly of a network of threads called

- A. Fibrinogen
- B. Prothrombin
- C. Thrombin
- D. Fibrin

**Answer: D**



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4. Prothrombin  $\xrightarrow{a}$  Thrombin

Fibrinogen  $\xrightarrow{b}$  Fibrin

Recognise a and b

A. a-thrombokinase, b-thrombin

B. a-fibrin, b-thrombokinase

C. a-thrombokinase, b-thrombinase

D. a-thrombinase, b-thrombokinase

**Answer: A**



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5. Thromboplastin required for blood clotting at the place of injury is released by

A. Blood platelets

B. Eosinophils

C. Neutrophils

D. Lymphocytes

**Answer: A**



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**6. Important function of lymph is**

- A. Transport oxygen to brain
- B. Transport  $CO_2$  to lungs
- C. Return RBCs to lymph nodes
- D. Return interstitial fluid to blood

**Answer: D**



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7. Murmur occurs due to defect in

- A. Heart valves
- B. SA node
- C. AV node
- D. Purkinje fiber

**Answer: A**



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8. Normal blood level of calcium in adults is

- A. 20-30 mg/dl
- B. 15.5 – 20.0mg / dl
- C. 8.5 – 10.5mg / dl
- D. 5 mg/dl

**Answer: C**



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9. Which of the following substances, if introduced into the blood system, would cause coagulation of blood at the site of its introduction

A. Prothrombin

B. Fibrinogen

C. Thromboplastin

D. Heparin

**Answer: C**



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10. Which one has no role in blood coagulation?

A. Fibrinogen

B. Calcium

C. Vitamin K

D. Vitamin D

**Answer: D**



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**11. Lymph consists of**

A. RBCs, WBCs and plasma

B. RBCs, proteins and platelets

C. All components of blood except RBCs  
and some larger plasma proteins

D. WBCs and serum

**Answer: C**



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12. Blood protein which initiates blood coagulation is

A. Prothrombin

B. Thrmobin

C. Fibrinogen

D. Fibrin

**Answer: A**



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**13.** Conversion of fibrinogen to fibrin is catalysed by

- A. Prothrombin
- B. Thromboplastin
- C. Thrombin
- D. All of the above

**Answer: C**



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14. Which one is the common anticoagulant used for preserving blood?

- A. Sodium hydroxide
- B. Sodium chloride
- C. Sodium oxalate
- D. Sodium bicarbonate

**Answer: C**



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15. During the process of blood coagulation, vitamin K helps in

- A. Formation of prothrombin
- B. Formation of thromboplastin
- C. Conversion of fibrinogen into fibrin
- D. Conversion of prothrombin

**Answer: A**



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Section A Topicwise Questions Topic 4  
Circulatory Pathways

1. The circulatory pattern in which blood pumped by the heart passed through large vessels into open spaces or body cavities (sinuses) is

- A. Open circulatory system
- B. Closed circulatory system
- C. incomplete circulatory system
- D. Mixed circulatory system

**Answer: A**



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**2. In crocodile, heart is**

- A. Two-chambered
- B. Three-chambered
- C. Four-chambered
- D. thirteen-chambered

**Answer: C**



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3. In which of the following, heart pump mixed blood

- A. Single circulation
- B. Incomplete double circulation
- C. Double circulation
- D. both A and B

**Answer: B**



4. Read the following statements and find out the incorrect statements.

a. Heart is situated in the thoracic cavity, is between the two lungs, slightly tilted to the right.

b. Heart has the size of a clenched fist.

(c ) Heart is protected by double walled membranous bag, pericardium, enclosed the pericardial fluid.

d. Human heart has four chambers, two

relatively larger upper chambers called atria and two smaller lower chambers called ventricles.

e. A thick muscular wall called the inter-atrial septum separates the right and the left atria, whereas a thinwalled, the inter-ventricular septum, separates the left and right ventricles.

A. a,d and e

B. b,c and d

C. b,c and e

D. a and d

**Answer: A**



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5. The opening of the right and the left ventricles into the pulmonary artery and the aorta respectively are provided with the

- A. Bicuspid valves
- B. Tricuspid valves
- C. Semilunar valves
- D. Both A and B

**Answer: C**



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**6.** Read the following statements and find out the incorrect statement.

A. The entire heart is made of cardiac muscles.

B. A specialised cardiac musculature called the nodal

C. The walls of ventricles are much thicker than that of the atria.

D. None of the above

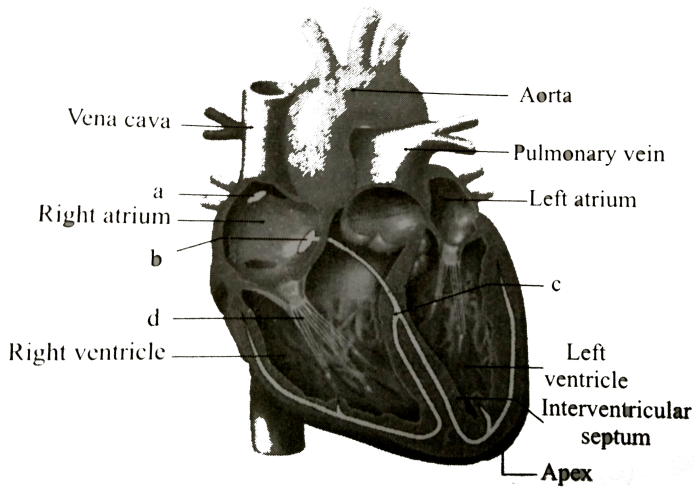
**Answer: D**



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7. Recognise the figure and find out the correct matching.





A. a-SAN, b-AVN, c-Bundle of His, d-Chordae tendinae

B. b-SAN, a-AVN, c-Bundle of His, d-Chordae tendinae

C. a-SAS, b-AVN, d-Bundle of His, c-Chordae tendinae

D. b-SAN,a-AVN, d-Bundle of His,c-Chordae  
tendiane

**Answer: A**



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**8.** The atrium and ventricle of same side are separated by a thick fibrous tissue called the

A. Inter-atrial septum

B. Inter-ventricular septum

C. Atrio-ventricular septum

D. Atrio-ventricular valve

**Answer: C**



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**9. Assertion :** Sino-atrial node (SAN) is called the pacemaker

**Reason :** SAN generates the maximum number of action potentials and is responsible for

initiating and maintaining the rhythmic contractions of the heart.

A. both Assertion and Reason are true and the Reason is the correct explanation of the Assertion,

B. both Assertion and Reason are true but the Reason is not the correct explanation of the Assertion

C. Assertion is true statement but Reason is false

D. both Assertion and Reason are false statements

**Answer: A**



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**10.** Match the columns I and II, and choose the correct combination from the options given.

**Column I**  
(Organisms)

**Column II**  
(Heart)

- |               |                    |
|---------------|--------------------|
| a. Fishes     | 1. Two-chambered   |
| b. Amphibians | 2. Three-chambered |
| c. Reptiles   | 3. Four-chambered  |
| d. Birds      |                    |
| e. Mammals    |                    |

A. a-1, b-1 c-2, d-2, e-3

B. a-1, b-1, c-2, d-3, e-3

C. a-1, b-1,c-2, d-3, e-3

D. a-1,b-2,c-3,d-2,3,e-2

**Answer: C**



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11. Another mass of nodal tissue called atrio-ventricular node (AVN) is present in

A. Right upper corner of right atrium

B. Left upper corner of right atrium

C. Right lower corner of left atrium

D. Left lower corner of left atrium

**Answer: D**



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12. A bundle of nodal fibres, which continues from the AVN which passed through the atrio-ventricular septa to emerge on the top of the inter-ventricular septum is called

- A. Right and left bundle
- B. Atrio-ventricular bundle (AV bundle)
- C. Purkinje fibres
- D. Bundle of His

**Answer: B**



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13. On the top of inter-ventricular septum AV bundle immediately divides and from

A. Right and left bundle

B. Purkinje fibres

C. Bundle of His

D. Both A and B

**Answer: A**



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14. Right and left bundle give rise to minute fibres throughout the ventricular musculature to the respective side and called

A. Bundle branches

B. Purkinje fibres

C. Bundle of His

D. both A and B

**Answer: B**



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15. Purkinje fibre along with right and left bundles are known as

A. Bundle branches

B. Bundle of His

C. Purkinje bundle

D. both A and B

**Answer: B**



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**16.** The maximum number of action potentials are generated by

A. SAN

B. AVN

C. AV bundle

D. Bundle of His

**Answer: A**



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17. Which is correct about joint diastole?

