

BIOLOGY

BOOKS - TRUEMAN BIOLOGY

BODY FLUIDS AND CIRCULATION

Multiple Choice Questions

- 1. Hepatic portal system extends from
 - A. Digestive system to liver
 - B. Kidney to liver
 - C. Liver to heart
 - D. Liver to kidney

Answer: A



warah walah dalaman

2. Which blood vessel has the largest amount of urea?
A. Dorsal aorta
B. Hepatic vein
C. Hepatic artery
D. Dorsal portal vein
Answer: B
Answer: B Watch Video Solution
Watch Video Solution
Watch Video Solution 3. Carotid artery supplies
3. Carotid artery supplies A. deoxygenated blood to kidneys

D. oxygenated blood to brain
Answer: D
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4. Deoxygenated blood from wall of heart is carried by
A. coronary sinus
B. inferior vena cava
C. superior vena cava
D. pulmonary artery
Answer: A
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5. Which one represents pulmonary circulation ?

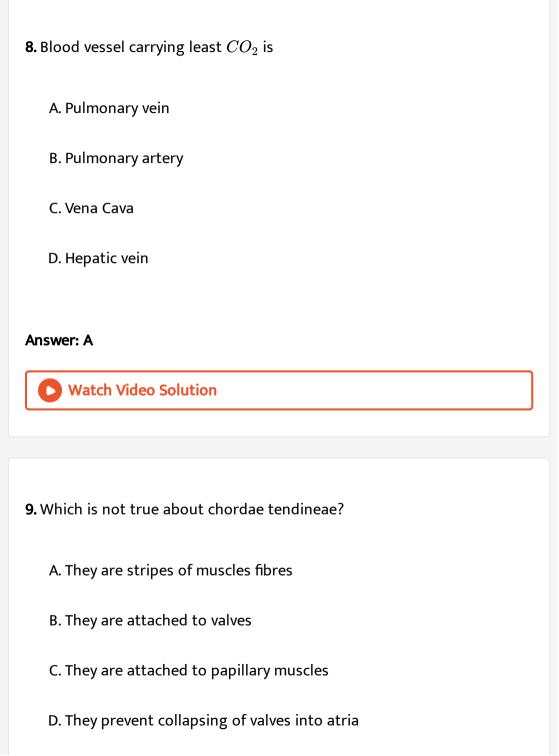
A. Left auricle (oxygenated blood $\,\,
ightarrow\,$ lungs (deoxygenated blood $\,\,
ightarrow\,$ Right auricle B. Left auricle (deoxygenated blood \rightarrow lungs (oxygenated blood \rightarrow Right auricle C. Left auricle (oxygenated blood $\,\,
ightarrow\,$ lungs (deoxygenated blood $\,\,
ightarrow\,$ left auricle D. Right auricle (deoxygenated blood \rightarrow lungs (oxygenated blood \rightarrow Left auricle Answer: D **Watch Video Solution**



6. Erythroblastosis foetalis occurs when a factor from mother passes into foetus through placenta

A. Rh antigens

B. Agglutinins C. Rh antibodies D. ABO antibodies **Answer: C** Watch Video Solution 7. Blood leaving liver and moving to the heart has usually high concentration of A. Bile B. Glycogen C. Amino acids D. Urea Answer: D



Answer: A



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- 10. Which is not detected usually by ECG?
 - A. Arrhythmia
 - B. Myocardial infarction
 - C. Heart block
 - D. Valvular defects

Answer: D



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11. A correct systemic circulation pathway is

A. Right auricle $\,
ightarrow\,$ Left ventricle $\,
ightarrow\,$ Aorta $\,
ightarrow\,$ arteries 'to " Tissue

ightarrow Veins 'to 'right atrium

B. Right Ventricles $\;
ightarrow\;$ Pulmonary aorta $\;
ightarrow\;$ Tissues $\;
ightarrow\;$ Pulmonary

vein $\,
ightarrow \,$ Left auricle

C. Left atrium $\,
ightarrow\,$ Left ventricle $\,
ightarrow\,$ Aorta $\,
ightarrow\,$ Arteries $\,
ightarrow\,$ Tissues

ightarrow Veins ightarrow Right atrium

D. left auricle $\,
ightarrow\,$ Left ventricle $\,
ightarrow\,$ Pulmonary aorta $\,
ightarrow\,$ Tissues $\,
ightarrow\,$

Right auricle

Answer: C



12. First sound recorded in sphygmomanometer indicates

A. Systolic pressure

B. Diastolic pressure

C. Lubb	
D. Dubb	
Answer: A	
Watch Video Solution	
13. Valves occur in	
A. Arteries, veins and auricles	
B. Atria , ventricles and veins	
C Arteries veins and ventricles	

D. SA node, AV node and veins

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Answer: B

14. 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

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

C. Right ventricle, right atrium, lungs, pulmonary veins, left atrium

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

Answer: A



15. Cardiac muscles are found in :

A. epicardium

B. myocardium

D. all of these
nswer: B
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6. The bulk of the heart wall is
A. endocardium
B. pericardium
C. epicardium
D. myocardium
nswer: D
Watch Video Solution

C. endocardium

17. Though the heart is an involuntary organ, the fibres are different from smooth muscles in possessing

A. striations

B. tendons

C. mitochondria

D. sarcoplasm

Answer: A



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18. Muscular ridges on the interior surface of the atria are called

