

BIOLOGY

BOOKS - MTG BIOLOGY (HINGLISH)

BODY FLUIDS AND CIRCULATION

Body Fluids And Circulation

1. pH of blood

- A. is greater than 9
- B. ranges between 7-8
- C. is less than 7
- D. none of these

Answer: B



Watch Video Solution

2. Match column *I* with column *II* and select the correct option from the codes given below.

Column I
(Plasma protein)

Column II
(Functions)

- | | | |
|---------------|-------|----------------------|
| A. Fibrinogen | (i) | Defence mechanism |
| B. Globulins | (ii) | Osmotic balance |
| C. Albumins | (iii) | Coagulation of blood |

A. A-(iii),B-(i),C-(ii)

B. A-(i),B-(iii),C-(ii)

C. A-(iii),B-(ii),C-(i)

D. A-(ii),B-(i),C-(iii)

Answer: A

3. Consider the following four statements and select the correct option stating which ones are true (T) and which ones are false (F) ?

(i) Proteins contribute 6-8 of the blood plasma

(ii) Plasma contains very high amount of minerals

(iii) Plasma without the clotting factors is called serum

(iv) Glucose, amino acids, lipids, etc, are also present in the plasma as they are always in transit in the body.

A. (i) (ii) (iii) (iv)
F F T T

B. (i) (ii) (iii) (iv)
T F T T

C. (i) (ii) (iii) (iv)
T T F F

D. (i) (ii) (iii) (iv)
F F F T

Answer: B



Watch Video Solution

4. Which of the following statements is incorrect ?

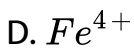
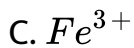
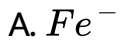
- A. Erythrocytes/RBCs are the least abundant of all the cells in blood
- B. The number of RBCs in adult man per mm^3 of blood is 5 million to 5.5 million
- C. RBCs are formed in the red bone marrow in the adults
- D. RBCs are enucleated in most of the mammals.

Answer: A



Watch Video Solution

5. What is the oxidation state of iron in haemoglobin ?



Answer: B



Watch Video Solution

6. Which of the following is an agranulocyte ?

A. Basophil

B. Neutrophil

C. Lymphocyte

D. Eosinophil

Answer: C



Watch Video Solution

7. The life span of human granulocytic WBC is approximately

A. between 2 to 3 months

B. more than 4 months

C. less than 10 days

D. between 20 to 30 days

Answer: C



Watch Video Solution

8. In a healthy adult man, the smallest type of leucocytes are

A. Basophils

B. monocytes

C. eosinophils

D. lymphocytes

Answer: D



Watch Video Solution

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

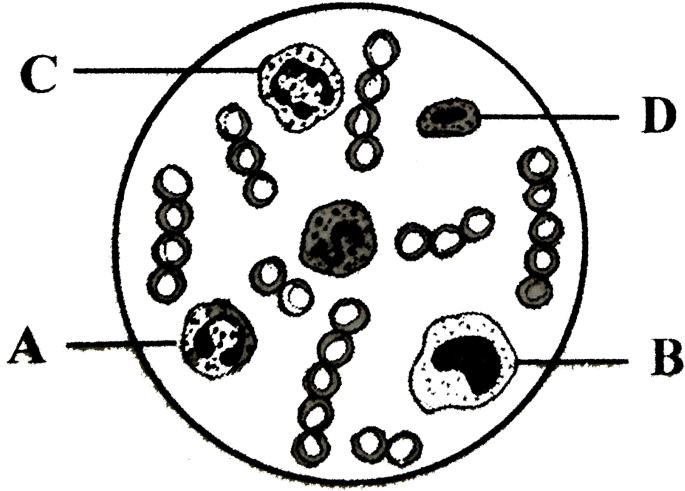
- A. Neutrophils → Basophils → Lymphocytes →
Acidophils (Eosinophils) → Monocytes
- B. Monocytes → Neutrophils → Lymphocytes →
Acidophils → Basophils
- C. Neutrophils → Lymphocytes → Monocytes →
Acidophils → Basophils
- D. Lymphocytes → Acidophils → Basophils →
Neutrophils → Monocytes

Answer: C



[Watch Video Solution](#)

10. Study the given figure and identify the cells labelled as A, B, C and D



A. A - Eosinophil, B - Erythrocyte

C - Neutrophil, D - Basophil

B. A - Eosinophil, B - Lymphocyte

C - Neutrocyte, D - Monocyte

C. A - Erythrocyte, B - Basophil,

C - Neutrophil, D - Lymphocyte

D. A - Eosinophil, B - Monocyte

C - Neutrophil, D - Lymphocyte

Answer: D



Watch Video Solution

11. Which of the following match is correct ?

	Structure	Percentage	Function
A.	(a)	0.3 – 0.5	Phagocytic
B.	(b)	0.5 – 1.0	Secrete histamine and serotonin
C.	(c)	30 – 40	Defence against parasites
D.	(d)	30 – 40	Allergic reactions

Answer: B



Watch Video Solution

12. Match the types of WBC listed under column *I* with the shape of nucleus given under column *II* and select the correct option from codes given below

Column I		Column II
A. Neutrophils	(i)	Kidney-shaped
B. Eosinophils	(ii)	S-shaped
C. Basophils	(iii)	3 to 5 lobes
D. Monocyte	(iv)	2 lobes
	(v)	Disc-shaped

- A. A-(ii),B-(v),C-(i),D-(ii)
- B. A-(v),B-(iii),C-(i),D-(iv)
- C. A-(ii),B-(i),C-(v),D-(iii)
- D. A-(iii),B-(iv),C-(ii),D-(i)

Answer: D



Watch Video Solution

13. Which statement is true for WBC ?

- A. Non-nucleated
- B. Its deficiency causes cancer
- C. Manufactured only in thymus
- D. Can squeeze through blood capillaries

Answer: D



Watch Video Solution

14. 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. (i) and (ii)
- B. (i) and (iv)
- C. (i) and (iii)
- D. (ii) and (iii)

Answer: C



Watch Video Solution

15. The life span of thrombocytes is

- A. 4 to 5 weeks

B. 3 to 4 weeks

C. 3 to 7 days

D. none of these

Answer: C

 [Watch Video Solution](#)

16. Identify the following type of blood cells and mark the correct option.



A



B



C



D



E

A.

<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>
Monocyte	Eosinophil	Neutrophil	Basophil	Blood platelets

B.

<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>
Monocyte	Basophil	Neutrophil	Blood platelets	Eosinophil

C.

<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>
Basophil	Blood platelets	Monocyte	Eosinophil	Neutrophil

D.

<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>
Basophil	Blood platelets	Eosinophil	Neutrophil	Monocyte

Answer: C



Watch Video Solution

17. In the following table of human ABO blood groups, fill up the blanks (i),(ii),(iii) and (iv) from the options given below

Blood group	Antigens on RBCs	Antibody in Plasma	Donor groups
A	A	Anti-B	A,O
B	B	Anti-A	B,O
AB	AB	(ii)	A,B,AB,O
O	(i)	(iii)	(iv)

- A. (i) Nil (ii) Nil (iii) Nil (iv) O
- B. (i) Nil (ii) Nil (iii) Anti-A,B (iv) AB
- C. (i) Nil (ii) Anti-A,B (iii) Nil (iv) O
- D. (i) Nil (ii) Nil (iii) Anti-A,B (iv) O

Answer: D



Watch Video Solution

18. A certain road accident patient with unknown blood group needs immediate blood transfusion. His one doctor friend at once offers his blood. What was the blood group of the donor ?

- A. Blood group B
- B. Blood group AB
- C. Blood group O
- D. Blood group A

Answer: C



View Text Solution

19. Which of the following blood groups is a universal recipient in the blood transfusion ?

A. Group AB

B. Group B

C. Group A

D. Group O

Answer: A



[Watch Video Solution](#)

20. Anti-A and Anti-B antibodies are not found in which of the following blood group ?

A. AB

B. A

C. O

D. B

Answer: A



Watch Video Solution

21. Clumping of RBC may occur when blood of one person is mixed with serum or blood of another person. This is due to

A. antigen-antibody reaction

B. antitoxin-antibody reaction

C. antigen-antigen reaction

D. antibody-antibody reaction

Answer: A



Watch Video Solution

22. Blood of AB group cannot be given to B group patient because

- A. patient has antibodies b
- B. patient lacks antibodies b
- C. patient lacks antibodies a
- D. patient has antibodies a

Answer: D



Watch Video Solution

23. A drop of each of the following, is placed separately on four sides. Which of them will not coagulate ?

- A. Blood serum
- B. Blood from pulmonary artery
- C. Whole blood from pulmonary vein
- D. Blood plasma

Answer: A



Watch Video Solution

24. Which one the following statements is correct with regard to the principle of safe blood transfusion ?

- A. The donor's red blood corpuscles should not contain antibodies against the recipient's serum
- B. The recipient's serum should not contain antigens against the donor's antibodies.
- C. The recipient's serum should not contain the antibodies against the red blood corpuscles of the donor.
- D. The recipient's red blood corpuscles should not contain antibodies against the donor's antigen

Answer: C



[Watch Video Solution](#)

25. Detection of blood is done by agglutination test using antiserum. According to this method, if the blood shows

coagulation with

- A. antiserum B, blood group is AB
- B. antiserum B, blood group B
- C. antiserum A and B, blood group is O
- D. antiserum A, blood group is O

Answer: B



Watch Video Solution

26. As per the guidelines of the Indian Red Cross Society, which of the following persons is recommended for blood donation ?