- a. Bicuspid and tricuspid valves are open
- b. Bicuspid and tricuspid valves are closed
- c. Semilunar valves are open
- d. Semilunar valves are closed

A. a and c

B. b and d

C. a and d

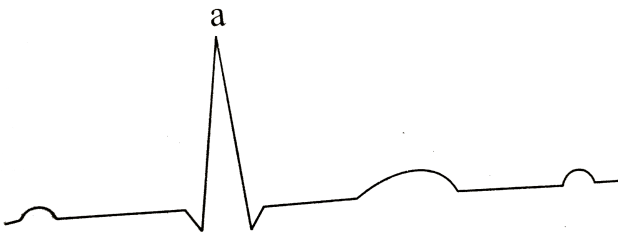
D. b and c

**Answer: C**





18. In this figure, peak point (a) is represented by letter



A. P

B. Q

C. R

D. S

**Answer: C**



**Watch Video Solution**

**19.** The atrial systole increase the flow of blood into the ventricles by about

A. 30 %

B. 70 %

C. 33 %

D. 45 %

**Answer: A**



**Watch Video Solution**

**20.** What will happen during the ventricular systole?

- a. Bicuspid and tricuspid valves are open
- b. Bicuspid and tricuspid valves are closed
- (c ). Semilunar valves are open
- d. Semilunar valves are close

**A. a and c**



B. b and d

C. a and d

D. b and c

**Answer: D**



**Watch Video Solution**

**21.** During a cardiac cycle, each ventricle pump out blood which is called

A. Stroke volume

B. Cardiac output

C. Beat volume

D. Both A and B

**Answer: A**



**Watch Video Solution**

**22.** The body has ability to alter the

A. Stroke volume

B. Heart rate

C. Cardiac output

D. All of the above

**Answer: D**



**Watch Video Solution**

**23. Match the column I and II, and choose the correct combination from the options given.**

**Column I**  
(Organisms)

**Column II**  
(Circulation)

- |               |                                  |
|---------------|----------------------------------|
| a. Fishes     | 1. Single circulation            |
| b. Amphibians | 2. Incomplete double circulation |
| c. Reptiles   | 3. Double circulation            |
| d. Birds      |                                  |
| e. Mammals    |                                  |

A.  $a^{-1}, b^{-1}, c^{-2}, d^{-2}, e^{-3}$

B.  $a^{-1}, b^{-1}, c^{-2}, d^{-3}, e^{-3}$

C.  $a^{-1}, b^{-2}, c^{-2}, d^{-3}, e^{-3}$

D.  $a^{-1}, b^{-2}, c^{-3}, d^{-2}, e^{-2}$

**Answer: C**



**Watch Video Solution**

**24.** How many cardiac cycles performed per minute?

A. 72

B. 12 – 16

C. 80 – 120

D. 30

**Answer: A**



**Watch Video Solution**

**25.** Number of beats pwe minutes is called

A. Best number

B. Heart rate

C. Stroke rate

D. All of the above

**Answer: B**



**Watch Video Solution**

**26.** The graphical representation of the electrical activity of the heart during a cardiac cycle is called

- A. Electrocardiogram
- B. Electrocardiograph
- C. Electroencephlograph
- D. both A and B

**Answer: A**



**Watch Video Solution**

**27.** The recording (ECG) of the heart activity is taken by the machine

A. Electrocardiogram

B. Electrocardiograph

C. Electroencephalograph

D. both A and B

**Answer: B**



**Watch Video Solution**

**28.** Read the following statements and find out the incorrect statement.



A. For a detailed evaluation of the heart's function, multiple leads are attached to the chest region.

B. the end of the P-wave marks the end of systole.

C. The ventricular contraction start shortly after Q and marks The beginning of the systole.

D. By counting the number of QRS complexed that occur in a given time

period, one can determine the heart beat rate of an individual.

**Answer: B**



**View Text Solution**

**29.** Most probable cause of heart attack is

- A. Cardiac arrest
- B. Arteriosclerosis
- C. Atherosclerosis

D. High level of HDL

**Answer: C**



**Watch Video Solution**

**30.** EGG is employed for study of

A. Lung ailments

B. Brain defects

C. Heart problem

D. Kidney defects

**Answer: C**



**Watch Video Solution**

**31.** Amount of blood pumped by heart into body per minute is

- A. Atrial output
- B. Ventricular output
- C. Cardiac output
- D. Stoke volume

**Answer: D**



**Watch Video Solution**

**32. Cardiac output is determined by**

- A. Blood flow
- B. Heart rate
- C. Stroke volume
- D. Both B and C

**Answer: D**



[Watch Video Solution](#)

**33.** Value of cardiac output is

- A. Auricular volume  $\times$  ventricular volume
- B. Stroke volume  $\times$  rate of heart beat
- C. Blood pumped in one minute
- D. Both B and C

**Answer: D**



[Watch Video Solution](#)

**34.** Mixing of oxygenated and deoxygenated blood occurs in the ventricle of

A. Scoliodon

B. Frog

C. Rabbit

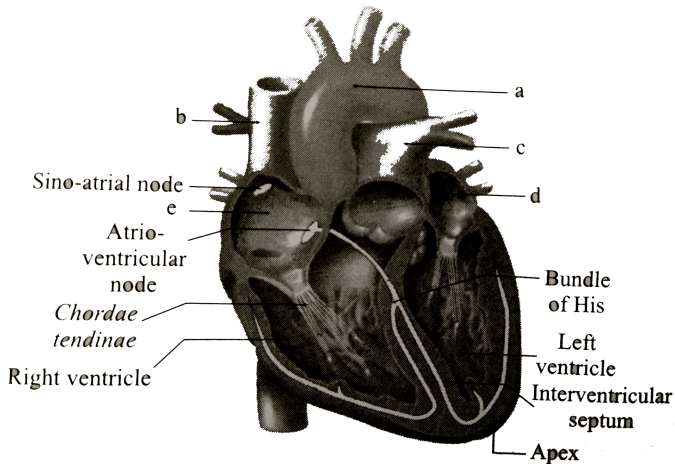
D. Pigeon

**Answer: B**



**Watch Video Solution**

35. Recognise the figure and find out the correct matching.



A. b-pulmonary vein, a-vena cava, c-aorta, d-

right atrium, e-left atrium

B. c-pulmonary artery, b-vena cava, a-aorta,

e-right atrium, d-left atrium



C. a-pulmonary vein, c-vena, b-aorta, d-right atrium, e-left atrium

D. c-pulmonary artery, a-vena cava, b-aorta, e-right atrium, d-left atrium

**Answer: B**



**Watch Video Solution**

**36.** Bundle of His is a network of

A. nervous tissue supplying ventricles

B. Nervous tissue supplying heart

C. Muscular tissue supplying heart

D. Muscular tissue supplying ventricle

**Answer: D**



**Watch Video Solution**

**37. Which ones have open circulatory system?**

1. Ascidia
2. Cockroach
3. Earthworm
4. Prawn
5. Silver Fish
6. Snail
7. Squid

A. 2,4,6

B. 1,2,4,6

C. 3,4,5,7

D. 2,4,5,6

**Answer: D**



**Watch Video Solution**

**38. Heart of Heart is**

Pace maker of the heart is

A. SA node

B. AV node

C. Bundle of His

D. Purkinjr fibres

**Answer: A**



**Watch Video Solution**

**39.** Mark the correct statement.

A. Blood has WBC while lymph has RBC

B. Blood has both RBC and WBC while lymph has none

C. Blood has RBC while lymph has both RBC and WBC

D. Blood has RBC and WBC while lymph has only WBC

**Answer: D**



**Watch Video Solution**

**40.** Heart beats originate from

- A. Left atrium
- B. Right ventricle
- C. Cardiac muscles
- D. Pace makes

**Answer: D**



**Watch Video Solution**

**41.** Bundle of His is a network of

A. Muscle fibres distribute throughout heart walls

B. Muscle fibres found only in ventricle wall

C. Nerve fibres distributed in ventricles

D. Nerve fibres found throughout the heart

**Answer: B**



**Watch Video Solution**

**42.** Artificial pacemaker is usually implanted to correct the defect in

- A. AV node
- B. SA node
- C. Purkinjr fibres
- D. Mitral valve

**Answer: B**



**Watch Video Solution**



**43.** Impulse originating from SA node is transmitted to

A. Pacemaker

B. AV node

C. Bundle of His

D. Purkinje system

**Answer: B**



**Watch Video Solution**

## Section A Topicwise Questions Topic 5 Double Circulation And Regulation Of Cardiac Activity

1. The circulation which provides nutrients,  $O_2$  and essential substances to the tissue and takes  $CO_2$  and other harmful substances away for elimination is

- A. Systemic circulation
- B. Pulmonary circulation
- C. Double circulation
- D. Ststematic circulation

**Answer: A**



**Watch Video Solution**

2. A unique vascular connection between the digestive tract and liver is called

- A. Hepatic portal system
- B. Renal portal system
- C. Hapophyseal portal system
- D. Coronary system

**Answer: A**



**Watch Video Solution**

**3.** The vessel that carries blood from intestine to the liver is called

- A. hepatic vein
- B. Hepatic artery
- C. hepatic portal vein
- D. Hepatic portal artery

**Answer: C**



**Watch Video Solution**

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

- A. Nodal system
- B. Portal system
- C. Coronary system

D. Bypass system

**Answer: C**



**Watch Video Solution**

5. neural signal through autonomic nervous system (ANS) can

a. Increase the heart beat rate

b. Decrease the heart beat rate

c. Increase the strength of ventricular contraction

d. Decrease the speed of conduction of action potential

e. Increase cardiac output

f. Decrease cardiac output

A. b,c and e

B. a,d and f

C. b,d and f

D. a,c and e

**Answer: D**



**Watch Video Solution**

6. Which of the following sequences is truly a systemic circulation pathway ?

A. Right auricle → Left ventricle →  
Aorta → Tissues → Veins

B. Right ventricle → Pulmonary aorta  
→ Tissues → Pulmonary veins →  
Left auricle

C. Left auricle → Left ventricle → Aorta  
→ Arteries → Tissues → Veins



→ Right atrium

D. Left auricle → Left ventricle →

Pulmonary aorta → Tissues → Right

auricle.