A. trabeculae carneae

B. endocardium

C. papillary muscles

D. musculi pectinati

Answer: D



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19. Foramen ovale is present only in the heart of embryos leading from the right atrium to

- A. left atrium
- B. right ventricle
- C. postcaval vein
- D. pulmonary artery

Answer: A



by

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20. In mammals, the opening of postcaval in the right atrium is guarded

A. mitral valve B. bicuspid valve C. thebesian valve D. eustachian valve **Answer: D Watch Video Solution** 21. Tricuspid valve is found in between A. two atria B. two ventricles C. left atrium and ventricle D. right atrium and ventricle Answer: D Watch Video Solution

22. In which one of the following pairs, two terms represent the same thing? A. Plasma-Serum

B. Atrioventricular node-Pacemaker

C. Leucocytes -Lymphocytes

D. Mitral valve-bicuspid valve

Answer: D



23. Bicuspid valve (mitral) guards the opening in mammals between:

A. left atrium and left ventricle

B. right atrium and left ventricle

C. left atrium and right ventricle

D. right atrium and right ventricle
nswer: A
Watch Video Solution
4. The thick muscular projections on the walls of the ventricle are called
A. columnae carneae
B. conus arteriosus
C. chordae tendineae
D. truncus arteriosus
nswer: A
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25. Which of the following organs has papillary muscles?

A. Wall of heart B. Lungs C. Lingual papilla D. Mammary glands Answer: A Watch Video Solution 26. In the heart of man, the mitral valve is attached to the papillary muscles by A. Bundle of His B. Purkinje fibres C. Columnae fibres D. Chordae tendinae **Answer: D**

27. Which has the thickest walls:	_
--	---

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

Answer: B



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28. In mammalian embryo the pulmonary aorta communicates with carotico-systemic aorta by a narrow ductus arteriosus,in the adult this connection closes leaving : —

A. Carotico-pulmonary aperture

B. ligamentum arteriosus
C. fossa ovalis
D. none of the above
Answer: B
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29. Which term does not apply to human heart?
A. Pacemaker
B. Mitral valve
C. Neurogenic
D. Four chambered
Answer: C
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30. Heart of Heart is

Pace maker of the heart is

A. SA node

B. AV node

C. Bundle of His

D. Purkinje fibres

Answer: A



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31. SA node is located in

A. upper lateral wall of left atrium

B. lower lateral wall of left atrium

C. lower lateral wall of right ventricle

D. upper part of wall of right atrium

Answer: D **Watch Video Solution** 32. Impulse originating from sinu-atrial node are transmitted to the A. Pacemaker B. Bundle of His C. Purkinje system D. Atrioventricular node Answer: D **Watch Video Solution**

33. What happens when the pacemaker becomes nonfunctional?

A. Only ventricle will contract rhythmically

- B. Only the Atria will contract rhythmically
- C. Atria and ventricles contract simultaneously
- D. The cardiac muscles do no contract in a coordinated manner rhythmically

Answer: D



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- **34.** Given these structures of the conduction system of the heart
- 1. Bundles of His 2. AV node
- 3. Bundle branches
- 4. Purkinje fibres
- 5. SA node

Choose the arrangement that lists the structures in an order of an action potential passes through them.

A. 2,5,3,1,4

- B. 5,2,1,3,4 C. 2,5,1,3,4
- D. 5,2,4,1,3

Answer: B



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35. The duration of cardiac cycle is

- A. 0.8 seconds
- B. 80 seconds
- C. 8 seconds
- D. 72 seconds

Answer: A



- **36.** Identify the correct sequence of events in a cardiac cycle
 - A. diastole, atrial systole, ventricular diastole
 - B. atrial systole, ventricular systole, atrial diastole ventricular diastole
 - C. atrial systole, ventricular diastole, ventricular systole
 - D. ventricular diastole, diastole, ventricular, systole, atrial systole

Answer: B



- 37. During systole of heart
 - A. only atria contract
 - B. only ventricles contract
 - C. atria and ventricles contract seperately
 - D. Atria and ventricles contract simultaneously

Answer: C



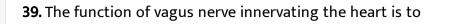
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38. During ventricular systole

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

Answer: A





- A. maintain constant heartbeat
- B. accelerate the heartbeat
- C. initiate the heartbeat
- D. reduce the heartbeat

Answer: D



- **40.** Sympathetic stimulation
 - A. decreases blood pressure
 - B. increases heartbeat
 - C. decreases heartbeat
 - D. not related to heartbeat

Answer: B Watch Video Solution

- **41.** Heartbeat is accelerated by
 - A. cranial nerves and adrenaline
 - B. cranial nerves and acetylcholine
 - C. sympathetic nerves and epineprine
 - D. sympathetic nerves and acetylcholine

Answer: C



- **42.** Which of the following hormones has no effect on heart beat ?
 - A. Oxytocin

C. Adrenaline
D. Noradrenaline
Answer: A
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43. Parasympathetic stimulation of the heart
A. decreases the heart rate
B. increases cardiac output
C. increases the force of ventricular contraction
D. increases the rate of depolarization of the SA node
Answer: A
Watch Video Solution