- A. People not in good health, under the influence of alcohol or drugs

B. Ladies during menstruation, pregnancy and breast feeding

C. Healty women but unwed and below the gate of 35

D. Persons who are immunised with live vaccines

Answer: D



Watch Video Solution

27. Rh factor was discovered by

A. Landsteiner and Weiner

B. William Harvey

C. Malpighi

D. none of these

Answer: A



Watch Video Solution

28. In which of the following situations, there is a risk factor for children acquiring erythroblastosis foetalis ?

- A. Mother is Rh -ve and father is Rh -ve
- B. Mother is Rh -ve and father is Rh + ve
- C. Mother is Rh + ve and father is Rh + ve
- D. Mother is Rh +ve and father is Rh - ve

Answer: B



Watch Video Solution

29. Conversion of fibrinogen to fibrin is catalysed by

- A. thrombin
- B. prothrombin
- C. thromboplastin
- D. all of these

Answer: A



Watch Video Solution

30. Which proteolytic enzyme induce lysis of fibrin during fibrinolysis ?

- A. Fibrin
- B. Thrombin

C. Plasmin

D. Platelet factor *VIII*

Answer: C



Watch Video Solution

31. Which of the following statements are correct ?

(i) Ca^{+2} is necessary for blood coagulation

(ii) Coagulation in blood vessel is prevented during normal condition by heparin

(iii) Clotting of blood involves changes of fibrinogen to fibrin by thrombin

(iv) Blood clotting involves cascading process involving a number of factors present always in the active form.

A. (i),(iii) and (iv)

B. (ii) and (iv)

C. (i),(ii) and (iii)

D. (iii) and (iv)

Answer: C



Watch Video Solution

32. Consider the following statements (A-C) each with one or two blanks.

(A) (1) are the most abundant cells (60-65 percent) of the total WBCs and (2) are the least (0.5-1 percent) among them

(B) Platelets are cell fragments produced from (3)

(C) During clot formation, fibrins are formed by the conversion of inactive (4) in the plasma by the enzyme (5)

Which one of the following options, gives the correct fill ups for the respective blank numbers from (1) to (5) in the statements ?

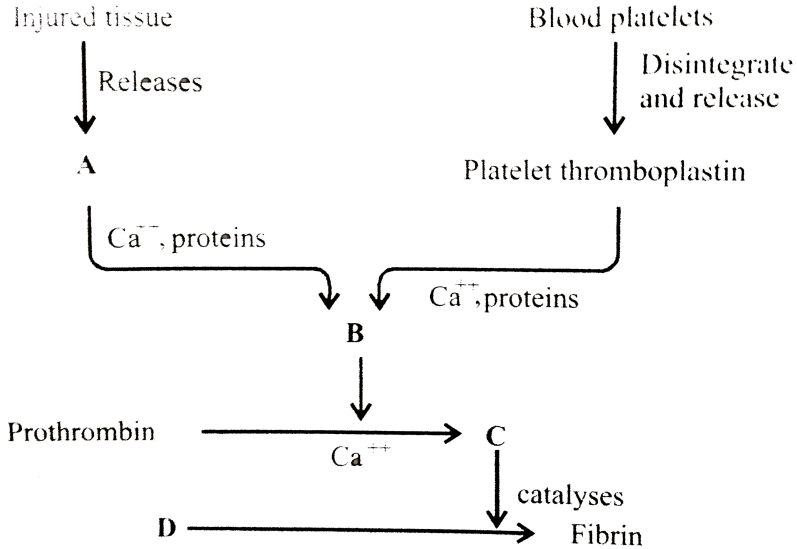
- A. (1)-Neutrophils, (2)-basophils, (4)-fibrinogens, (5)-thrombin
- B. (3)-mast cells, (4)-thrombokinase, (5)-prothrombin
- C. (3)-megakaryocytes, (4)-prothrombin, (5)-thrombin
- D. (1)-Basophils, (2)-neutrophils, (3)-reticulocytes

Answer: A



[Watch Video Solution](#)

33. Identify the components labelled (A-D) in the given flow chart of the blood clotting process.



- | | <i>A</i> | <i>B</i> | <i>C</i> | <i>D</i> |
|----|---------------------|---------------------|---------------------|---------------------|
| A. | Thrombo-
plastin | Prothrom-
binase | Thrombin | Fibrinogen |
| B. | Fibrinogen | Thrombin | Prothrombinase | Thrombo-
plastin |
| C. | Prothrom-
binase | Fibrinogen | Thrombo-
plastin | Thrombin |
| D. | Thromin | Thrombo-
plastin | Fibrinogen | Prothrom-
binase |

Answer: A



Watch Video Solution

34. Prothrombin, which helps in clotting of blood, is released by

- A. monocytes
- B. erythrocytes
- C. Lymphocyte
- D. blood platelets

Answer: D



Watch Video Solution

35. Prothrombin required for blood clotting is produced in

- A. stomach
- B. liver
- C. spleen

D. pancreas

Answer: B



Watch Video Solution

36. Read the following statements and select the correct option

Statement 1 : Prothrombin is essential for blood clotting

Statement 2 : Prothrombin is synthesised in the liver in the presence of Ca^{++}

- A. Both statements 1 and 2 are correct
- B. Statement 1 is correct but statement 2 is incorrect
- C. Statement 1 is incorrect but statement 2 is correct
- D. Both statements 1 and 2 are incorrect

Answer: B



Watch Video Solution

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

- A. the formation of thromboplastin
- B. the conversion of fibrinogen to fibrin
- C. the conversion of prothrombin to thrombin
- D. the formation of prothrombin

Answer: D



Watch Video Solution

38. Coagulation will not be affected in the absence of factor

- A. *VII*
- B. *XII*
- C. *VIII*
- D. *VI*

Answer: D



Watch Video Solution

39. Which of the following factors is known as Christmas factor

?

- A. Factor *VIII*
- B. Factor *XII*

C. Factor *IV*

D. Factor *IX*

Answer: D



Watch Video Solution

40. In the clotting mechanism pathway, thrombin activates the factors

A. *XI, VIII, V*

B. *XI, IX, X*

C. *VIII, X, V*

D. *IX, VIII, X*

Answer: A



Watch Video Solution

41. Match column *I* with column *II* and select the correct option from the codes given below.

Column I

Column II

- | | | |
|----------------|-------|-------------------------|
| A. Factor II | (i) | Thromboplastin |
| B. Factor III | (ii) | Prothrombin |
| C. Factor VIII | (iii) | Hageman factor |
| D. Factor XII | (iv) | Antihæmophilic globulin |

A. A-(iii),B-(iv),C-(ii),D-(i)

B. A-(iv),B-(iii),C-(ii),D-(i)

C. A-(ii),B-(i),C-(iv),D-(iii)

D. A-(i),B-(ii),C-(iii),D-(iv)

Answer: C



Watch Video Solution

42. Most of our cells are surrounded by

A. blood

B. fluid equivalent to seawater in salt composition

C. interstitial fluid

D. pure water

Answer: C



Watch Video Solution

43. Which of the following statement is/are incorrect about lymph ?

(i) Lymph is colourful as it has haemoglobin but no RBC

(ii) It contains specialised lymphocytes which are responsible

for immunity of the body

(iii) Lymph is an important carrier for nutrients and hormones

(iv) Fats are absorbed through lymph in the lacteals present in the intestinal villi.

A. (i) only

B. (iii) and (iv)

C. (ii) and (iii)

D. (iv) only

Answer: A



Watch Video Solution

44. Lymph nodes form

A. hormones

B. lymph

C. antigens

D. antibodies

Answer: D



Watch Video Solution

45. The lymph serves to

A. return the interstitial fluid to the blood

B. return the WBCs and RBCs to the lymph nodes

C. transport CO_2 to the lungs

D. transport O_2 to the brain.

Answer: A



[Watch Video Solution](#)

46. Read the following statements and select the correct option

Statement 1 : Lymphatic capillaries are free and blind at one end

Statement 2 : Lymph does not flow in a circular manner.

- A. Both statements 1 and 2 are correct
- B. Statement 1 is correct but statement 2 is incorrect
- C. Statement 1 is incorrect but statement 2 is correct
- D. Both statements 1 and 2 are incorrect

Answer: A



[Watch Video Solution](#)

47. Compared to blood our lymph has

- A. plasma without proteins
- B. more WBCs and no RBCs
- C. more RBCs and less WBCs
- D. no plasma

Answer: B



[Watch Video Solution](#)

48. Which of the following statements is true for lymph ?

- A. WBCs + serum
- B. Blood - RBCs and some proteins

C. RBCs + WBCs + plasma

D. RBCs + proteins + platelete

Answer: B



Watch Video Solution

49. Open circulatory system is present in (i) and (ii). Fill the correct option for (i) and (ii)

A. (i)-platyhelminthes (ii)-molluscs

B. (i)-arthropods (ii)-echinoderms

C. (i)-annelids (ii)-arthropods

D. (i)-arthropods (ii)-molluscs

Answer: D



50. Read the following statements and select the correct option

Statement 1 : The 4-chambered heart of birds is superior to the 4-chambered heart of crocodiles

Statement 2 : Crocodilian heart retains both systemic arches that join, causing mixing of blood in the dorsal aorta while avian heart has lost left systemic arch.