**Answer: C**



**Watch Video Solution**

7. In the measurement of the blood pressure the denominator and numerator represents

A. Resting and pumping pressure  
respectively

B. Pumping and resting pressure  
respectively

C. Systolic and diastolic pressure  
respectively

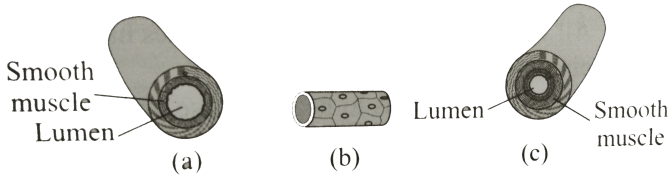
D. Both B and C

**Answer: A**



**Watch Video Solution**

8. Recognise the figure and find out correct matching.



A. a-artery, b-vein, c-capillary

B. c-artery, a-vein, b-capillary

C. b-artery, c-vein, a-capillary

D. a-artery, c-vein, b-capillary

**Answer: B**



**Watch Video Solution**

9. Circulatory system is absent in

A. Annelids

B. Arthropods

C. Flatworms

D. Cephalopods

**Answer: C**



**Watch Video Solution**

10. A portion of cardiovascular system that transport oxygen depleted blood from the heart to the lungs and brings oxygenated blood back to heart is

- A. Pulmonary circulation
- B. Coronary circulation
- C. Systemic circulation
- D. Signal circulation system

**Answer: A**



**Watch Video Solution**

11. Which one is present in tunica media?

A. Collagen fibres and smooth muscles

B. Yellow fibres and smooth muscles

C. Yellow fibres and striated muscles

D. Squamous epithelium and striated muscles

**Answer: B**



**Watch Video Solution**

12. Vagus nerve slows down heart beat due to secretion of

- A. Adrenaline
- B. Acetylcholine
- C. Norepinephrine
- D. Dopamine

**Answer: B**



**Watch Video Solution**

**13.** neural signals through parasympathetic

neural signals (another component of ANS) can

a. Increase the heart beat rate

b. Decrease the heart beat rate

c. increase the strength of ventricular contraction

e. Increase cardiac output

f. Decreases cardiac output

A. b,c and e

B. a,d and f

C. b,d and f



D. a,c and e

**Answer: C**



**Watch Video Solution**

**14.** Blood passes from left ventricle to right atrium. It is

A. Pulmonary circulation

B. Systemic circulation

C. Coronary circulation

D. Arterovenous circulation

**Answer: B**



**Watch Video Solution**

**15.** The artery can be distinguished from the vein in having

A. Thicker walls

B. Thinner walls

C. More plasma

D. Larger cavity

**Answer: A**



**Watch Video Solution**

**16.** How many double circulations are normally completed by the human heart in one minute

A. Eight

B. Sixteen

C. Thirty six

D. Seventh two

**Answer: D**



**Watch Video Solution**

**17.** How many times a red blood corpuscle will have to pass through the heart in its journey from hepatic artery?

A. Once

B. Two times

C. Four times

D. Several times

**Answer: B**



**Watch Video Solution**

**18.** Blood pressure is controlled by

A. Thyroid gland

B. Adrenal gland

C. Thymus gland

D. Parathyroid gland

**Answer: B**



**Watch Video Solution**

**19.** In ventricular systole, oxygenated blood is pumped into

A. Pulmonary artery and deoxygenated into  
aorta

B. Aorta and deoxygenated into pulmonary  
vein

C. Plumonary vein and deoxygenated into  
pulmonary artery

D. Aorta and deoxygenated into  
pulomanary artery

**Answer: D**



**Watch Video Solution**

20. Systemic heart refers to

A. Heart that contracts under stimulation  
from nervous system

B. Left auricle and left ventricle in higher  
vertebrates

C. Entire heart in lower vertebrates

D. The two ventricles together in humans

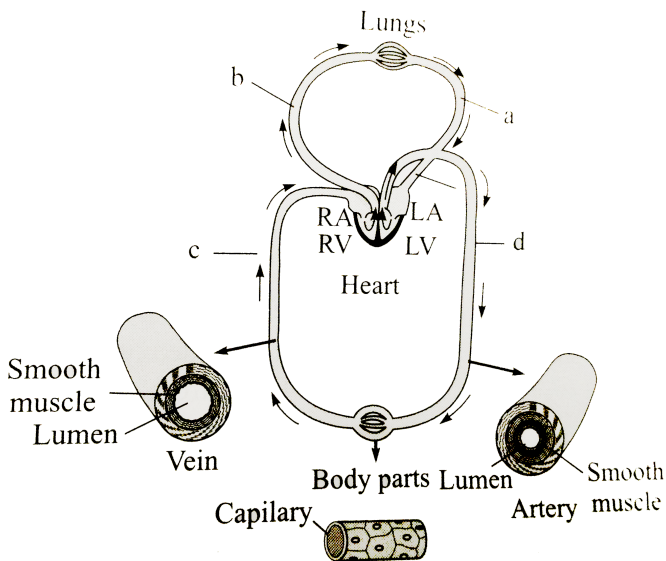
**Answer: B**



**Watch Video Solution**



21. Recognise the figure and find out the correct matching.



A. a-dorsal aorta, b-vena cava, c-pulmonary artery, d-pulmonary vein

B. c-dorsal aorta, d-vena cava, b-pulmonary  
artery, a-pulmonary vein

C. d-dorsal aorta, c-vena cava, a-pulmonary  
artery, b-pulmonary vein

D. d-dorsal aorta, c-vena cava, b-pulmonary  
artery, a-pulmonary vein

**Answer: D**



**Watch Video Solution**

22. Heart is neurogenic in

A. Mussel

B. Frog

C. Limulus

D. Human

**Answer: C**



**Watch Video Solution**

**23.** At the time of diastole, heart is filled with

- A. Mixed blood
- B. Venous blood
- C. Deoxygenated blood
- D. Oxygenated blood

**Answer: B**



**Watch Video Solution**

24. Human/mammalian/elephant heart is

A. Myogenic

B. Neurogenic

C. Cardiogenic

D. Digenic

**Answer: A**



**Watch Video Solution**

25. Which one represents pulmonary circulation?

A. Left auricle (oxygenated blood) →

lungs

B. Left auricle (deoxygenated blood) →

lungs

C. Left auricle (oxygenated blood) →

lungs

D. Right auricle (deoxygenated blood) →

lungs

(oxygenated blood) → Left auricle

**Answer: D**



**Watch Video Solution**

**26.** Pulmonary artery drains deoxygenated blood from

A. Right ventricle

B. Right atrium

C. Left atrium

D. Left ventricle

**Answer: A**



**Watch Video Solution**

**27. What is true about vein?**

A. All veins carry deoxygenated blood

B. All veins carry oxygenated blood



C. They carry blood from organs towards  
heart

D. They carry blood from heart towards the  
organs

**Answer: C**



**Watch Video Solution**

**28.** Match the column I and II, and choose the correct combination from the options given.

**Column I****Column II**

- |                       |   |
|-----------------------|---|
| a. Superior Vena Cava | p. Carries deoxygenated blood to lungs                                  |
| b. Inferior Vena Cava | q. Carries oxygenated blood from lungs                                  |
| c. Pulmonary Artery   | r. Brings deoxygenated blood from lower parts of body to right atrium   |
| d. Pulmonary Vein     | t. Brings deoxygenated blood from upper parts of body into right atrium |

A. a-q, b-t, c-r, d-p

B. a-t, b-p, c-q, d-r

C. a-t, b-r, c-p, d-q

D. a-t, b-p, c-r, d-q

**Answer: C**



**Watch Video Solution**

29. All veins carry deoxygenated blood except

- A. Renal artery
- B. Hepatic vein
- C. hepatic portal vein
- D. Pulmonary veins

**Answer: D**



**Watch Video Solution**

**30.** Systematic circulation of oxygenated blood starts from

- A. Right atrium
- B. Left atrium
- C. Left ventricle
- D. Right ventricle

**Answer: C**



**Watch Video Solution**

**31.** Deoxygenated blood from wall of heart is carried by

- A. Coronary sinus
- B. Inferior vena cava
- C. Superiour vena cava
- D. Pulmonary artery

**Answer: A**



**Watch Video Solution**

32. Hepatic portal system starts from

- A. Digestive system to liver
- B. Kidney to liver
- C. Liver to heart
- D. Liver to kidney

**Answer: A**



**Watch Video Solution**

1. Read the following statements and find out the incorrect statements.

a. All vertebrates and a few invertebrates have a closed circulatory system.

b. Hyperension leads to heart disease and also affects vital organs like brain and lungs.

c. CAD affects the vessels that supply blood to the skeletal muscles.

d. In angina, a symptom of chronic chest pain appears when not enough oxygen is reaching the heart muscle.

e. Heary attack means the state of heart when it is not pumpin blood effectively enough to meet the needs of the body.

A. a and d

B. b,c and e

C. b,c and d

D. b,c, d and e

**Answer: D**



**Watch Video Solution**



2. When the heart muscle is suddenly damaged by an inadequate blood supply, it is called

- A. heart attack
- B. heart failure
- C. Cardiac arrest
- D. CAD

**Answer: A**



**Watch Video Solution**

3. Read the following statements and find out the incorrect statement.

A. Through the heart is autoexcitable, its functions can be moderated by neural and hormonal mechanisms.

B. Angina pectoris can occurs in men and women of any age but it is more common among the middleaged and elderly.

C. Heart failure is same as cardiac arrest or heart attack.

D. CAD is caused by deposits of calcium, fat, cholesterol and fibrous tissues, which makes the lumen of arteries narrower.