B. Thyroxine

44. The secretion of vagus nerve, which reduces the heart rate, is
A. dopamine
B. adrenaline
C. epinephrine
D. acetylcholine
Answer: D
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45. Rate of heartbeat is maximum in
A. man
B. whale
C. elephant
D. mouse

Answer: D



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- 46. P wave of ECG indicates
- 1. activation of SA node
- 2. depolarization of atrial muslces
- 3. spread of excitation froom AV node ot Purkinje fibres
- 4. repolarization of atria and depolarization of ventricles
 - A. 1 and 2 are correct
 - B. 2 and 4 are correct
 - C. 1 and 3 are correct
 - D. 1,2 and 3 are correct

Answer: A



47. QRS is related to A. 1)SA node activation B. 2)atrial relaxation C. 3)atrial contraction D. 4) ventricular contraction **Answer: D Watch Video Solution** 48. In ECG, what does T wave represent? A. Diastole of atria B. Systole of ventricle

C. Repolarisation of ventricles

D. Diastole of atria and ventricles

Answer: C



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- **49.** Which correctly pairs an ECG phase with the cardiac event responsible
 - A. P wave -Depolarization of the ventricles
 - B. P wave -Depolarization of the AV node
 - C. QRS wave-Depolarization of the ventricles
 - D. T wave-Repolarization of the atria

Answer: C



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50. Typical 'lubb-dupp' sounds heard during heartbeat are due to

B. blood under pressure through aorta C. closing of bicuspid-tricuspid valves D. closure of bicuspid-tricuspid valves followed by semilunar valves Answer: D **Watch Video Solution** 51. Closure of which of the following makes louder sound of heartbeat? 1. Thebesian 2. Eustachian 3. Semilunar valves 4. Atrio-ventricular valves A. Thebesian B. Eustachian C. Semilunar valves

A. closing of semilunar valves

D. Atrio ventricular valves

Answer: D



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- 52. The "lubb" sound (first heart sound) is caused by
- 1. filling of the ventricles
- 2. ventricular contraction
- 3. closing of the AV valves
- 4. closing of semilunar valves
 - A. filling of the ventricles
 - B. ventricular contraction
 - C. closing of the AV valves
 - D. closing of semilunar valves

Answer: B



53. A heart " murmur" disorder indicates a defect of : -

A. heart valve

B. bundle of His

C. sinoatrial node

D. Atrioventricular node

Answer: B



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54. Cardiac output is defined as

A. heart rate times stroke volume

B. peripheral resistance times heart rate

C. blood pressure minus peripheral resistance

D. blood pressure times peripheral resistance
Answer: D
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55. Normal Cardiac output is:

A. 4 L/min

B. 5 L/min

C. 6.3 L/min

D. 7.3 L/min

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Answer: B

56. Which one of the following will be the cardiac output (in litres per
minutes) ?
A. 63.30
B. 63.00
C. 00.63
D. 06.30
Answer: C
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57. By which instrument BP of man is determined ?
A PD motor
A. BP meter
B. Ultrasound

Answer: C



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- **58.** Systolic pressure is higher than diastolic pressure due to : -
 - A. arteries contract during systole only
 - B. arteries offer resistance to the following of blood
 - C. volume of blood in heart is greater during systole
 - D. blood is forcefully pumped into arteries by the heart during systole

Answer: C



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59. The pulse pressure is a measure of the

A. number of heartbeats per minutes

- B. sum of the diastolic & systolic pressure
- C. difference between the arterial and venous pressure
- D. difference between the systolic and diastolic pressure

Answer: d



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- **60.** Pressure in the aorta is at its lowest
 - A. just before AV valves open
 - B. at the time of first heart sound
 - C. at the time of second heart sound
 - D. just before the semilunar valves open

Answer: D



61. what is tachycardia

- A. abnormal heart rhythm
- B. high blood pressure
- C. slow rate of heartbeat
- D. rapid rate of heartbeat

Answer: D



- 62. Slowing of heartbeat is called
 - A. tachycardia
 - B. bradycardia
 - C. cardiac arrest
 - D. angina pectoris

Answer: B



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

- A. only once
- B. two times
- C. four times
- D. several times

Answer: B



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64. Pulmonary artery differs from pulmonary vein in having

A. no endothelium B. having strong valves C. having oxygenated blood D. having thick muscular walls **Answer: D Watch Video Solution** 65. Given these blood vessels 1. Aorta 2. Inferior vena cava 3. Pulmonary arteries 4. Pulmonary veins Which vessels carry oxygen -rich blood? a. 1,3 b. 1,4

c. 2,3
d. 4,2
A. 1,3
B. 1,4
C. 2,3
D. 4,2
Answer: B
Watch Video Solution
Watch video solution
Watch video solution
66. Which one of the following has elastic wall?
66. Which one of the following has elastic wall?
66. Which one of the following has elastic wall? A. Precaval
66. Which one of the following has elastic wall? A. Precaval B. Postcaval

Answer: C



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67. Which of the statements is false?