- A. Both statements 1 and 2 are correct
- B. Statement 1 is correct but statement 2 is incorrect
- C. Statement 1 is incorrect but statement 2 is correct
- D. Both statements 1 and 2 are incorrect

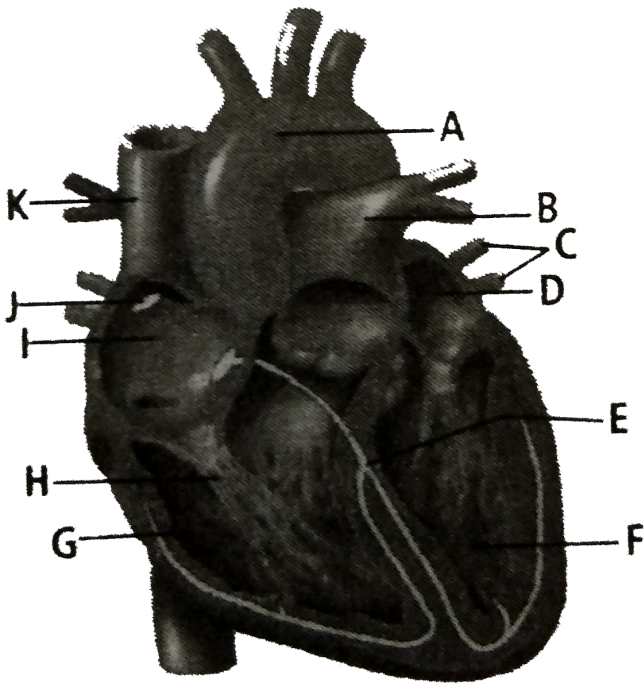
Answer: A



Watch Video Solution

51. The given figure shows the vertical section of human heart.

Identify the parts labelled as A to K



A. A-Aorta, B-Pulmonary vein, C-Pulmonary arteries D-Left ventricle, E-semilunar valves, F-Left auricle. G-Right

auricle, H-Superior vena cava, I-Right ventricle, J-Tricuspid valves, K-inferior vena cava

B. A-Aorta, B-Pulmonary artery, C-Pulmonary veins, D-Left auricle, E-Bundle of His, F-Left ventricle, G-Right ventricle, H-Chordae tendineae, I-Right auricle, J-Sino-atrial node, K-Vena cava

C. A-Aorta, B-Superior vena cava, C-Inferior vena cava, D-Right ventricle, E-Bundle of His, F-Right auricle, G-Left auricle, H-Pulmonary vein, I-Right ventricle, J-Sino-atrial node, K-Pulmonary artery

D. A-Aorta, B-Superior vena cava, C-Inferior vena cava, D-Left ventricle, E-Semilunar valves, F-left auricle, G-Right

auricle, H-Pulmonary artery, I-Right ventricle, J-Tricuspid valves, K-Pulmonary vein ?

Answer: B



Watch Video Solution

52. Which of the following is correct about human heart ?

- A. The volume of both atria $>$ the volume of both ventricles
- B. The volume of both ventricles $>$ the volume of both atria
- C. The volume of both atria = the volume of both ventricles

D. Ventricles are upper chambers and atria are lower chambers in our heart

Answer: B



Watch Video Solution

53. Which of the following chambers of the heart has the thickest muscular wall ?

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

Answer: D



[Watch Video Solution](#)

54. Heart pumps blood more forcefully in older persons than younger ones due to

- A. decrease in oxygen content of blood
- B. decrease in elasticity of arteries
- C. fall in nutrient content of blood
- D. increase in elasticity of arteries

Answer: B



[Watch Video Solution](#)

55. Pacemaker is situated in the

- A. wall of right atrium
- B. interauricular septum
- C. interventricular septum
- D. wall of left atrium

Answer: A



Watch Video Solution

56. Read the following statements and select the correct option

Statement 1 : The SA node acts as pacemaker

Statement 2 : The SA node is located in the wall of the right atrium near the interatrial septum

- A. Both statements 1 and 2 are correct

- B. Statement 1 is correct but statement 2 is incorrect
- C. Statement 1 is incorrect but statement 2 is correct
- D. Both statements 1 and 2 are incorrect

Answer: B



Watch Video Solution

57. In which one of the following pairs, two terms represent the same thing ?

- A. Lymphocyte - erythrocyte
- B. Plasma - serum
- C. Mitral valve - bicuspid valve
- D. Atrioventricular node - pacemaker

Answer: C



Watch Video Solution

58. Read the following statements and select the correct ones

- (i) Nodal tissue is specialised cardiac musculature in human heart which has the ability to generate action potential due to an external stimuli
- (ii) Position of SAN - right corner of right atrium
- (iii) Position of AVN - right corner of ventricle
- (iv) AV bundle continues from AVN
- (v) Purkinje fibres are modified cardiac muscle fibres that originate from the atrioventricular node and spread into the two ventricles.

A. (i) and (ii)

B. (i) and (iii)

C. (ii),(iv) and (v)

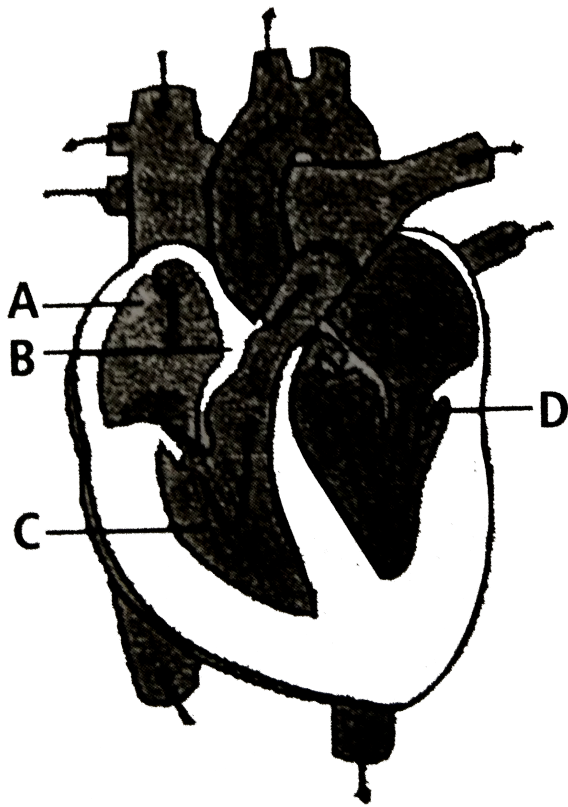
D. all of these

Answer: C



Watch Video Solution

59. The given figure illustrates a section through the human heart.



Which labelled part represents the site for the generation of action potential in human heart ?

A. A

B. B

C. C

D. D

Answer: A



Watch Video Solution

60. Chordae tendineae are found in

- A. ventricles of brain
- B. joints of legs
- C. ventricles of heart
- D. atria of heart

Answer: C



Watch Video Solution

61. The problem of electrical discontinuity caused in the normal heart by the connective tissue separating the atria from the ventricles is solved by

- A. coordinating electrical activity in the atria with electrical activity in the ventricles by connecting them via the bundle of His
- B. having the A-V node function as a secondary pacemaker
- C. having an ectopic pacemaker
- D. coordinating electrical activity in the atria with electrical activity in the ventricles by connecting them via the vagus nerve

Answer: A



Watch Video Solution

62. Match column *I* with column *II* and select the correct option from the codes given below.

Column I		Column II
A. RBC	(i)	Coagulation
B. Antibody	(ii)	Immunity
C. Platelets	(iii)	Contraction
D. Systole	(iv)	Gas transport
	(v)	Hypertension

A. A-(v),B-(i),C-(iv),D-(iii)

B. A-(ii),B-(iv),C-(iii),D-(i)

C. A-(iv),B-(ii),C-(i),D-(iii)

D. A-(iii),B-(v),C-(ii),D-(iv)

Answer: C



Watch Video Solution

63. Blood enters the heart because muscles of the

- A. atrium contracts
- B. atrium relaxes
- C. ventricles relaxes
- D. ventricle contracts

Answer: B



Watch Video Solution

64. During ventricular systole

- A. oxygenated blood is pumped into the pulmonary artery
and deoxygenated blood is pumped into the artery

- B. oxygenated blood is pumped into the aorta and deoxygenated blood is pumped into the pulmonary vein
- C. oxygenated blood is pumped into the pulmonary vein and deoxygenated blood is pumped into the pulmonary artery
- D. oxygenated blood is pumped into the aorta and deoxygenated blood is pumped into pulmonary artery.