**Answer: C**



**Watch Video Solution**

4. When the heart stop beating, it is called

A. Heart attack

B. Heart failure

C. Cardiac arrest

D. CAD

**Answer: C**



**Watch Video Solution**

**5. Angina occurs due to conditions that affects the**

A. Blood clotting

B. Blood flow

C. Cloure of bicuspid and tricuspid valves

D. Opening of the semilunar valves

**Answer: B**



**Watch Video Solution**

**6.** Sphygmomanometer is an instrument used to record

A. Systolic pressure

B. Diastolic pressure

C. Cardiac output

D. Opening of the semilunar valves

**Answer: D**



**Watch Video Solution**

7. Most probable cause of heart attack is

A. Vasomotion

B. Systolic pressure of 120 mm Hg

C. Arteriosclerosis

D. High level of HDL

**Answer: C**



**Watch Video Solution**

**8.** Continued consumption of a diet rich in butter, red meat and eggs for a long period may lead to

A. Vitamin A toxicity

B. Kidney stones

C. Hypercholesterolemia

D. Urine laden with ketone bodies

**Answer: C**



**Watch Video Solution**

**9. Coronary heart disease is due to**

A. Weakening of heart valves



B. Insufficient blood supply to heart muscles

C. Streptococci bacteria

D. Inflammation of pericardium

**Answer: B**



**Watch Video Solution**

**10.** Which of the following cranial nerves innervates heart, stomach and lungs

or

which of the cranial nerve is mixed

A. Vagus

B. Facial

C. Trochlear

D. Auditory

**Answer: A**



**Watch Video Solution**

11. Stimulation of the vagus nerve will make the heart beat

A. Decrease

B. Increase

C. Remain normal

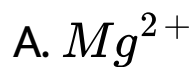
D. Stop

**Answer: B**



**Watch Video Solution**

12. Erythropoiesis is assisted by



**Answer: D**



**Watch Video Solution**

**13.** Which one of the following minerals controls heart?

A. Sulphur

B. Sodium

C. Iron

D. Potassium

**Answer: B**



**Watch Video Solution**

14. Neurogenic heart is characteristic of

- A. Humans
- B. Lower invertebrates
- C. Rat
- D. Rabbit

**Answer: B**



**Watch Video Solution**

15. In circulatory system, valves occur in

- A. Heart and blood vessels of both vertebrates and invertebrates as well as vertebrate lymphatics
- B. Both vertebrate and invertebrate hearts
- C. Vertebrate heart only
- D. Both vertebrate and invertebrate hearts and their blood vessels

**Answer: A**



**Watch Video Solution**

## Section B Assertion Reasoning Questions

1. Assertion: Protein that produced in response to antibodies are called antigens.

Reason: Antibodies are present on the surface of RBCs

A. If both asseration and reason are true and the reason is the correct explanation of the assertion.

B. If both assertion and reason are true but reason is not the correct explanation of



the assertion.

C. If assertion is true reason is false.

D. If both assertion and reason are false.

**Answer: D**



**Watch Video Solution**

2. Assertion: heart failure is sometimes called congestive heart failure.

Reason: Congestion of the lungs is one the main symptom of heart failure.

A. If both asseration and reason are true and the reason is the correct explanation of the assertion.

B. If both assertion and reason are true but reason is not the correct explanation of the assertion.

C. If assertion is true reason is false.

D. If both assertion and reason are false.

**Answer: A**



**Watch Video Solution**

**3. Assertion: SAN is also called pacemaker.**

**Reason: SAN sets the pace of the activities of the heart.**

A. If both asseration and reason are true and the reason is the correct explanation of the assertion.

B. If both assertion and reason are true but reason is not the correct explanation of the assertion.

C. If assertion is true reason is false.

D. If both assertion and reason are false.

**Answer: A**



**Watch Video Solution**

**4. Assertion:** Human heart is myogenic.

**Reason:** Normal activities of the heart are regulated intrinsically, i.e., auto regulated by specialised muscles (nodal tissue).

A. If both asseration and reason are true and the reason is the correct explanation of the assertion.

B. If both assertion and reason are true but reason is not the correct explanation of the assertion.

C. If assertion is true reason is false.

D. If both assertion and reason are false.

**Answer: A**



**Watch Video Solution**

5. Assertion: Leucocytes are also known as white blood cells (WBC).

Reason: Leucocytes are colourless due to lack of haemoglobin.

A. If both assertion and reason are true and the reason is the correct explanation of the assertion.

B. If both assertion and reason are true but reason is not the correct explanation of

the assertion.

C. If assertion is true reason is false.

D. If both assertion and reason are false.

**Answer: A**



**Watch Video Solution**

**6. Assertion:** The nodal musculature has the ability to generate action potentials without any external stimuli, i.e., it is auto-excitabile.

**Reason:** The number of action potentials that

could be generated in a minute very at different parts of the nodal system.

A. If both asseration and reason are true and the reason is the correct explanation of the assertion.

B. If both assertion and reason are true but reason is not the correct explanation of the assertion.

C. If assertion is true reason is false.

D. If both assertion and reason are false.



**Answer: B**



**Watch Video Solution**

7. Assertion: Interstitial fluid or tissue fluid has the same mineral distribution as that in plasma.

Reason: Exchange of nutrients, gases, etc., between the blood and the cells always occurs through tissue fluid (lymph).

A. If both asseration and reason are true and the reason is the correct explanation of the assertion.

B. If both assertion and reason are true but reason is not the correct explanation of the assertion.

C. If assertion is true reason is false.

D. If both assertion and reason are false.

**Answer: B**



**View Text Solution**

8. Assertion: Lymph is a colourless fluid containing specialised lymphocytes which are responsible for the immune response of the body

Reason: Lymph is an important carrier for nutrient, hormones, etc.

A. If both assertion and reason are true and the reason is the correct explanation of the assertion.

B. If both assertion and reason are true but reason is not the correct explanation of the assertion.

C. If assertion is true reason is false.

D. If both assertion and reason are false.

**Answer: B**



**Watch Video Solution**

9. Assertion: Closed circulatory system is considered to be more advantageous as compared to open circulatory system.

Reason: In closed circulatory system, the flow of fluid can be more precisely regulated.

A. If both assertion and reason are true and the reason is the correct explanation of the assertion.

B. If both assertion and reason are true but reason is not the correct explanation of

the assertion.

C. If assertion is true reason is false.

D. If both assertion and reason are false.

**Answer: A**



**Watch Video Solution**

**10.** Assertion: Each cardiac cycle consists of systole and diastole of both the atria and ventricles.

Reason: The cardiac output of an ordinary

man will be much higher than that of an athlete.

A. If both asseration and reason are true and the reason is the correct explanation of the assertion.

B. If both assertion and reason are true but reason is not the correct explanation of the assertion.

C. If assertion is true reason is false.

D. If both assertion and reason are false.

**Answer: C**



**Watch Video Solution**

**11. Assertion:** ECG is a graphical representation of the electrical activity of the heart during a cardiac cycle.

**Reason:** Each peak in the ECG is identified with the letter from P to Q that corresponds to electrical activity of the heart.



A. If both asseration and reason are true and the reason is the correct explanation of the assertion.

B. If both assertion and reason are true but reason is not the correct explanation of the assertion.

C. If assertion is true reason is false.

D. If both assertion and reason are false.

**Answer: C**



**Watch Video Solution**

**12. Assertion:** The valves of the heart (i.e., semilunar and atrio-ventricular valves) prevent any backward flow.

**Reason:** The valves in the heart allows the flow of blood only in one direction, i.e. from the atria to the ventricles and from ventricles to the pulmonary artery or aorta.

A. If both asseration and reason are true and the reason is the correct explanation of the assertion.

B. If both assertion and reason are true but reason is not the correct explanation of the assertion.

C. If assertion is true reason is false.

D. If both assertion and reason are false.

**Answer: A**



**Watch Video Solution**

**Section D Chapter End Test**

1. Papillary muscles occur in

A. Ventricles

B. Atria

C. Atrioventricular valves

D. Pulmonary valves

**Answer: A**



**Watch Video Solution**

2. Battery of artificial pacemaker is built of

A. Nickel

B. Lithium

C. Photosensitive material

D. Dry Cadmium

**Answer: B**



**Watch Video Solution**

**3. Which of the acts as middle man ?**

A. Plasma

B. Lymph

C. WBC

D. RBC

**Answer: B**



**Watch Video Solution**

**4. What is true of leucocytes?**

A. They undergo diapedesis or squeeze through capillary walls

B. Sudden fall in number indicates cancer

C. Produced in thymus

D. Enuclate

**Answer: A**



**Watch Video Solution**

**5. Polycythemia is characterised by**

A. Decrease in  $O_2$  content

B. Increase in RBC content

C. Decrease in RBC content

D. Increase in WBC content

**Answer: B**



**Watch Video Solution**

**6. Largest internal vein from alimentary canal to liver is**

A. Aorta

B. Hepatic artery



C. Hepatic vein

D. Hepatic portal vein

**Answer: D**



**Watch Video Solution**

7. Blood vessel carrying least  $CO_2$  is

A. Pulmonary vein

B. Pulmonary artery

C. Vena Cava

D. Hepatic vein

**Answer: A**



**Watch Video Solution**

**8. Pernicious anaemia is caused by**

A. Low RBC count

B. Death of WBC

C. Obstruction of RBC maturation

D. Destruction of young RBC

**Answer: A**



**Watch Video Solution**

**9. Blood leaving liver and moving to the heart has usually high concentration of**

A. Bile

B. Glycogen

C. Amino acids

D. Urea

**Answer: D**



**Watch Video Solution**

**10.** The animal which has oval RBCs

A. Rat

B. Humans

C. Bat

D. Camel

**Answer: D**



Watch Video Solution

11. To which organ does femoral artery supply blood

- A. Dorsal part of thigh
- B. Ventral part of hind limb
- C. All parts of hind limb
- D. Rectum