- A. Tunica media is thin in veins
- B. Capillaries have a greater total surface area than any other type of

vessel

C. Exchange between blood and tissue fluid occur across the walls of

venules

D. Small arteries and arterioles present great resistance to blood flow

Answer: C



- A have internal valves B. contain oxygenated blood C. have thick-wall and narrow lumen D. deliver carbon dioxide to the organs they supply **Answer: C Watch Video Solution**
- **69.** Blood of which vessel in mammals carries least percentage of urea?
 - A. Renal vein
 - B. Dorsal aorta
 - C. Renal artery
 - D. Posterior vena cava

Answer: A



70. Maximum surface area of circulating system is seen in : —
a. veins
b. heart
c. arterioles
d. capillaries
A. veins
B. heart
C. arterioles
D. capillaries
Answer: D
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71. The structure of which of the following consists of a layer of single cell
thickness

1. artery 2. venule 3. capillary 4. arteriole A. artery B. venule C. capillary D. arteriole **Answer: C Watch Video Solution** 72. Which of the following is not characteristic of the body's capillaries? A. Thin-walls B. Highly branched C. High blood velocity

D. Large total surface area

Answer: C



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73. In a Portal system (Man): —

A. a vein starts from an organ and ends up in the heart

B. an artery breaks up in an organ and restarts by union of capillary

C. a vein enters into an organ other than the heart and breaks up into capillaries

D. the blood from gut is brought into kidneys before it is poured into

posterior vena cava

Answer: C



74. Lymph

- A. transports CO_2 to lungs
- B. transports oxygen to brain
- C. returns interstitial fluid to blood
- D. returns RBCs and WBCs to lymph nodes

Answer: C



- **75.** Which of the following is the largest lymphatic vessel of the human body?
 - A. Thoracic duct
 - B. Lacteal duct
 - C. Cisterna chyle
 - D. Right lymphatic duct

Answer: B Watch Video Solution

76. Which of the following is first to receive lymphatic duct from legs

- A. Left subclavian vein
- B. Right subclavian vein
- C. Right lyphatic duct
- D. Thoracic duct

Answer: D



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77. Which of the following organs can be called as a sort of "blood bank"

A. Lungs

B. Heart C. Liver D. Spleen **Answer: D Watch Video Solution** 78. Role of spleen of mammals is to A. act as a haemopoietic tissue

B. secrete digestive enzymes

D. produce angioteninogen

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C. assist kidneys

Answer: A

79. The thickening of walls of arteries is called
A. arthritis
B. aneurysm
C. arterioscelerosis
D. both 2 and 3
Answer: C
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80. An ischemic injury to the heart that destroys myocardial cells is
A. heart block
B. fibrillation
C. cardiac arrest
D. myocardial infarction

Answer: D



81. To which of the following, bundles of His passes stimulus for contraction?

- A. Atrium
- B. AV node
- C. SA node
- D. Purkinje fibres

Answer: D



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82. Which of the following is the largest lymphatic vessel of the human body?

A. lung
B. liver
C. kidney
D. Spleen
Answer: D
Watch Video Solution
83. Release of catecholamines from adrenal medulla (human) is an action
of
A. Adrenaline
B. Acetylcholine
C. Vasopressin
D. Callinta kannana
D. Collip's hormone
D. Collip's normone



84. Which of the following is not a major organ of lymphatic system

A. Spleen

B. Kidney

C. Thymus

D. Lymph nodes

Answer: B



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

A. angina

B. hypotension

C. heart failure

D. atherosclerosis

Answer: C



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86. Consider the following statements

A marathon runner is likely to show

- 1. Reduced heart rate
- 2. Enlarged heart
- 3. larger stroke volume
- 4. Decreased arterial blood pressure

Which of the above statement is/are correct?

- A. All of the above
- B. 1, 2 and 3
- C. 1 and 2
- D. 1 alone

Answer: B



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87. Go through the following statements

- (i) Vagus nerve decreases the rate of impulse formation from the SA node and its conduction
- (ii) As the human heart is myogenic in nature, the rate of formation and conduction of cariac impulse cannot be changed by the action of nerves (iii) The end of T-wave in ECG marks the end of systole.
- (iv) If the P-wave in ECG is inverted, it indicates that SA node fails to initiate impulse and the atrial muscle depolarises by the impulse originating in A.V. node.

Which of these are correct?

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

D. All are correct

Answer: B



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88. SA node acts as a pacemaker of the heart because of the fact that it

A. is capable of generating impulses spontaneously

B. has rich sympathetic innervation

C. has poor cholinergic innervation

D. generates impulses at the highest rate

Answer: D



- **89.** Go through the following statements,
- (i) The stroke volume multiplied by heart rate gives the cardiac output.
- (ii) The second heart sound is associated with the closure of semilunar valves
- (iii) Heart failure is the same as cardiac arrest or a heart attack.

Which of these are correct?

- A. (i) & (ii)
- B. (ii) & (iii)
- C. (i) & (iii)
- D. All are correct

Answer: A



- 90. what is bradycardia and tachycardia
 - Watch Video Solution

91. A baby is born with a congenital cardiac defect that allows right atrial blood to bypass the lungs and enter the left atrium. Which of the following structural defects must be surgically repaired to save this baby's life?

- A. Ductus venosus
- B. Foramen ovale
- C. Ductus arteriosus
- D. Ductus vena cavas

Answer: B



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92. ECG depicts the depolarisation and repolarisation processes during the cardiac cycle. In the ECG of a normal healthy individual waves is not represented.