Answer: D



[Watch Video Solution](#)

65. 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 flow of blood into the aorta will be slowed down
- B. The pacemaker will stop working
- C. The blood will tend to flow back into the left atrium
- D. The flow of blood into the pulmonary artery will be reduced

Answer: D



Watch Video Solution

66. In humans, blood passes from the post caval to the diastomic right atrium of heat due to

- A. Stimulation of the sino auricular nodes
- B. pressure defference between the post caval and atrium

C. pushing open of the venous valves

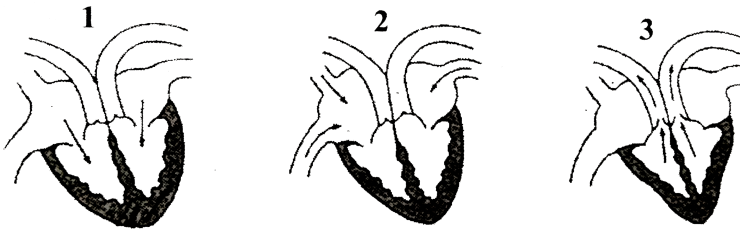
D. suction pull

Answer: B



Watch Video Solution

67. The figure given below three stages in the cardiac cycle



Which of the following sequences is correct regarding this ?

A. 2,3,1

B. 1,2,3

C. 2,1,3

D. 3,1,2

Answer: C



Watch Video Solution

68. A red blood cell, entering the right side of the heart passes by or through the following structures

- (1) Atrioventricular valves
- (2) Semilunar valves
- (3) Right atrium
- (4) Right ventricle
- (5) SAN

Which of the following options represents the correct sequence ?

A. $2 \rightarrow 3 \rightarrow 1 \rightarrow 4 \rightarrow 5$

B. $3 \rightarrow 1 \rightarrow 5 \rightarrow 2 \rightarrow 4$

C. $3 \rightarrow 5 \rightarrow 1 \rightarrow 2 \rightarrow 4$

D. $5 \rightarrow 3 \rightarrow 1 \rightarrow 4 \rightarrow 2$

Answer: D



Watch Video Solution

69. What happens when the pacemaker becomes nonfunctional ?

A. Only auricles contract rhythmically

B. Only ventricles contract rhythmically

C. Cardiac muscles do not undergo co-ordinated rhythmic movements

D. Auricles and ventricles contract rhythmically

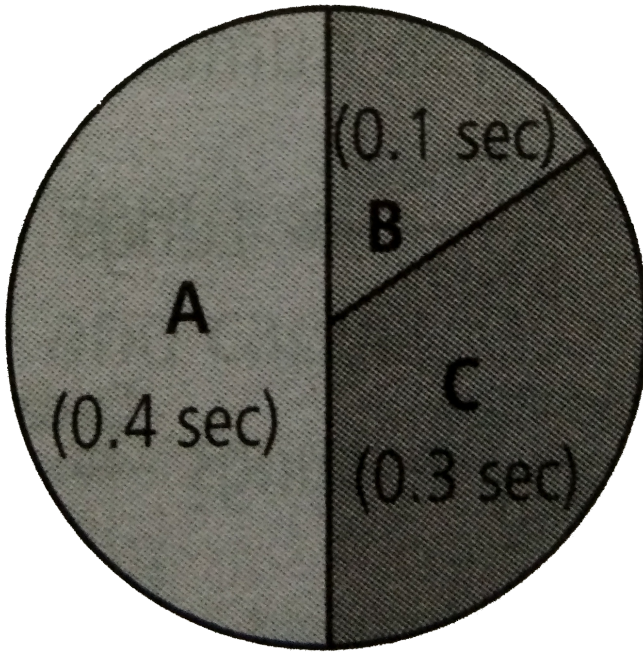
Answer: C



Watch Video Solution

70. In the given figure the durations of the events of the cardiac cycle are given. Identify these events and select the

correct option.



A.

<i>A</i>	<i>B</i>	<i>C</i>
Auricular systole	Joint diastole	Ventricular systole

B.

<i>A</i>	<i>B</i>	<i>C</i>
Ventricular systole	Joint diastole	Auricular systole

C.

<i>A</i>	<i>B</i>	<i>C</i>
Ventricular systole	Auricular systole	Joint diastole

D.

A

Joint diastole

B

Auricular systole

C

Ventricular systole

Answer: D



Watch Video Solution

71. Which of the following statements (s) regarding the cardiac system is/are correct ?

(i) Human heart is an ectodermal derivative

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

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

(iv) Stroke volume \times Heart rate = Cardiac output.

A. (i) only

B. (i) and (ii)

C. (ii) and (iii)

D. (iv) only

Answer: D



Watch Video Solution

72. In a cardiac output of 5250 mL per minute, with 75 heartbeats per minute, the stroke volume is

A. 60 mL

B. 80 mL

C. 55 mL

D. 70 mL

Answer: D



Watch Video Solution

73. Rate of heartbeat is determined by

- A. Purkinje fibres
- B. papillary muscles
- C. AV-node
- D. SA-node

Answer: D



Watch Video Solution

74. Which one of the following is a matching pair ?

- A. Lub - sharp closure of AV valves at the beginning of ventricular systole
- B. Dup- sudden opening of semilunar valves at the beginning of ventricular diastole
- C. Pulsation of the radial artery- valves in the blood vessels
- D. Initiation of the heart beat - Purkinje fibres

Answer: A



[Watch Video Solution](#)

75. Heart sound which is longer is

A. lub

B. dup

C. both equal

D. sometimes (a) and sometimes (b)

Answer: A



Watch Video Solution

76. X" is the rhythmic contraction and relaxation in the aorta and its main arteries. What is X ?

A. Heartbeat

B. Heart rate

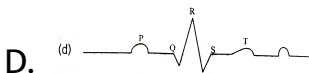
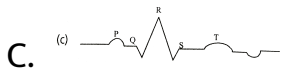
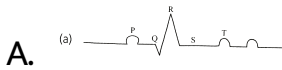
C. Pulse

D. Cardiac output

Answer: C

 [Watch Video Solution](#)

77. Which of the following is the diagrammatic representation of standard electrocardiogram (ECG) ?



Answer: D

 [Watch Video Solution](#)

78. In a standard ECG which one of the following alphabets is the correct representation of the respective activity of the human heart ?

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

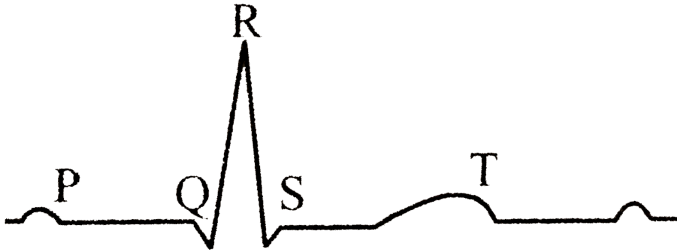
Answer: C



Watch Video Solution

79. Examine the diagrammatic representation of standard ECG.

Select an option with correct matching



- | | P-Wave | QRS complex | T-wave |
|----|----------------------------------|----------------------------------|----------------------------------|
| A. | Repolarisation of the atria | Repolarisation of the ventricles | Depolarisation of the atria |
| B. | Depolarisation of the atria | Depolarisation of the ventricles | Repolarisation of the ventricles |
| C. | Repolarisation of the ventricles | Repolarisation of the atria | Depolarisation of the ventricles |
| D. | Repolarisation of the ventricles | Depolarisation of the atria | Repolarisation of the atria |

Answer: B



Watch Video Solution

80. Which of the following statements is correct ?

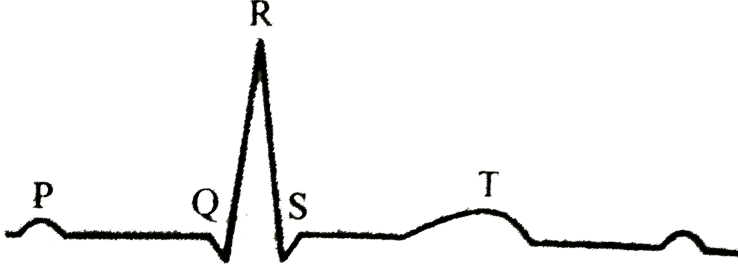
- A. The T-wave in an ECF represent excitation of ventricles
- B. The sum of P and T waves in a given time period can determine that heart beat rate of an individual
- C. The end of the P-wave marks the end of the systole
- D. In a standard ECG, a person is connected to the machine with three electrical leads.

Answer: D



[Watch Video Solution](#)

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



- A. Complex ORS - one complete pulse
- B. Peak T - initiation of total cardiac contraction
- C. Peak P and peak R together - systolic and diastolic blood pressures
- D. Peak P- initiation of left atrial contraction only

Answer: A



Watch Video Solution

82. In ECG, P-R interval corresponds to

A. time delay in A-V node

B. S-A nodal conduction time

C. increased ventricular contraction

D. time interval between onset of ventricular contraction

Answer: A



Watch Video Solution

83. Read the following statements carefully

(i) In fishes, the heart pumps out deoxygenated blood which is oxygenated by the gills and supplied to the body part from where deoxygenated blood is returned to the heart

(ii) The openings of the right and the left ventricles into pulmonary artery and aorta respectively are provided with the mitral valves

- (iii) The nodal musculature has the ability to generate action potential without any external stimuli, i.e., it is autoexcitable
- (iv) The T-wave of ECG represent depolarisation of the ventricles.