**Answer: A**



12. Blood of which of the following is colourless

A. Earthworm

B. Cockroach

C. Leech

D. Frog

**Answer: B**



13. Erythrocyte maturing factor is

A. Folic acid

B. Cyanocobalamine

C. Vitamin  $B_2$

D. Vitamin C

**Answer: A**



**Watch Video Solution**

14. Cattle fed on spoiled Sweet Clover having dicoumerol have

- A. Excellent health due to good diet
- B. Catch infections readily
- C. May suffer vitamin K deficiency and prolonged bleeding
- D. May suffer from beriberi due to vitamin B deficiency

**Answer: C**



**Watch Video Solution**



**15. Serum is**

A. Blood minus fibrinogen

B. Lymph minus corpuscles

C. Lymph

D. Blood minus corpuscles and fibrinogen

**Answer: D**



**Watch Video Solution**

**16.** For analysis, the blood drawn from a patient will not be placed in a tube having

- A. Sodium oxalate
- B. Heparin
- C. Calcium bicarbonate
- D. Been chilled

**Answer: C**



**Watch Video Solution**

17. Which one is not a blood group?

A. ABO and Rh

B. Rh and MN

C. Buffs and Kips

D. Lewis and Duffy

**Answer: C**



**Watch Video Solution**

**18.** Lymphocytes of lower vertebrates are produced in

A. Liver

B. Spleen

C. Bone marrow

D. Vertebrae

**Answer: A**



**Watch Video Solution**

**19. Diapedesis is**

A. Bursting of WBC

B. Production of pus

C. Production of WBC

D. Passage of WBC out of blood capillaries  
to the site of injury

**Answer: D**



**Watch Video Solution**

20. Pulmonary artery differs from pulmonary vein in having

- A. Thick wall
- B. Thin wall
- C. Valves
- D. Both B and C

**Answer: A**



**Watch Video Solution**

21. Normal pulse pressure is

A. 80 mm Hg

B. 120 mm Hg

C. 40 mm Hg

D. 320 mm Hg

**Answer: C**



**Watch Video Solution**

22. Amount of blood received by brain every minute is

A. 2500 ml

B. 1000 ml

C. 750 ml

D. 450 ml

**Answer: C**



**Watch Video Solution**



23. Which is transmitted through serum?

A. Venereal diseases

B. Cirrhosis

C. Tuberculosis

D. Hepatitis

**Answer: D**



**Watch Video Solution**

24. Which organ received only oxygenated blood?

A. Gill

B. Spleen

C. Lung

D. Liver

**Answer: B**



**Watch Video Solution**

25. In which of the following, blood is carried by a set of capillaries and then taken away by another set of capillaries?

A. Liver

B. Heart

C. Brain

D. Alveolus of lungs

**Answer: A**



**Watch Video Solution**

**26.** Mineral involved in formation of bone and teeth and clotting of blood is

A. Potassium

B. Sulphur

C. Calcium

D. Iodine

**Answer: C**



**Watch Video Solution**

27. Collecting of WBCs at the site of injury occurs due to

A. Phagocytosis

B. Hemolysis

C. Diapedesis

D. All of the above

**Answer: C**



**Watch Video Solution**

**28.** In Prawn, the heart pumps

A. Deoxygenated blood

B. Oxygenated blood

C. Both A and B

D. Mixed blood

**Answer: B**



**Watch Video Solution**

**29.** Oedema is due to

A. Increased permeability of capillary walls

B. Reduced return of lymph

C. Increased capillary pressure

D. All of the above

**Answer: D**



**Watch Video Solution**

**30. Pace maker is**

A. Instrument for measuring heart beat

B. Instrument for measuring pulse rate

C. Atrioventricular node that provides  
impulse for heart beat

D. Sinoauricular node that provides  
impulse for heart beat

**Answer: D**



**Watch Video Solution**

**31.** Heart beat is heard on left side as



A. Aorta is on left side

B. Heart is on left side

C. Ventricles are on left side

D. Left ventricle is on left side

**Answer: D**



**Watch Video Solution**

**32. the one devoid of muscular coat is**

A. Vein

B. Artery

C. Arteriole

D. Capillary

**Answer: D**



**Watch Video Solution**

**33.** Glucose is carried from digestive tract to liver by

A. Hepatic artery

B. Hepatic portal vein

C. Pulmonary vein

D. None of the above

**Answer: B**



**Watch Video Solution**

**34.** In aquatic mammals

A. having mammary glands

B. having hair

C. oviparous

D. both A and B

**Answer: 4**



**Watch Video Solution**

**35.** Erythropoiesis is assisted by

A.  $Mg^{2+}$

B.  $Ca^{2+}$

C.  $Cu^{2+}$

D.  $Fe^{2+}$

**Answer: D**



**Watch Video Solution**

**36.** Typical 'lub-dub' sound heard in heart beat are due to

- A. Closing of bicuspid and tricuspid valves
- B. Closing of semilunar valves
- C. Blood under pressure through aorta

D. Closure of bicupid-tricupid valves

followed by semilunar valves

**Answer: D**



**Watch Video Solution**

**37. Largest heart is of**

A. Giraffe

B. Elephant

C. Crocodile

D. Lion

**Answer: B**



**Watch Video Solution**

**38.** RBC placed in distilled water will

A. Burst

B. Shrink

C. Stick to one another

D. Remain as it is

**Answer: A**



**Watch Video Solution**

**39.** Origin of heart beat and its conduction is represented by

A. AV node → Bundle of His → SA node  
→ Purkinje fibres

B. SA node → Purkinjr fibres → AV node  
→ Bundle of His



C. Purkinjr fibres → AV node → SA node

→ Bundle of His

D. SA node → AV node → Bundle of His

→ Purkinje fibres

**Answer: D**



**Watch Video Solution**

**40. Blood vessel of diaphragm is called**

A. Coronary

B. Cardiac

C. Phrenic

D. Pulmonary

**Answer: C**



**Watch Video Solution**

**41. Anemia is due to deficiency of**

A. Ca

B. Fe

C. Mg

D. P

**Answer: B**



**Watch Video Solution**

**42. Carotid artery carries**

A. Impure blood to brain

B. Oxygenated blood to brain

C. Impure blood too kidney

D. Oxygenated blood to heart

**Answer: B**



**Watch Video Solution**

**43. Systole causes**

A. Entry of blood into lungs

B. Entry of blood into heart

C. Exit of blood from brain

D. Exit of blood from ventricle

**Answer: D**



**Watch Video Solution**

**44.** Blood capillaries are made of

- A. Endothelium, connective tissue and muscle fibres
- B. Endothelium and muscle fibers
- C. Endothelium and connective tissue
- D. Endothelium only

**Answer: D**



**Watch Video Solution**

**45.** Granules of neutrophils are derived from

- A. Phagosomes
- B. Mitochondria
- C. Golgi bodies
- D. E.R.

**Answer: C**



Watch Video Solution

46. Which term does not apply to human heart?

- A. Neurogenic
- B. Pacemaker
- C. Four chambered
- D. Mitral valve

**Answer: A**



47. Iron containing haem is attached with lobin of hemoglobin as

- A. Coenzyme
- B. Apoenzyme
- C. Prosthetic group
- D. Inorganic group

**Answer: C**





**48.** Rising of PH of blood shall result in

A. Inhibition of carbonic anhydrase

B. Production of carbon monoxide and causing carbon monoxide poisoning

C. Non-release of carbon dioxide from carbonic acid and carbonates

D. Non-dissociation of oxygen from oxyhaemoglobin

**Answer: A**



**Watch Video Solution**

**49.** Which of the following vessel in rabbit starts with capillaries and ends in capillaries

Which one of the following vein breaks up into capillaries

- A. Pelvic vein
- B. pulmonary vein
- C. Renal vein

D. Hepatic portal vein

**Answer: D**



**Watch Video Solution**

**50.** If nerves supplying heart are cut, the heart will

A. Shrink

B. Beat arhythmically

C. Beat ryhthmically

D. Stop

**Answer: B**



**Watch Video Solution**

**Others**

**1. Macimum surface area of circulatory system  
is of**

**A. Heart**

B. Arterioles

C. Veins

D. Capillaries.

**Answer: D**



**Watch Video Solution**

2. Largest number of white blood corpuscles are

A. Eosinophils

B. Basophils

C. Neutrophils

D. Monocytes.

**Answer: C**



**Watch Video Solution**

**3. the haemoglobin of a human foetus**

A. Has two protein subunits instead of four

B. Has higher affinity of oxygen than that of the adult

C. Has lower affinity of oxygen than that of the adult

D. Its affinity of oxygen is the same as that of an adult

**Answer: B**



**Watch Video Solution**

4. Which one of the following is a matching pair

A. Lub-sharp closure of AV valves at beginning of ventricular systole

B. Dub-sudden opening of semilunar valves at the beginning of ventricular systole

C. Pulsation of radial artery-valves in blood vessels

D. Initiation of heart beat-Purkinje fibres



**Answer: A**



**Watch Video Solution**

5. Artificial pacemaker is implanted subcutaneously for correcting

A. 90 % blockage of coronary arteries

B. High blood pressure

C. Arteriosclerosis

D. Irregularity of heart rhythm

**Answer: D**



**Watch Video Solution**

**6. The lymph differs from the blood in having**

A. More RBC less WBC

B. Less RBC more WBC

C. No RBC less WBC

D. No RBC more WBC

**Answer: C**



[Watch Video Solution](#)