- A. P.wave \rightarrow Atrial depolarization

D.

Answer: D



- 93. Find out the wrong statement:
 - A. SA node is called the pacemaker of the heart
 - B. Tricuspid valve is located between right atrium and right ventricle
 - C. By counting the number fo QRS complexes that occur in a given
 - time period, one can determine the heart beat rate of an individual
 - D. The P-wave represents the depolarization of the atria while QRS
 - complex represents the repolarisation of the ventricles

Answer: D



94. The sequence of flow of blood in the hepatic portal system of a mammal is

A. caudal vein, hepatic vein, liver, posterior venacava

B. intestine , liver, hepatic vein, posterior venacava

C. kidney, liver, intestine, sinus venosus

D. posterior venacava, intestine, liver, hepatic vein, portal vein

Answer: B



95. what is bradycardia



96. If there is a blockage between the AV node and AV bundle, how will this affect the appearance of the ECG /

A. P-R interval would be smaller

B. There would be more P waves than QRS complexes

C. There would be more QRS complexes than P waves

D. none of the above

Answer: B



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97. what is tachycardia



98. All of the following are true about phloem except

A. Trabeculae carnae , the muscular ridges of ventricles are also known as columnae carnae

B. Musculi pectinati are present in ventricular walls

C. There are three papillary muscles in right ventricle are two in left ventricle

D. Papillary muscles are attached to AV valves through chordae tendinae

Answer: B



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99. name two vertebrates and invertebrates



100. Narrowing of which of the following heart valves would cause blood to accumulate in the left atrium?

- A. Tricuspid valve
- B. Aortic valve
- C. Mitral valve
- D. Pulmonic valve

vantricular contraction

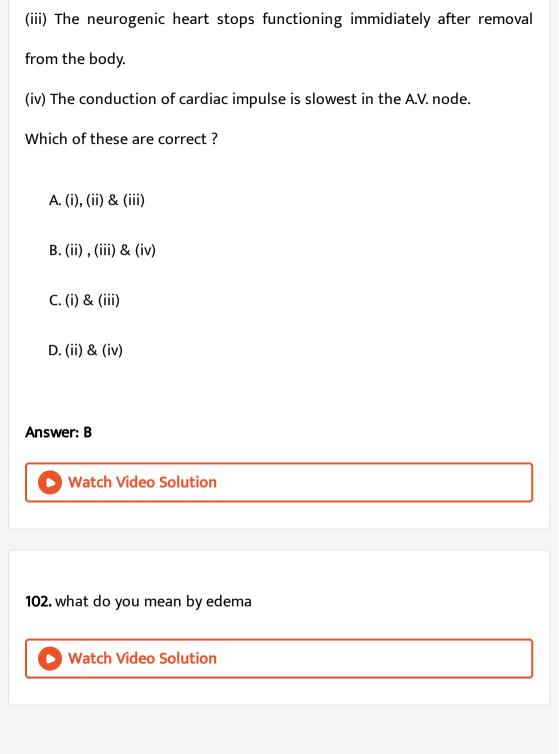
Answer: C



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101. Go through the following statements

- (i) The inner surface of atria have got transverse muscular ridges called papillary muscles.
- (ii) Chordae tendinae are special fibrous cords attached to the AV valves and prevent them from collapsing back into the atria during powerful



103. Go through the following statements .

(i) Hypophysial portal vein carries blood from the hypothalamus to the anterior lobe of the pituitary gland.

- (ii) The central nervous system lacks lymphatic channels.
- (ii) The thoracic duct drains into the left subclavian vein.

(iv) Hepatic portal vein is formed by the union of superior mesenteric vein and splenic vein.

Which of these are correct?

A. (ii), (ii) & (iii)

B. (ii), (iii) & (iv)

C. (i) ,(iii) & (iv)

D. All are correct

Answer: D



104. Read the following statements

(i) The nodal musculature of the heart has the ability to generate action potentials without any external stimuli.

(ii) The AV node is located in the right ventricle close to the AV septum
(iii) The stroke volume is the amount of blood pumped out by each ventricle per minute.

Which of these are correct?

A. (i), & (ii)

B. (ii) & (iii)

C. only (ii)

D. only (i)

Answer: D



105. 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: B



106. what is pulmonary edema



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

- A. Malleus -Anvil
- B. SA node -Pace maker
- C. Leucocytes -Lymphocytes
- D. Haemophilia -Blood cancer

Answer: B



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108. An artifical 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

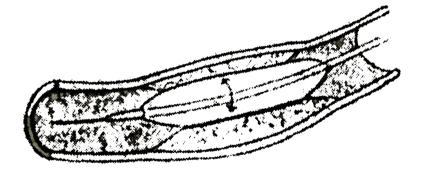
D. suffering from arteriosclerosis

Answer: C



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109. 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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- 110. The chief difference between the erthrocytes of man and frog is
 - A. Human erythrocytes have more haemoglobin
 - B. Human erthrocytes have more nuclei
 - C. Human erthrocytes have no nuclei
 - D. Human erthrocytes have less haemoglobin

Answer: C



A. Haemolysis
D. Davilaanii
B. Rouleaux
C. Haematopoiesis
D. Phagocytosis
Answer: C
Allower. C
Watch Video Solution
112. ESR (erythrocyte sedimentation rate) is meant for knowing
A. degree of disease
Dtht.
B. erythrocyte count
C. study of plasma
D. calculation of haemoglobin