Which of the above two statements are incorrect ?

- A. (i) and (ii)
- B. (ii) and (iv)
- C. (i) and (ii)
- D. (iii) and (iv)

Answer: B



Watch Video Solution

84. Which of the following parts of heart first receives deoxygenated blood ?

A. Right ventricle

B. Left auricle

C. Right auricle

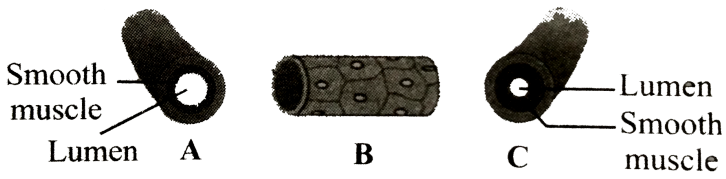
D. Left ventricle

Answer: C



Watch Video Solution

85. Given below are the figures of blood vessels. Identify them and select the correct option



- A. *A* *B* *C*
 Capillary Vein Artery
- B. *A* *B* *C*
 Artery Capillary Vein
- C. *A* *B* *C*
 Vein Capillary Artery
- D. *A* *B* *C*
 Vein Artery Capillary

Answer: C

 [Watch Video Solution](#)

86. In which of the following points pulmonary artery is different from pulmonary vein ?

- A. its lumen is broad

B. its wall is thick

C. it has valves

D. its does not possess endothelium

Answer: B



Watch Video Solution

87. Which of the following statements is incorrect ?

A. Veins are typically larger in diameter than arteries

B. Because of their small size, blood flows more rapidly in capillaries than in other parts of circulatory system

C. Wall of arteries are elastic enabling them to stretch and shrink during changes in blood pressure

D. Veins contain more blood than any other part of circulatory system

Answer: B

 [Watch Video Solution](#)

88. Choose the schematic diagram which properly represents pulmonary circulation in humans.

A. Left auricle $\xrightarrow[\text{blood}]{\text{Deoxygenated}}$ Lungs $\xrightarrow[\text{blood}]{\text{Oxygenated}}$ Right

ventricle

B. Let auricle $\xrightarrow[\text{blood}]{\text{Oxygenated}}$ Lungs $\xrightarrow[\text{blood}]{\text{Deoxygenated}}$ Right

ventricle

C. Right ventricle $\xrightarrow[\text{blood}]{\text{Deoxygenated}}$ Lungs $\xrightarrow[\text{blood}]{\text{Oxygenated}}$ left

auricle

D. Right ventricle $\xrightarrow[\text{blood}]{\text{Oxygenated}}$ Lungs $\xrightarrow[\text{blood}]{\text{Deoxygenated}}$ left

auricle

Answer: C



Watch Video Solution

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

A. Right ventricle \rightarrow Pulmonary aorta \rightarrow Tissues \rightarrow

Pulmonary veins \rightarrow Left auricle

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

C. Left auricle → Left ventricle → Pulmonary aorta →
Tissues → Right auricle

D. Left auricle → Left ventricle → Aorta → Arteries
→ Tissues → Veins → Right atrium

Answer: D



Watch Video Solution

90. Which of the following options represents correct systemic circulation in human being ?

A. Left ventricle $\xrightarrow[\text{blood}]{\text{Deoxygenated}}$ Tissues $\xrightarrow[\text{blood}]{\text{Oxygenated}}$ Right ventricle

B. Right ventricle $\xrightarrow[\text{blood}]{\text{Oxygenated}}$ Tissues $\xrightarrow[\text{blood}]{\text{Deoxygenated}}$ Right auricle

C. Left ventricle $\xrightarrow[\text{blood}]{\text{Deoxygenated}}$ Tissues $\xrightarrow[\text{blood}]{\text{Oxygenated}}$ Right auricle

D. Left ventricle $\xrightarrow[\text{blood}]{\text{Oxygenated}}$ Tissues $\xrightarrow[\text{blood}]{\text{Deoxygenated}}$ Right auricle

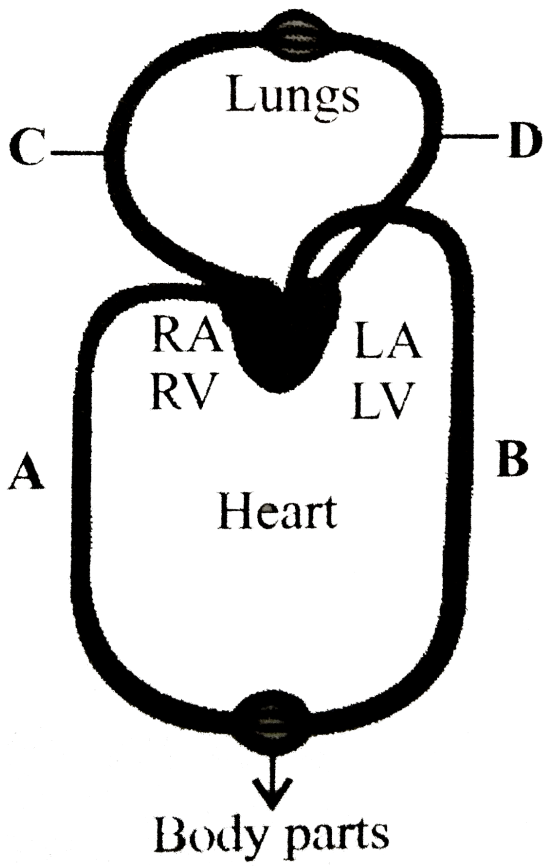
Answer: D



[Watch Video Solution](#)

91. What is the nature of blood passing through blood vessels

A, B, C and D respectively ?



A.

<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>
Deoxygenated	Oxygenated	Deoxygenated	Oxygenated

B.

<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>
Deoxygenated	Deoxygenated	Oxygenated	Oxygenated

C.

<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>
Oxygenated	Oxygenated	Deoxygenated	Deoxygenated

D.

<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>
Oxygenated	Deoxygenated	Oxygenated	Deoxygenated

Answer: A



Watch Video Solution

92. The given figure is of circulatory system. Identify the labelled parts (A-D) from the list (i-vii).

(i) Pulmonary circulation

(ii) Systemic circulation

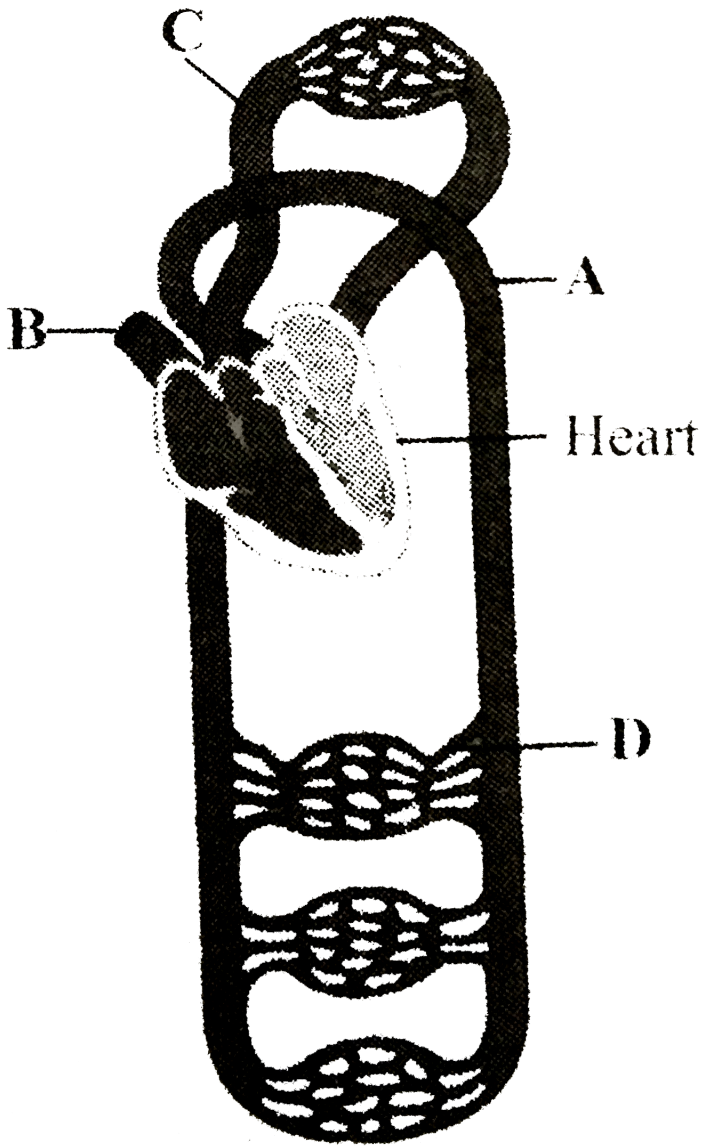
(iii) Superior vena cava

(iv) Inferior vena cava

(v) Aorta

(vi) Veins and venules

(vii) Arterioles and capillaries



- A. A B C D
 (v) (iii) (i) (vii)