7. What is correct about ECG?

- A. P-depolarisation of atria
- B. R-repolarisation of ventricles
- C. T-start of systole
- D. T-end of diastole

**Answer: A**



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8. Globulins contained in human blood plasma are primarily involved in

- A. Clotting of blood
- B. Osmotic balance of body fluids
- C. Defence mechanism of body
- D. Oxygen transport in blood

**Answer: C**



**Watch Video Solution**

9. Blood group agglutigen is

A. Phosphoprotien

B. Glycoprotein

C. Haemoprotien

D. Phospholipid

**Answer: B**



**Watch Video Solution**

**10.** Mature erythrocyte cannot utilise flucose because they lack

A. Golgi complexes

B. Mitochondria

C. Enzymes

D. Nucleus

**Answer: B**



**Watch Video Solution**

**11.** In order for the blood to flow from right ventricle to left ventricle in mammalian heart, it must flow through

A. Right ventricle, pulmonary arteries, lungs, pulmonary veins, left atrium

B. Right ventricle, pulmonary veins, lungs, pulmonary arteries, left atrium

C. Right ventricle, pulmonary veins, left atrium

D. Right ventricle, systemic aorts, lungs,  
pulmonary veins, left atrium

**Answer: A**



**Watch Video Solution**

**12. Which one takes part in blood clotting?**

A. RBC

B. WBC

C. Thrombocytes



D. Lymphocytes

**Answer: C**



**Watch Video Solution**

**13.** Fastest distribution of some injectible material / medicine and with no risk of any kind can be achieved by injecting it into the

A. Artery

B. Vein

C. Muscle

D. Lymph vessel

**Answer: B**



**Watch Video Solution**

**14.** Give below are four statements, a-d, regarding human blood circulatory system.

Find the correct one.

(a) Arteries are thick-walled and have narrow lumen as compared to veins

(b) Angina is acute chest pain when the blood circulation to brain is reduced

(c ) Person with blood group AB can donate blood to any person with any blood group under ABO system

(d) Calcium ions play a very important role in blood clotting

A. a and b

B. a and d

C. b and c

D. c and d

**Answer: B**



**Watch Video Solution**

**15.** If due to some injury the chordae tendineae of the tricuspid valve of the human heart is partially non-functional, what will be the immediate effect ?

A. The 'Pacemaker' will stop working

B. Blood will tend to flow back into left atrium

C. Flow of blood into pulmonary artery will  
be reduced

D. Flow of blood into aorta will be slowed  
down

**Answer: C**



**Watch Video Solution**

**16.** The life of the erythrocytes in mammalian  
bloos is about

A. 120 days

B. 150 days

C. 190 days

D. 180 days

**Answer: A**



**Watch Video Solution**

**17.** A blood group does not have any antigen but possesses both a and b antibodies. It is

A. A

B. O

C. B

D. AB

**Answer: B**



**Watch Video Solution**

**18.** Cold blooded animal with a single circulation is

A. Mammal

B. Amphibian

C. Reptile

D. Fish

**Answer: D**



**Watch Video Solution**

**19.** Blood corpuscles containing both A and B antigens are mixed with another blood serum.



The blood corpuscles agglutinated. Blood serum belong to blood group

A. A

B. B

C. AB

D. O

**Answer: D**



**Watch Video Solution**

20. Systolic pressure is 120 mm Hg. Diastolic pressure is 80 mm Hg. Pulse pressure is

A.  $120 \times 80 = 9600$  mm Hg

B.  $120 + 80 = 200$  mm Hg

C.  $120 - 80 = 40$  mm Hg

D.  $120 / 80 = 1.5$  mm Hg.

**Answer: C**



**Watch Video Solution**

21. Which one functions as enzyme in blood clotting

A. Prothrombin

B. Calcium

C. Thrombin

D. Fibrin

**Answer: C**



**Watch Video Solution**

22. Pulmonary trunk and aorta are attached by

A. Chordae tendinae

B. Ligamentum arteriosum

C. Coronary sulcus

D. Pericardium

**Answer: B**



**Watch Video Solution**

23. Valve surrounding opening of coronary sinus is

- A. Thebesius valve
- B. Eustachian valve
- C. Mitral valve
- D. Semilunar valve

**Answer: A**



**Watch Video Solution**

24. Valves occur in

A. Arteries, venis and auticles

B. Atria, ventricles and veins

C. Arteries, veins and ventricles

D. SA node, AV node and veins

**Answer: B**



**Watch Video Solution**

25. In case of emergency (e.g., serious accident with great blood loss) which blood group could be safely transfused?

A.  $AB Rh^-$

B.  $ORh^+$

C.  $AB Rh^+$

D.  $O Rh^-$

**Answer: D**



**Watch Video Solution**

26. Valves present between right auricle and right ventricles is

- A. Mitral valve
- B. Tricuspid valve
- C. Bicuspid valve
- D. Semilunar valve

**Answer: B**



**Watch Video Solution**



27. Congestion of lungs is one of the main symptoms in

A. Hypertension

B. Angina

C. Heart failure

D. Coronary artery disease

**Answer: C**



**Watch Video Solution**

**28.** In ECG, what does T wave represent?

- A. Diastole of atria
- B. Systole of ventricles
- C. Systole of ventricles
- D. Repolarisation of ventricles

**Answer: D**



**Watch Video Solution**

**29.** The first heart sound is

- A. Lub during closure of semilunar valves
- B. Dub during closure of semilunar valves
- C. Lub during closure of atrioventricular valves
- D. Dub during closure of atrioventricular valves.

**Answer: C**



**Watch Video Solution**

**30. Hypertension is not caused by**

A. Anaemia

B. Atherosclerosis

C. Obesity

D. Arteriosclerosis

**Answer: A**



**Watch Video Solution**

31. QRS complex of a standard ECG represents

- A. Excitation or depolarisation of atria
- B. Depolarisation of ventricles
- C. Repolarisation of ventricles
- D. None of the above

**Answer: B**



**Watch Video Solution**

32. Angina pectoris is a major symptom of

A. Myocardial infraction

B. Cyanosis

C. High blood pressure

D. Low blood pressure

**Answer: A**



**Watch Video Solution**

**33.** The volume of blood each ventricle pumps out during a cardiac cycle is about

A. 70 ml

B. 51 ml

C. 40 ml

D. 120 ml

**Answer: A**



**Watch Video Solution**

**34.** To obtain a standard ECG, a patient is connected to the machine by three electrodes

A. One to each wrist and to the left ankle

B. One to each each ankle and to the left  
wrist

C. One to each wrist and to the left wrist  
region

D. One to each ankle and to the left chest  
region

**Answer: A**



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### 35. Foramen ovale

A. Connects the two atria in the foetal heart

B. Connects pulmonary trunk and aorta in foetus

C. Is condition in which heart valves do not completely close

D. Is a shallow depression in the inter-ventricular septum

**Answer: A**



**Watch Video Solution**

**36.** What is correct regarding blood pressure?

A. 105/50 mm Hg makes one very active.

B. 100/50 mm Hg is considered an ideal  
blood pressure.

C. 190/110 mm Hg harm vital organs like  
brain and kideneys.

D. 130/90 mm Hg is considered as high and requires treatment.

**Answer: C**



**Watch Video Solution**

**37.** Which one of the following proteins is involved in the coagulation of blood?

A. Globulin

B. Fibrinogen

C. Albumin

D. Serum amylase

**Answer: B**



**Watch Video Solution**

**38.** Arteries are best defined as the vessels which

A. Break up into capillaries which reunite to  
from a vein

B. Carry blood away from heart to different organs

C. Supply oxygenated blood to different organs

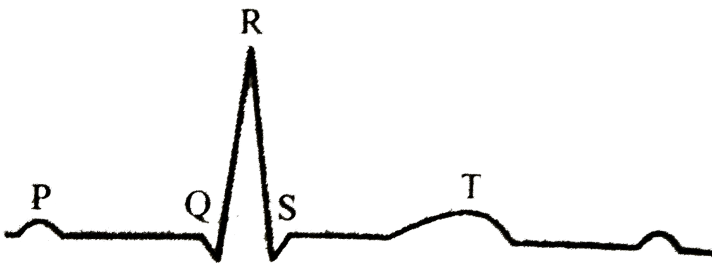
D. Carry blood from one visceral organ to another visceral organ