111. Formation of blood corpuscles is known as

Answer: A Watch Video Solution 113. The cation (mineral) necessary for coagulation of blood is A. Na B. Ca C. K D. Cl **Answer: C** Watch Video Solution 114. Removal of calcium from freshly collected blood would A. accelerate clotting

- B. prevent clotting C. cause immediate clotting D. prevent destruction of haemoglobin **Answer: B Watch Video Solution** 115. RBC placed in distilled wate will
- - A. burst
 - B. shrink
 - C. stick to one another
 - D. divide

Answer: B



116. Formation of blood corpuscles is known as
A. Lymphocytes
B. basophils
C. Erythrocytes
D. Monocytes
Answer: C
Watch Video Solution
117. The ratio of RBC to WBC in human is
117. The ratio of RBC to WBC in human is A. 6: 1
A. 6:1
A. 6: 1 B. 60: 1

Answer: B Watch Video Solution

118. Cells froms in bone marrow include

A. RBC

B. RBC, leucoytes and platelets

C. Leucocytes

D. Lymphocytes

Answer: C



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119. Thrombocytes have a life of

A. 3-4 weeks

B. 4-5 weeks

C. 7-10 days

D. 4-5 hours

Answer: B



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120. 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 ${\it Rh}^{\,-}$

Answer: C



121. 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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122. 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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123. 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. 1 and 5 correct, 2,3,4 wrong
 - A. 1-4 correct, 5 wrong
 - B. 1-2 correct, 3,4,5 wrong
 - C. 2,3,4 correct, 1 and 5 wrong
 - D. 1 and 5 correct, 2,3,4 wrong

Answer: C



- 124. Platelets are given in case of
 - A. Anaemia
 - B. Polycythemia
 - C. Thrombocytopenia
 - D. Leukopenia

Answer: C



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125. Which blood transfusion is correct?

 $A. A \rightarrow B$

 $B.B \rightarrow A$

 $\mathsf{C.\,AB} \; o \; \mathsf{A}$

 $\mathsf{D.O} \ \to \ \mathsf{A}$

Answer: D



126. Go through the following table

A. Basophils
B. Monocytes
C. Thrombocytes
D. B- Lymphocytes
E. Eosinophils

(i) Megakaryocyte
(ii) Allergy
(iii) Macrophages
(iv) Serotonin
(v) Plasma cells

Choose the option which matches the components on the left with the related components on the right

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

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

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

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

Answer: D



127. Which statement is incorrect regarding human blood?

A. Average leucoytes count is 6000-8000 mm^{-3}

B. Average RBC count is 2-4 million $mm^{\,-3}$

C. Proteins contribute about 8 percent of plasma

D. A healthy human has about 12-16 gms of haemoglobin per 100 ml

blood

Answer: B



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128. Which of the following is present in both plasma and serum in humans.

A. WBCs

B. Fibrinogen

C. RBCs

D. Albumin

Answer: D



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129. Cells of human blood can be arranged in a series of increasing number per cubic millimeter of blood as follows

- A. Erythrocytes < Lymphocytes < Platelets < Basophils <
 - Neutrophils
- B. basophils < Lymphocytes < Neutophils < Platelets <
 - Erthrocytes
- C. Lymphocytes < Basophils < Platelets < Neutrophils <
 - Erthrocytes
- D. Neutrophils < Basophils < Lymphocytes < Platelets <
 - Erythrocytes

Answer: B



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

- A. Thromboplastin
- B. Fibrinogen
- C. Heparin
- D. prothrombin

Answer: A



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131. A drop of each of the following, is placed separately on four sides.

Which of them will not coagulate?

A. Blood serum B. Sample from the thoracic duct of lymphatic system C. Whole blood from pulmonary vein D. Blood plasma Answer: A Watch Video Solution 132. Which one of the following mammalian cells is not capable of metabolising glucose to carbon-dioxide aerobically? A. Unstriated muscle cells B. Liver cells C. Red blood cells D. White blood cells **Answer: C**



133. Compared to blood our lymph has

A. More WBCs and no RBCs

B. More RBCs and less WBCs

C. No plasma

D. Plasma without proteins

Answer: A



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134. In ECG what is represented by P-wave , QRS complex and T-wave respectively?

A. Repolarisation of atria, Depolarisation of atria, Repolarisation of

ventricles

- B. Repolarisation of ventricles, Depolarisation of atria, Depolarisation
 - of ventricles
- C. Repolarisation of ventricles , Depolarisation of atria, Depolarisation of ventricles
- D. Depolarisation of atria, Depolarisation of ventricles, repolarisation of ventricles

Answer: D



- **135.** In humans, blood passes from the post caval to the diastolic right atrium of heart due to
 - A. pressure difference between the post caval and atrium
 - B. pushing open of the venous valves suction pull
 - C. suction pull

D. stimulatiion of the sino auricular node

Answer: A



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

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

Answer: B



137. Which of the following statement is true about RBCs in humans?

A. They do not carry CO_2 at all

B. They carry about 20-25 per cent of ${\cal C}{\cal O}_2$

C. They transport 99.5 per cent of O_2

D. They transport about 80 per cent oxygen only and the rest of 20 per cent of it is transported in dissolved state in blood plasma