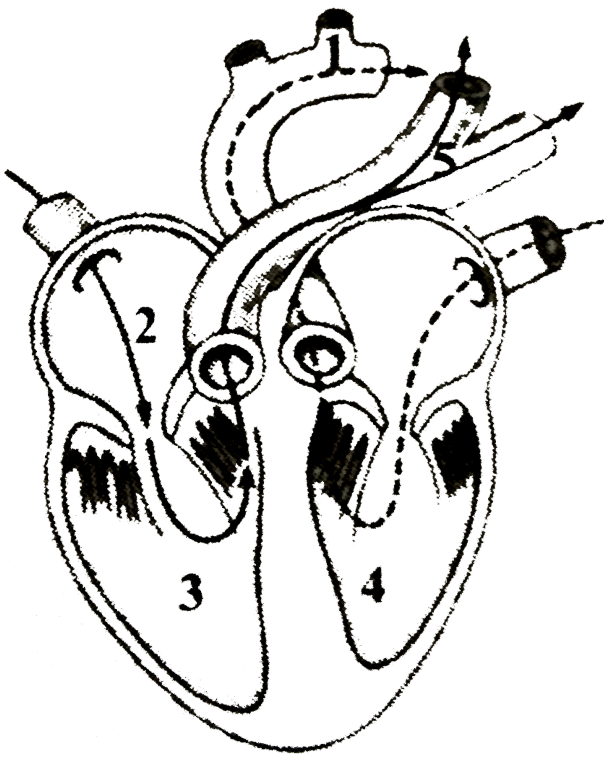
- | | | | | |
|----|-------|-------|------|-------|
| | A | B | C | D |
| B. | (vii) | (iv) | (i) | (vi) |
| | A | B | C | D |
| C. | (v) | (iii) | (ii) | (vii) |
| | A | B | C | D |
| D. | (vii) | (v) | (i) | (vi) |

Answer: A



Watch Video Solution

93. In the given figure of the heart which of the labelled part (1,2,3,4,5) carries oxygenated blood ?



A. 1,2,3 and 4

B. 1 and 5

C. 1 and 4

D. 3 and 5

Answer: C



Watch Video Solution

94. Right atrium receives blood from

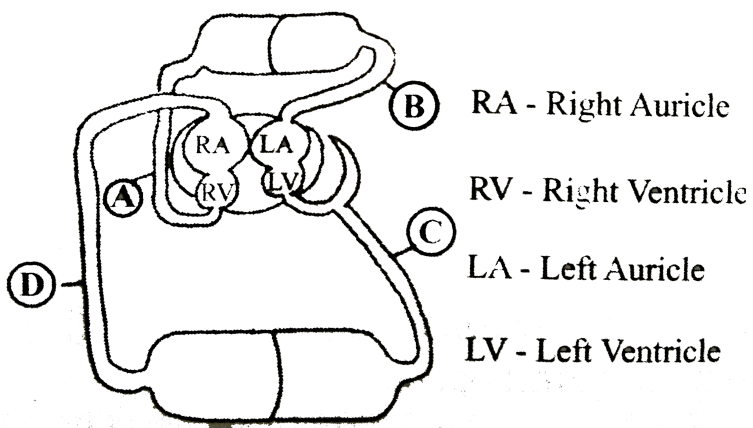
- A. pulmonary aorta
- B. pulmonary veins
- C. inferior vena cava
- D. superior and inferior vena cava.

Answer: D



Watch Video Solution

95. In the figure given below, which blood vessel represents vena cave ?



A. C

B. D

C. A

D. B

Answer: B



Watch Video Solution

96. Arteries are best defined as the vessels which

- A. supply oxygenated blood to the different organs
- B. carry blood away from the heart to different organs
- C. break up into capillaries which reunite to form a vein
- D. carry blood from one visceral organ to another visceral organ

Answer: B



Watch Video Solution

97. Carotid artery supplies

- A. oxygenated blood to lungs
- B. oxygenated blood to intestine
- C. oxygenated blood to brain

D. none of these

Answer: C



Watch Video Solution

98. All veins carry deoxygenated blood except

A. pulmonary vein

B. hepatic vein

C. hepatic portal vein

D. renal vein

Answer: A



Watch Video Solution

99. In veins, valves are present to check backward flow of blood flowing at

- A. atmospheric pressure
- B. high pressure
- C. low pressure
- D. all of these

Answer: C



Watch Video Solution

100. Which of the following statements is correct regarding veins ?

- A. Carry blood from an organ towards the heart

B. All veins carry oxygenated blood with single exception

C. Carry blood from heart towards the organ

D. all of these

Answer: A



Watch Video Solution

101. Match column *I* with column *II* and select the correct option from the codes given below

Column I

Column II

- | | | |
|-----------------------|-------|---|
| A. Superior vena cava | (i) | Carries deoxygenated blood to lungs |
| B. Inferior vena cava | (ii) | Carries oxygenated blood from lungs |
| C. Pulmonary artery | (iii) | Brings deoxygenated blood from lower part of body to right atrium |
| D. Pulmonary vein | (iv) | Bring deoxygenated blood to right atrium of body to right atrium |

A. A-(ii),B-(iv),C-(iii),D-(i)

B. A-(iv),B-(i),C-(ii),D-(iii)

C. A-(iv),B-(iii),C-(i),D-(ii)

D. A-(iv),B-(i),C-(iii),D-(ii)

Answer: C



Watch Video Solution

102. Consider the following four statements (i)-(iv) and select the correct option

(i) Fish heart contains only oxygenated blood

(ii) Closure of A-V valves produces the second heart sound

(iii) The vascular connection between the digestive track and kidney is called hepatic portal system

(iv) Purkinje fibres are nerve fibres present in the heart wall.

- | | | | | |
|----|----------|-----------|------------|-----------|
| A. | (i)
F | (ii)
F | (iii)
T | (iv)
F |
| B. | (i)
F | (ii)
F | (iii)
F | (iv)
T |
| C. | (i)
T | (ii)
T | (iii)
F | (iv)
T |
| D. | (i)
T | (ii)
F | (iii)
T | (iv)
F |

Answer: B



Watch Video Solution

103. The rate of heartbeat is regulated by the integrated activity of inhibiting and accelerating effects occurring in which part of the brain ?

A. Cerebellum

B. Diencephalon

C. Medula oblongata

D. Pons Varolii

Answer: C



Watch Video Solution

104. Hormonal regulation of cardiac activity involves the hormones _____ and _____ secreted by the _____

A. epinephrine, norepinephrine, medulla of adrenal glands

B. epinephrine, norepinephrine, cortex of adrenal glands

C. thyroxine, calcitonin, thyroid gland

D. aldosterone, corticosterone, cortex of adrenal glands

Answer: B



105. Which of the following statements is correct regarding neural regulation of cardiac activity ?

- A. The cardiac centre lies in medulla oblongata of brain
- B. Sympathetic nerve fibres accelerate the rate of heart beat and parasympathetic nerve fibres retard the rate of heart beat
- C. Sensory fibres extend from the receptors present in the walls of aortic arch, carotid sinuses and vena cava to the cardiovascular centre in medulla oblongata
- D. all of these

Answer: D



106. Consider the following four statement (i) - (iv) and select the correct option.

(i) SA node is natural pacemaker of heart

(ii) Human heart has inter-auricular foramen

(iii) Right atrioventricular valve is a semilunar value

(iv) Normal systolic and diastolic pressure of human is 120 and 60 mm Hg respectively.

A. (i) (ii) (iii) (iv)
F F T F

B. (i) (ii) (iii) (iv)
F F T T

C. (i) (ii) (iii) (iv)
T T F T

D. (i) (ii) (iii) (iv)
T F F F

Answer: D



[Watch Video Solution](#)

107. An adult human with average health has systolic and diastolic pressures as

- A. 120 mm Hg and 80 mm Hg
- B. 50 mm Hg and 80 mm Hg
- C. 80 mm Hg and 80 mm Hg
- D. 70 mm Hg and 120 mm Hg

Answer: A



[Watch Video Solution](#)

108. If the systolic pressure is 120 mm Hg and diastolic pressure is 80 mm Hg, the pulse pressure is _____

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

B. $120 + 80 = 200$ mm Hg

C. $120 - 80 = 40$ m Hg

D. $\frac{120}{80} = 1.5$ mm Hg

Answer: C



[Watch Video Solution](#)

109. Blood pressure is defined as the force with which blood

A. comes out of the atrium

B. is pushed to the legs

C. pushes against wall of blood vessels

D. comes out of the ventricle

Answer: C



Watch Video Solution

110. Which one of the following statements is correct regarding blood pressure ?

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

B. 100/55 mm Hg is considered an ideal blood pressure

C. 105/50 mm Hg makes one very active

D. 190/110 mm Hg may harm vital organs like brain and kidney.

Answer: D



Watch Video Solution

111. Which one of the following is incorrect for atherosclerosis ?

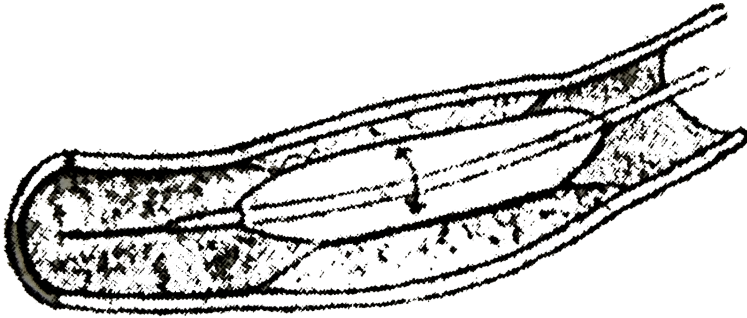
- A. Construction of arterial lumen reduces the blood flow
- B. Loss of dilation ability of the arterial wall and its rupture
- C. Cholesterol deposition at the inner wall of the artery
- D. none of these