**Answer: B**



**Watch Video Solution**

39. The given figure is the ECG of a normal human. Which one of its components is correctly interpreted below ?



A. Peak T-initiation of total cardiac contraction

B. Peak T-initiation of total cardiac contraction

C. Peaks P and R-systole end diastole blood pressure

D. Peak T-initiation of left atrial contraction only

**Answer: A**



**Watch Video Solution**

**40.** A vein starts from capillaries and ends in capillaries

A. Phreinc

B. Coronary

C. Portal vein

D. Internal jugular

**Answer: C**



**Watch Video Solution**

**41. Universal donor blood group is**

A. A



B. B

C. AB

D. O

**Answer: D**



**Watch Video Solution**

**42. Cardiac output is**

A. 4 liters/minutes

B. 5.3 liters/minutes

C. 6.3 litere/minutes

D. 7.3 litres/minutes

**Answer: B**



**Watch Video Solution**

**43. Which one regulates heart beat?**

A. Purkinjr fibres

B. Cardiac branch of vagus nerve

C. SA node

D. AV node

**Answer: B**



**Watch Video Solution**

**44.** Purkinjr fibres are present in

A. Heart

B. Cerebrum

C. Semicircular canals

D. Voluntary muscles

**Answer: A**



**Watch Video Solution**

**45.** In ECG, P-wave refers to

A. End on atrial contraction

B. Beginning of atrial contraction/depolarisation

C. Beginning of ventricular contraction

D. None of the above

**Answer: B**



**Watch Video Solution**

**46. Erythroblastosis foetalis occurs:**

- A.  $Rh^+$  and mother  $Rh^-$
- B.  $Rg^+$  and mother  $Rh^+$
- C.  $Rh^-$  and mother is  $Rh^+$
- D.  $Rh^-$  and mother  $Rh^-$

**Answer: A**



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47. In human beings, duration of cardiac cycle is

A. 0.08 second

B. 0.8 second

C. 0.5 second

D. 8.0second

**Answer: B**



48. Compared to those of humans, erythrocytes of Frog are

- A. With nucleus but without haemoglobin
- B. Nucleated and with haemoglobin
- C. Smaller and fewer
- D. Without nucleus but with haemoglobin

**Answer: B**



**49.** The blood vessel which supplies oxygenated blood to cardiac tissue is

- A. Coronary sinus
- B. Coronary vein
- C. Coronary artery
- D. Pulmonary artery

**Answer: C**



**Watch Video Solution**



50. Circulatory system does not help in

- A. Trnsnsport of gases
- B. Transoprt of nutrients
- C. Transport of hormones
- D. Passage of impulses

**Answer: D**



**Watch Video Solution**

51. Lub sound produced by heart is caused by

A. Ventricular systole

B. Ventricucular diastole

C. Atrial diastole

D. Atrial systole

**Answer: A**



**Watch Video Solution**

52. Number of action potentials that can be generated by sino-atrial node is

A. 40-50/min

B. 70-75/min

C. 80-120/min

D. 100-120/min

**Answer: B**



**Watch Video Solution**

53. If blood pressure reads 140 systole and 90 diastole, the condition is called

A. Hypertension

B. Normal

C. Hypotension

D. Ischemia

**Answer: A**



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54. Choose the correct option.

(i) Human heart is ectodermal in origin.

(ii) Mitral valve guards the opening between right atrium and left ventricle.

(iii) SAN is located on the left upper corner of right atrium

(iv) Stroke volume  $\times$  heart rate = Cardiac output

A. (i) alone is correct

B. (i) and (ii) alone is correct

C. (ii) and (iii) alone are correct

D. (iv) alone is correct

**Answer: D**



**Watch Video Solution**

**55.** Choose the correct statement.

A. T-wave in ECG represents excitation of ventricles

B. Sum of P and T waves can determine heart beat rate

C. End of P-wave marks end of systole

D. In a standard ECG, a person is connected to machine with three electrical leads

**Answer: D**



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**56.** From which part of heart does the largest artery arise

A. Left ventricle

B. Right ventricle

C. Left atrium

D. Right atrium

**Answer: A**



**Watch Video Solution**

**57.** Volume of blood that enters aorta with each ventricular systole is

A. vital capacity



B. Cardiac cycle

C. Stroke volume





D. Cardiac output

**Answer: C**



**Watch Video Solution**

## 58. Select the correct option.

	Structure	%	Function
(A)		0.3–0.5	Phagocytic
(B)		0.5–1	Secrete histamine and serotonin
(C)		30–40	Defence against microbes
(D)		30–40	Allergic reactions



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## 59. The other term for heart attack is

A. Coronary thrombosis

B. Myocardial infarction

C. Ischaemia

D. Cardiac arrest

**Answer: B**



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**60.** Which is not correct about circulatory system of aves

A. Heart is four chambered

B. Well developed renal portal system

C. Sinus venosus and truncus arteriosus

are lacking

D. RBCs are nucleated

**Answer: B**



**Watch Video Solution**

**61.** How do parasympathetic neural signals affect the working the heart

- A. Heart rate decreases but cardiac output increases
- B. Reduce both heart rate and cardiac output
- C. heart rate is increased without affecting the cardiac output
- D. Both heart rate and cardiac output increase

**Answer: B**



**Watch Video Solution**

**62.** Person with blood group AB is considered as universal recipient because he has

A. Both A and B antigens in the plasma but no antibodies

B. Both A and B antigens on RBC but no antibodies in the plasma

C. Both A and B antibodies in the plasma

D. No antigen on RBC and no antibody in the plasma

**Answer: B**



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**63.** Mitral valve in mammalian heart guards the opening between

- A. Pulmonary vein and left auricle
- B. Right atrium and right ventricle
- C. Left atrium and left ventricle
- D. Left ventricle and dorsal aorta

**Answer: C**



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**64.** A canical condition in which the bond marrow stops producing WBC, is known as

- A. Leukaemia
- B. Apoptosis
- C. Leucopenia
- D. Anaemia



**Answer: C**



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**65.** The RBC membrane of a person contains no antigen. His blood group will be

A. A

B. B

C. AB

D. O

**Answer: D**



**Watch Video Solution**

**66.** Which of the following statements is true with respect to sounds produced during cardiac cycle?

- A. The first heart sound (lub) is associated with the closure of semilunar valves
- B. The first heart sound (lub) is associated with closure of tricuspid and bicuspid

valves

C. Second heart sound (dub) is associated with closure of bicuspid valves

D. Second heart sound (dub) is associated with closure of tricuspid valves

**Answer: B**



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**67.** Person with blood group 'O' are universal donors because they have

A. Antigen 'A' on RBCs

B. Antigen 'B' on RBCs

C. No antigen on RBCs

D. Antigens 'A' and 'B' on RBCs

**Answer: C**



**Watch Video Solution**

**68.** Blood pressure in the mammalian aorta is maximum during

- A. Systole of the left ventricle
- B. Diastole of the right atrium
- C. Systole of the left atrium
- D. Diastole of the right ventricle

**Answer: A**



**Watch Video Solution**

69. Which one of the following is correct?

A. Lymph=Plasma+RBC+WBC

B. Blood=Plasma+RCB+WBC+Platelets

C. Plasma=Blood+Lymphocytes

D. Serum=Blood +Fibrinogen

**Answer: B**



**Watch Video Solution**

70. Erythropoiesis starts in

- A. Spleen
- B. Red bone marrow
- C. Kidney
- D. Liver to kidney

**Answer: B**



**Watch Video Solution**

71. Doctors use stethoscope to hear the sounds produced during each cardiac cycle.

The second sound is heard when

A. Ventricular walls vibrate due to gushing

in of blood from atria

B. Semilunar valves close down after the

blood flows into vessels from ventricles

C. AV node receives signal from SA node

D. AV valves open up



**Answer: B**



**Watch Video Solution**

**72.** hardening of arteries due to precipitation of Ca salts and cholesterol causes

- A. Heart attack
- B. Arteriosclerosis
- C. Atherosclerosis
- D. Hypertension

**Answer: C**



**Watch Video Solution**

**73.** Reduction in pH of blood will

- A. reduce the rate of heart beat
- B. Reduce the blood supply to the brain
- C. decrease the affinity of hemoglobin with  
oxygen
- D. release bicarbonate ions by the liver

**Answer: C**



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**74.** Blood pressure in the pulmonary artery is

- A. same as that in the aorta
- B. more than that in the carotid
- C. more than that in the pulmonary vein
- D. less than that in the vena cavae

**Answer: C**



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75. name the blood cells, when reduction in number can cause clotting disorder, leading to excessive loss of blood from the body

- A. Neutrophils
- B. Thrombocytes
- C. Erythrocytes
- D. Leucocytes

**Answer: B**



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**76.** The hepatic portal vein drains blood to liver from

A. Stomach

B. Kidneys

C. Intestine

D. Heart

**Answer: C**



77. Frog's heart when taken out of the body continues to beat for sometime.

Select the best option from the following statements.

(a) Frog is poikilotherm

(b) Frog does not have any coronary circulation

(c) Heart is "myogenic" in nature

(d) Heart is autoexcitable

A. Only d

B. a and b

C. c and d

D. Only c

**Answer: C**



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**78.** Match the items given in Column I with those in Column II and select the correct option given below



A.  $a \quad b \quad c$   
 $iii \quad ii \quad i$

B.  $a \quad b \quad c$   
 $i \quad ii \quad iii$

C.  $a \quad b \quad c$   
 $i \quad iii \quad ii$

D.  $a \quad b \quad c$   
 $ii \quad iii \quad i$

**Answer: D**



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**79.** Match the item given in Column I with those in Column II and select the correct



option given below.