Answer: B



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138. 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 pulmonary artery will be reduced

B. The flow of blood into the aorta will be slowed down

C. The 'pacemaker' will stop working
D. The blood will tend to flow back into the left atrium
Answer: A
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139. Fastest distribution of some injectible meterial/medicine and with
no risk of any kind can be achieved by injecting it into the
A. muscles
B. arteries
C. veins
D. lymph vessels
Answer: C
Watch Video Solution

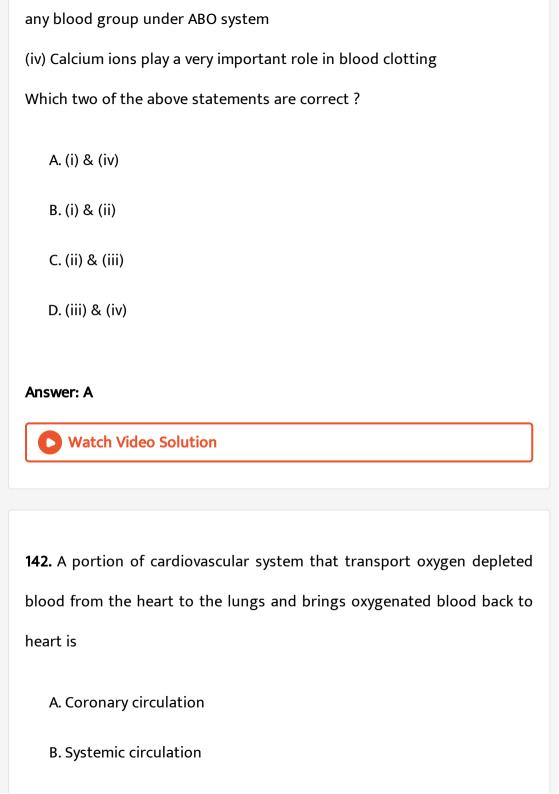
140. The haemoglobin content per 100 ml of blood of normal healthy human adult is

- A. 5-11 g
- B. 25-30 g
- C. 17-20 g
- D. 12-16 g

Answer: D



- **141.** 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



C. Pulmonary circulation
D. Single circulatory system
Answer: C
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143. Which blood group lacks antigen on their RBCs?
A. O
B. A
C. B
D. AB
Answer: A
Watch Video Solution

144. Second heart sound is associated with the

A. lub-closure of the Semilunar valves

B. lub-closure of the Tricuspid and Bicuspid valves

C. dub-closure of the Tricuspid and Bicuspid valves

D. dub-closure of the Semilunar valves

Answer: D



145. Which prevents conversion of prothrombin to thrombin in an undamaged blood vessel?

A. Heparin

B. Thrompoplastin

C. Calcium

D. Fibrinogen

Answer: A



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146. Number of leucocytes in decreasing order in human blood is

- A. Eosinophils > basophils > neutrophils
- B. Neutrophils > eosinophils > basophils
- C. Basophils > eosinophils > Neutrophils
- D. Eosinophils > Neutrophils > basophils

Answer: B



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147. Red cell count is carried out by

A. haemocytometer

- B. haemoglobinometer

 C. sphygmomanometer

 D. electrocardiogram

 Answer: A

 Watch Video Solution
- **148.** Rh factor can produce disease
 - A. AIDS
 - B. Turner's syndrome
 - C. erythroblastosis foetails
 - D. sickle-cell anaemia

Answer: C



- 149. Find out the wrong statement.
 - A. SA node is called the pacemaker of the heart
 - B. Tricuspid valve is located between right atrium and right ventricle
 - C. By counting the number fo QRS complexes that occur in a given time period, one can determine the heart beat rate of an individual
 - D. The P-wave represents the depolarization of the atria while QRS complex represents the repolarisation of the ventricles

Answer: D



- **150.** Bundle of His is a part of which one of the following organs in humans
 - A. Btain
 - B. Heart

C. Kidney
D. Pancreas

Answer: B



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151. Arteries are best defined as the vessels which

A. supply oxygenated blood to the different organs

B. carry blood away from the heart of 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



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

- A. 130/90 mmHg is considered high and requires treatment?
- B. 100/55 mmHg is considered an ideal blood pressure
- C. 105/50 mmHg makes one very active
- D. 190/110 mmHg may harm vital organs like brain and kidney

Answer: D



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153. A person with unknown blood group under ABO system, has suffered much loss in an accident and needs immediate blood trasfusion. His one friend who has a valid certifacte of his own blood type. What would have been the type of blood group of the donor friend

A. Type B

B. Type AB C. Type O D. Type A **Answer: C** Watch Video Solution 154. Write the name of a protein that helps in the blood coagulation process. A. AN albumin B. Serum amylase C. A globulin D. Fibrinogen Answer: D **Watch Video Solution**

155. Bulk of carbon dioxide (CO_2) released from body tissues into the blood is present as

A. bicarbonate in blood plasma and RBCs

B. free CO_2 in blood plasma

C. 70% carbamino-haemoglobin and 30% as bicarbonate

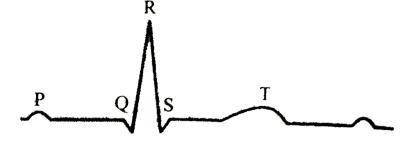
D. carbomino-haemoglobin in RBCs

Answer: A



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



- A. Complex QRS- 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: D



- 157. Which is the first Heart sound?
 - A. Lub associated with the closure of Semi-lunar valves
 - B. Lub associated with the closure of tricuspid and bicuspid valves
 - C. Dub associated with the closure of tricuspid and bicuspid valves

D. Dub associated with the closure of Semilunar valves

Answer: B



Watch Video Solution

158. A person with unknown blood group under ABO system, has suffered much blood loss in an accident and needs immediate blood transfusion. His one friend who has a valid certificate of his own blood type, offers for blood donation without delay. What would have been the type of blood group of the donor friend?