Answer: D



Watch Video Solution

112. 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 a coronary artery which has a cancerous growth that is being removed.
- B. It is a coronary artery which is blocked by a plaque and the same is being cracked
- C. It is a coronary vein in which the defective valves are beings opened

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

Answer: B



Watch Video Solution

113. Match column *I* with column *II* and select the correct option from the codes given below

Column I

Column II

- | | | |
|-----------------------------------|-------|---|
| A. Heart failure | (i) | Heart muscle is suddenly damaged by an inadequate blood supply |
| B. Cardiac arrest | (ii) | Chest pain due to inadequate O_2 reaching the heart muscles |
| C. Heart attack | (iii) | Atherosclerosis |
| D. Coronary artery diseases (CAD) | (iv) | Heart not pumping blood efficiency enough to meet the needs of the body |
| E. Angina pectoris | (v) | Heart stops beating |

A. A-(iv),B-(v),C-(i),D-(iii),E-(ii)

B. A-(v),B-(iv),C-(i),D-(iii),E-(ii)

C. A-(iv),B-(v),C-(i),D-(ii),E-(iii)

D. A-(v),B-(iv),C-(ii),D-(iii),E-(i)

Answer: A



Watch Video Solution

114. During acute myocardial infraction which of the following changes occurs in the ECG ?

A. Flattened T wave

B. Depressed ST segment

C. Elevated ST segment

D. Increased length of PQ interval

Answer: C



Watch Video Solution

115. Given below are four statements (i-iv) regarding human blood circulatory system

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

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

(iii) Persons with blood group AB can donate blood to any person with any blood group under ABO system

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

Which two of the above statements are correct ?

A. (i) and (iv)

B. (i) and (ii)

C. (ii) and (iii)

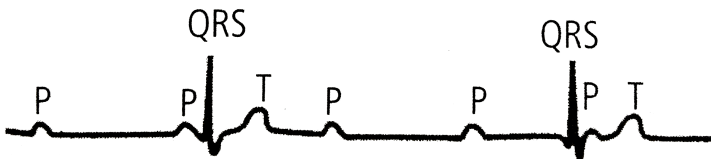
D. (iii) and (iv)

Answer: A



Watch Video Solution

116. Refer to the given electrocardiogram and select the correct statement



A. It shows electrocardiogram of a healthy person

B. It shows partial blockage due to damaged AV nodes

- C. It shows complete blockage and there is no synchrony between atrial and ventricular activities
- D. It shows that muscles of the heart are weak

Answer: C



Watch Video Solution

117. Excessively high heart rate (> 180) can reduce cardiac output because

- A. blood is moving too fast through the lungs to pick up enough oxygen
- B. it tires out the heart muscles and so they pump slower

C. it reduces the time for ventricular filling which reduces stroke volume

D. the PR-interval increases which leads to longer ventricular diastole and shorter ventricular systole

Answer: C



Watch Video Solution

118. Lungs receive blood from right side of the heart, whereas the branching of systemic arteries result in a parallel pattern.

What is the advantage of such of an arrangement ?

A. It ensures that each of the peripheral organs and tissues receive only a fraction of blood pumped by the left

ventricle

- B. It allows for independent variation in blood flow through different tissues as their metabolic activities change
- C. It ensures that as blood flows through capillaries some of the oxygen leaves the blood to enter cells
- D. Both (a) and (b)

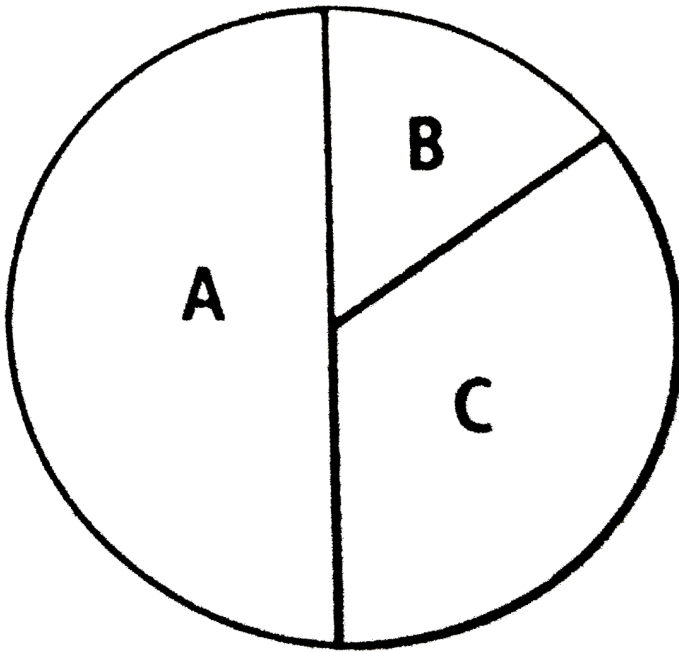
Answer: D



Watch Video Solution

119. The figure represents total period of one cardiac cycle i.e., 0.8 sec and A, B and C represent its stages. Identify A, B, C and

select the correct statement regarding them



- A. During A, tricuspid and bicuspid valves open and blood flows from atria into the ventricles
- B. During B, bicuspid and tricuspid valves close producing first heard sound

C. During C, the semilunar valves close producing second heard sound

D. During B, the atria contract due to a wave of contraction by SA node.

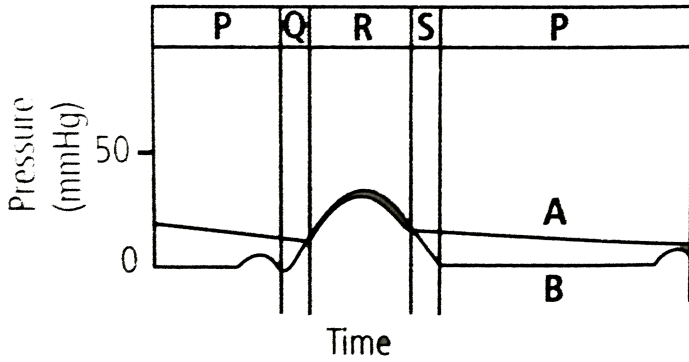
Answer: D

 [Watch Video Solution](#)

120. Refer to the given figure in which A refers to pulmonary artery pressure and B refers to right ventricular pressure. Identify P,Q,R and S in the figure and match with the list (i-iv) given below

- (i) Isovolumetric ventricular contraction
- (ii) Ventricular ejection
- (iii) Isovolumetric ventricular relaxation

(iv) Ventricular filling



- A. P-(iv),Q-(iii),R-(ii),S-(i)
- B. P-(ii),Q-(iii),R-(i),S-(iv)
- C. P-(iv),Q-(i),R-(ii),S-(iii)
- D. P-(i),Q-(ii),R-(iii),S-(iv)

Answer: C



View Text Solution

121. Which of the following cells does not exhibit phagocytic activity ?

- A. Monocytes
- B. Neutrophil
- C. Basophil
- D. Macrophage

Answer: C



Watch Video Solution

122. One of the common symptoms observed in people infected with dengue fever is

- A. significant decrease in RBC count

- B. significant decrease in WBC count
- C. significant decrease in platelets count
- D. significant increase in platelets count

Answer: C



Watch Video Solution

123. Which among the following is correct during each cardiac cycle ?

- A. The volume of blood pumped out by the Rt (Right) and Lt (Left) ventricles is same
- B. The volume of blood pumped out by the Rt and Lt ventricles is different

C. The volume of blood received by each atrium is different

D. The volume of blood received by the aorta and pulmonary artery is different

Answer: A



Watch Video Solution

124. Cardiac activity could be moderated by the autonomous neural system. Tick the correct answer

A. The parasympathetic system stimulates heart rate and stroke volume

B. The sympathetic system stimulates heart rate and stroke volume

C. The parasympathetic system decreases the heart rate but increase stroke volume

D. The sympathetic system decreases the heart rate but increase stroke volume

Answer: B



Watch Video Solution

125. Mark the pair of substances among the following which is essential for coagulation of blood.

A. Heparin and calcium ions

B. Calcium ions and platelet factors

C. Oxalates and cirtrates

D. Platelet factors and heparin

Answer: C



Watch Video Solution

126. ECG depicts the depolarisation and repolarisation process during the cardiac cycle. In the ECG of a normal healthy individual one of the following waves is not represented.