**Column I**

- a. Fibrinogen
- b. Globulin
- c. Albumin

**Column II**

- i. Osmotic balance
- ii. Blood clotting
- iii. Defence mechanism

A.  $\begin{matrix} a & b & c \\ iii & ii & i \end{matrix}$

B.  $\begin{matrix} a & b & c \\ i & ii & iii \end{matrix}$

C.  $\begin{matrix} a & b & c \\ i & iii & ii \end{matrix}$

D.  $\begin{matrix} a & b & c \\ ii & iii & i \end{matrix}$

**Answer: D**



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**80.** Which one of the following is a matching pair

A. Lubb-Sharp closure of AV valves at the beginning of ventricular systole.

B. Dup-Sudden opening of semilunar valves of the beginning of ventricular diastole.

C. Pulsation of the radial artery valves in the blood vessels.

D. Purkinje fibers-Initiation of the heart beat.

**Answer: A**



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**81.** Which one of the following is a matching pair of a certain body feature and its value/count in a normal human adult

A. Urea: 5-10 mg/100 ml of blood

B. Blood sugar (fasting): 70-100 mg/100 ml

C. Total blood volume: 5-6

D. ESR in Wintrobe method: 9-15 mm in males and 20-34 mm in females

**Answer: B**



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**82.** In which of the following pairs the two items mean one and the same thing?

A. Malleus-Anvil

B. SA node-Pacemaker

C. Leucocytes-Lymphocytes

D. Haemophilia-Blood cancer

**Answer: B**



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**83.** An artificial pace-maker is implanted subcutaneously and connected to the heart in patients

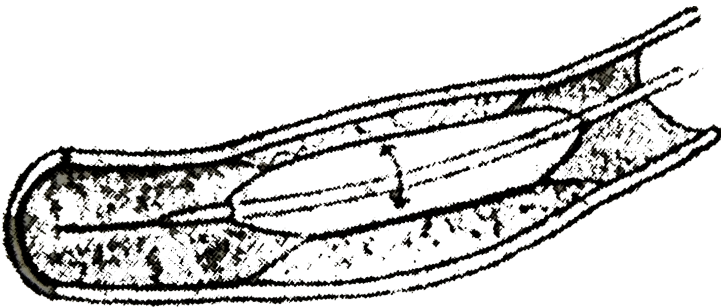
- A. having 90 % blockage of the three main coronary arteries
- B. having a very high blood pressure
- C. with irregularity in the heart rhythm
- D. suffering from arteriosclerosis

**Answer: C**



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84. The given figure shows an angiogram of the coronary blood vessel. Which one of the following statements correctly describes, what is being done ?



A. It is coronary artery which has a cancerous growth that is being removed.

B. It is coronary artery which is blocked by a plaque and the same is being cracked.

C. It is coronary vein in which the defective valves are being opened.

D. It is coronary vein blocked by a parasite (blood fluke) that is being removed.

**Answer: B**



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**85.** The component of blood which prevents its coagulation in the blood vessels is

A. haemoglobin

B. plasma

C. thrombin

D. heparin

**Answer: D**



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**86.** Hardening of the arteries due to deposition of cholesterol on arterial wall is termed as:

- A. arteriosclerosis
- B. rheumatic heat
- C. blood pressure
- D. cardiac arrest

**Answer: A**



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**87.** Arteries supplying blood to the heart are called

- A. carotid arteries
- B. hepatic arteries
- C. coronary arteries
- D. pulmonary arteries

**Answer: C**



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**88.** The blood glucose level is commonly expressed as

A. mm of Hg

B. milligram per decilitre

C. parts per million

D. gram (gm/l) per litre

**Answer: B**



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89. A man whose blood group is not known meets with a serious accident and needs blood transfusion immediately, which one of the blood groups readily available in the hospital will be safe for transfusion ?

A. O,  $Rh^-$

B. O,  $Rh^+$

C. AB,  $Rh^-$

D. AB  $Rh^+$

**Answer: A**





**90.** With reference to the blood in a normal person, which one of the following statements is correct ?

A. Compared to arteries, veins are less numerous and hold less of the body's blood at any given time.

B. Blood cells constitute about 70 per cent of the total volume of the blood.

C. White blood cells (WBC) are made by lymph nodes only.

D. The blood has more platelets than WBC.

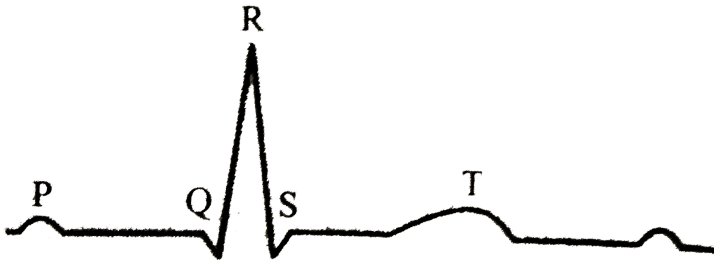
**Answer: D**



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**91.** The given figure is the ECG of a normal human. Which one of its components is

correctly interpreted below ?



A. Peak P and Peak R together-Systolic and diastolic blood pressures

B. Peak P-Initiation of left atrial contraction only

C. Complex QRS-One complete pulse

D. Peak T-Initiation of total cardiac contraction.



**Answer: C**



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**92.** Approximately seventy percent of carbon dioxide absorbed by the blood will be transported to the lungs

- A. as bicarbonate ions
- B. in the form of dissolved gas molecules
- C. by binding to RBC
- D. as carbamino-haemoglobin

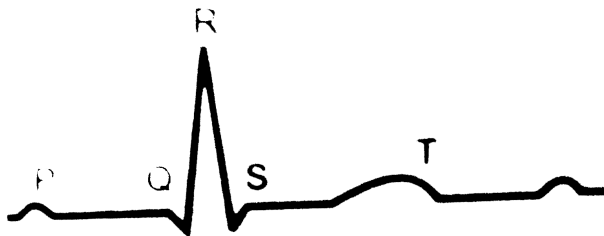
**Answer: A**



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**93.** The diagram given here is the standard ECG of a normal person, the P-wave represents the

the



**A.** Initiatio of the ventricular contraction

B. Beginning of the systole

C. End of systole

D. Contraction of both the atria

**Answer: D**



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**94.** Mature RBCs lose their ability for

A. DNA replication

B. Anaerobic respiration

C. Aerobic respiration, DNA replication

D. Aerobic respiration, DNA replication and  
RNA replication synthesising machinery.

**Answer: D**



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**95.** When kidney of a person is damaged, he/she invariably suffers from anaemia because

A. RBCs pass through the glomerulus

B. sufficient erythropoietin is not produced

C. hemoglobin is not synthesized  
sufficiently

D. iron and vitamin  $B_{12}$  are not able to  
bind to haemoglobin.

**Answer: B**



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**96.** Which of the following statements are incorrect ?

(i) Leucocytes disintegrate in spleen and liver

(ii) RBCs, WBCs and blood platelets are produced by bone marrow

(iii) Neutrophils bring about destruction and detoxification of toxins of protein origin

(iv) Important function of lymphocytes is to produce antibodies.

A. (i) and (ii) only

B. (i) and (iv) only

C. (i) and (iii) only

D. (ii) and (iii) only

**Answer: C**



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**97.** Assertion: WBCs accumulate at site of wounds by diapedesis.

Reason: It is squeezing of leucocytes from endothelium.

A. If both assertion and reason are true and the reason is a correct explanation of the assertion.

B. If both assertion and reason are true but reason is not a correct explanation of the assertion.

C. If the assertion is true but reason is false.

D. If both the assertion and reason are false.



**Answer: B**



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**98.** Assertion: Blood coagulates in uninjured blood vessels.

Reason: Uninjured blood vessels release an anticoagulant heparin.

A. If both assertion and reason are true and the reason is a correct explanation of the assertion.

B. If both assertion and reason are true but reason is not a correct explanation of the assertion.

C. If the assertion is true but reason is false.

D. If both the assertion and reason are false.

**Answer: B**



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**99.** Assertion: Oxyhaemoglobin dissociates near the organ tissue due to Bohr effect and oxygen is released.

Reason:  $CO_2$  concentration reduced the affinity of haemoglobin for oxygen.

A. If both assertion and reason are true and the reason is a correct explanation of the assertion.

B. If both assertion and reason are true but reason is not a correct explanation of

the assertion.

C. If the assertion is true but reason is false.

D. If both the assertion and reason are false.

**Answer: A**



**View Text Solution**

**100.** Assertion: Prothrombinase enzyme act as antiheparin.

Reason: Heparin prevent coagulation of blood in blood vessels.

A. If both assertion and reason are true and the reason is a correct explanation of the assertion.

B. If both assertion and reason are true but reason is not a correct explanantion of the assertion.

C. If the assertion is true but reason is false.

D. If both the assertion and reason are false.

**Answer: B**



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**101.** Assertion: When there is a fall in the blood pressure due to loss of blood volume, this is compensated by vasoconstriction of veins.

Reason: Veins hold the extra amount of blood which can be shifted to the arteries as required.

A. If both assertion and reason are true and the reason is a correct explanation of the assertion.

B. If both assertion and reason are true but reason is not a correct explanation of the assertion.

C. If the assertion is true but reason is false.

D. If both the assertion and reason are false.

**Answer: A**



**View Text Solution**

**102.** Assertion : Blood of insects is colourless.

Reason : The blood of insect does not play any role in transport of oxygen.



A. If both assertion and reason are true and the reason is a correct explanation of the assertion.

B. If both assertion and reason are true but reason is not a correct explanation of the assertion.

C. If the assertion is true but reason is false.

D. If both the assertion and reason are false.

**Answer: B**



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