- A. Depolarisation of atria
- B. Repolarisation of atria
- C. Depolarisation of ventricles
- D. Repolarisation of ventricles

Answer: C

 [Watch Video Solution](#)

127. Which one of the following types of cells lack nucleus in humans ?

- A. RBC
- B. Neutrophils
- C. eosinophils
- D. Erythrocytes

Answer: A::D

 [Watch Video Solution](#)

128. Which one of the following blood cells is involved in antibody production ?

A. B-Lymphocytes

B. T-Lymphocytes

C. RBC

D. Neutrophils

Answer: A



Watch Video Solution

129. The cardiac impulse is initiated and conducted further upto ventricle. The correct sequence of conduction of impulse is

A.

SA Node

AV Node

Purkinje fibre

AV Bundle

B.

SA Node Purkinje fibre AV Node AV Bundle

C.

SA Node AV Node AV Bundle Purkinje fibre

D. SA Node Purkinje fibre AV Bundle AV Node

Answer: C



[Watch Video Solution](#)

130. Agranulocytes responsible for immune response of the body are

A. basophils

B. neutrophils

C. eosinophils

D. lymphocytes

Answer: D



Watch Video Solution

131. The second heart sound (dub) is associated with the closure of

A. tricuspid valve

B. semilunar valves

C. bicuspid valve

D. tricuspid and bicuspid valves

Answer: B



[Watch Video Solution](#)

132. Which of the following correctly explains a phase/event in cardiac cycle in a standard electrocardiogram ?

- A. QRS complex indicates atrial contraction
- B. QRS complex indicates ventricular contraction
- C. Time between S and T represents atrial systole
- D. P-wave indicates beginning of ventricular contraction

Answer: B



[Watch Video Solution](#)

133. Which of the following statements is incorrect ?

- A. A person of 'O' blood group has anti 'A' and anti 'B' antibodies in his blood plasma
- B. A person of 'B' blood group can't donate blood to a person of 'A' blood group
- C. Blood group is designated on the basis of the presence of antibodies in the blood plasma
- D. A person of AB blood group is universal recipient

Answer: C



Watch Video Solution

134. What would be the cardiac output of a person having 72 heart beats per minute and a stroke volume of 50 mL ?

A. 360 mL

B. 3600 mL

C. 7200 mL

D. 5000 mL

Answer: B



Watch Video Solution

135. Match the terms given under column 'A' with their functions given under column 'B' and select the answer from the options given below :

Column A

Column B

- | | |
|-------------------|---|
| A. Lymphatic | i. Carries oxygenated |
| B. Pulmonary vein | ii. Immune response |
| C. Thrombocytes | iii. To drain back the
tissue fluid to the
circulatory system |
| D. Lymphocytes | iv. Coagulation of blood |

Options :

A. A-ii,B-i,C-iii,D-iv

B. A-iii,B-i,C-iv,D-ii

C. A-iii,B-i,C-ii,D-iv

D. A-ii,B-i,C-iii,D-iv

Answer: B



Watch Video Solution

136. Read the following statements and choose the correct option

Statement 1 : Atria receive blood from all parts of the body which subsequently flows to ventricles

Statement 2 : Action potential generated at sino-atrial node passes from atria to ventricles.

- A. Action mentioned in Statement 1 is dependent on action mentioned in Statement 2
- B. Action mentioned in Statement 1 is dependent on action mentioned in Statement 1
- C. Actions mentioned in Statements 1 and 2 are independent of each other
- D. Actions mentioned in Statement 1 and 2 are synchronous

Answer: D



Watch Video Solution

137. Assertion : RBCs are devoid of nucleus in most of the mammals

Reason : Entire cytoplasm of RBCs is filled protein called haemoglobin.

- A. If both assertion and reason are true and reason is the correct explanation of assertion
- B. If both assertion and reason are true but reason is not the correct explanation of assertion
- C. If assertion is true but reason is false
- D. If both assertion and reason are false

Answer: B



Watch Video Solution

138. Assertion : Type 'O' blood group individuals are called universal donors

Reason : RBCs of 'O' blood group have both 'A' and 'B' surface antigens.

- A. If both assertion and reason are true and reason is the correct explanation of assertion
- B. If both assertion and reason are true but reason is not the correct explanation of assertion
- C. If assertion is true but reason is false
- D. If both assertion and reason are false

Answer: C



Watch Video Solution

139. Assertion : Fibrins are formed by the conversion of inactive fibrinogens on the plasma by the enzyme thrombin

Reason : Plasma without fibrinogen and blood corpuscles is called serum.

- A. If both assertion and reason are true and reason is the correct explanation of assertion
- B. If both assertion and reason are true but reason is not the correct explanation of assertion
- C. If assertion is true but reason is false
- D. If both assertion and reason are false

Answer: B



Watch Video Solution

140. Assertion : The process of clotting can occur in absence of all cellular elements except platelets

Reason : Vitamin K is essential for blood clotting.

- A. If both assertion and reason are true and reason is the correct explanation of assertion
- B. If both assertion and reason are true but reason is not the correct explanation of assertion
- C. If assertion is true but reason is false
- D. If both assertion and reason are false

Answer: B



Watch Video Solution

141. Assertion : Lymph in lymphatic system is known as tissue fluid

Reason : It consists of plasma proteins, RBCs and WBCs.

- A. If both assertion and reason are true and reason is the correct explanation of assertion
- B. If both assertion and reason are true but reason is not the correct explanation of assertion
- C. If assertion is true but reason is false
- D. If both assertion and reason are false

Answer: C



Watch Video Solution

142. Assertion : Closed circulatory system is less efficient than open circulatory system

Reason : The blood flow is slow in closed circulatory system than in open circulatory system.

- A. If both assertion and reason are true and reason is the correct explanation of assertion
- B. If both assertion and reason are true but reason is not the correct explanation of assertion
- C. If assertion is true but reason is false
- D. If both assertion and reason are false

Answer: D



Watch Video Solution

143. Assertion : Double circulation is incomplete in amphibians and reptiles

Reason : Unlike in birds and mammals, in amphibian and reptiles, the left atrium receives oxygenated blood and right atrium receives deoxygenated blood.

- A. If both assertion and reason are true and reason is the correct explanation of assertion
- B. If both assertion and reason are true but reason is not the correct explanation of assertion
- C. If assertion is true but reason is false
- D. If both assertion and reason are false

Answer: C



Watch Video Solution

144. Assertion : There is no mixing of oxygenated and deoxygenated blood in the human heart.

Reason : Valves are present in the heart which allows the movement of blood in one direction only.

- A. If both assertion and reason are true and reason is the correct explanation of assertion
- B. If both assertion and reason are true but reason is not the correct explanation of assertion
- C. If assertion is true but reason is false
- D. If both assertion and reason are false

Answer: B



Watch Video Solution

145. Assertion : Left atrium has the thickest muscles

Reason : Right atrium receive blood from the lungs

- A. If both assertion and reason are true and reason is the correct explanation of assertion
- B. If both assertion and reason are true but reason is not the correct explanation of assertion
- C. If assertion is true but reason is false
- D. If both assertion and reason are false

Answer: D



Watch Video Solution

146. 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. If both assertion and reason are true and reason is the correct explanation of assertion
- B. If both assertion and reason are true but reason is not the correct explanation of assertion
- C. If assertion is true but reason is false
- D. If both assertion and reason are false

Answer: A



Watch Video Solution

147. Assertion : Atria act as primer pumps that increase the ventricular pumping

Reason : About 80 percent of the blood flows directly through the atria into ventricles.

- A. If both assertion and reason are true and reason is the correct explanation of assertion
- B. If both assertion and reason are true but reason is not the correct explanation of assertion
- C. If assertion is true but reason is false
- D. If both assertion and reason are false

Answer: A



Watch Video Solution

148. Assertion : There are 72-75 heart beats per minute on an average when a person is performing normal work

Reason : One heart beat is completed in 0.8 second.

- A. If both assertion and reason are true and reason is the correct explanation of assertion
- B. If both assertion and reason are true but reason is not the correct explanation of assertion
- C. If assertion is true but reason is false
- D. If both assertion and reason are false

Answer: A



Watch Video Solution

149. Assertion : The cardiac output of an ordinary man and of an athlete is the same

Reason : It is impossible to alter the stroke volume as well as heart rate.

- A. If both assertion and reason are true and reason is the correct explanation of assertion
- B. If both assertion and reason are true but reason is not the correct explanation of assertion
- C. If assertion is true but reason is false
- D. If both assertion and reason are false

Answer: D



Watch Video Solution

150. Assertion : The enlarged Q and R waves indicate myocardial infarction

Reason : Any deviation in the normal recording of ECG indicates possible abnormality or disease.

- A. If both assertion and reason are true and reason is the correct explanation of assertion
- B. If both assertion and reason are true but reason is not the correct explanation of assertion
- C. If assertion is true but reason is false
- D. If both assertion and reason are false

Answer: B



Watch Video Solution

151. Assertion : Neutral signals through sympathetic nerves can increase the strength of ventricular contraction

Reason : Parasympathetic neutral signals synergistically act with sympathetic neutral signal to increase the cardiac output.

- A. If both assertion and reason are true and reason is the correct explanation of assertion
- B. If both assertion and reason are true but reason is not the correct explanation of assertion
- C. If assertion is true but reason is false
- D. If both assertion and reason are false

Answer: C



Watch Video Solution