A. Blood group AB

B. Blood group O

C. Blood group A

D. Blood group B

Answer: B



159. Which one of the following is the main graveyard of RBC : $-$
A. Spleen
B. liver
C. Gall bladder
D. Kidney
Answer: A
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160. give few examples of vertebrates(only names)
Watch Video Solution
161. give names of 5 invertebrates

162. Blood diffuses out of the capillaries due to

- 1. hydrostatic pressure of Interstitial fluid
- 2. osmotic pressure of capillaries
- 3. hydrostatic pressure of capillaries
- 4. osmotic pressure of interstitial fluid
 - A. hydrostatic pressure of Interstitial fluid
 - B. osmotic pressure of capillaries
 - C. hydrostatic pressure of capillaries
 - D. osmotic pressure of interstitiat fluid

Answer: C



163. The opening between the right atrium and the right ventricle is guarded by which valve ?

- 1. Monocuspid valve
- 2. bicuspid valve
- 3. Tricuspid valve
- 4. Tetracuspid valve
 - A. Monocuspid valve
 - B. bicuspid valve
 - C. Tricuspid valve
 - D. Tetracuspid valve

Answer: C



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164. Which one of the following human cells does not contain mitochondria?

- 1. Nerve cell
 - 2. Red blood cell
 - 3. Liver cell
 - 4. White blood cells
 - A. Nerve cell
 - B. Red blood cell
 - C. Liver cell
 - D. White blood cells

Answer: B



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165. The cardiac impulse is initiated and conducted further upto ventricle.

The correct sequence of conduction of impulse is

A. SA node $\,
ightarrow\,$ AV node $\,
ightarrow\,$ Bundle of His $\,
ightarrow\,$ Purkinje fibres

B. AV node \rightarrow Bindle of His \rightarrow SA node \rightarrow Purkinje fibres

C. SA node $\,
ightarrow\,$ Purkinje fibres $\,
ightarrow\,$ AV node $\,
ightarrow\,$ Bundle of His

D. Purkinje fibres $\, \rightarrow \,$ AV node $\, \rightarrow \,$ SA node $\, \rightarrow \,$ Bundie of His

Answer: A



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166. The gene of sickle cell anaemia is inherited by

A. blood cells

B. bone cells

C. sex chromosomes

D. autosomes

Answer: D



167. Foramen ovale

- 1. Connects the two atria in the foetal heart
- 2. is a condition in which the heart valves do not completely close
- 3. is a shallow depression in the interventricular septum
- 4. is a connection between the pulmonary trunk and the aorta in the foetus
 - A. Connects the two atria in the foetal heart
 - B. is a condition in which the heart valves do not completely close
 - C. is a shallow depression in the interventricular septum
 - D. is a connection between the pulmonary trunk and the aorta in the foetus

Answer: A



168. To obtain a standard ECG, a patient is connected to the machine by

three electrodes

- 1. One to each wrist and to the left ankle
- 2. One of each ankle and to the left wrist
- 3. One to each wrist and to the left chest region
- 4. One to each ankle and to the left chest region
 - A. One to each wrist and to the left ankle
 - B. One of each ankle and to the left wrist
 - C. One to each wrist and to the left chest region
 - D. One to each ankle and to the left chest region

Answer: A



- 169. Circulatory system does not help in
- 1. transport of respiratory gases

- 2. transport of hormones
- 3. transport of food materials
- 4. transfer of impulses
 - A. transport of respiratory gases
 - B. transport of hormones
 - C. transport of food materials
 - D. transfer of impulses

Answer: D



- **170.** Blood pressure is measured by
- 1. barometer
- 2. sphygmomanometer
- 3. Stethoscope
- 4. electroencephalogram

A. barometer B. sphygmomanometer C. Stethoscope D. electroencephalogram **Answer: B Watch Video Solution** 171. Bursa of Fabricius is an important organ of birds. This organ is associated with A. generation of basophils B. production of uric acid C. metabolism of fatty acids D. generation of B-cell

Answer: D

- 1. coronary artery
- 2. coronary vein
- 3. coronoary sinus
- 4. pulmonary vein
 - A. coronary artery
 - B. coronary vein
 - C. cornoary sinus
 - D. pulmonary vein

Answer: A



A. 47 ml B. 70 ml C. 5 litres D. 3.3 litres **Answer: C** Watch Video Solution 174. Lub sound produced by heart is caused by 1. ventricular diastole 2. ventricular systole 3. atrial diastole 4. atrial systole A. ventricular diastole B. ventricular systole C. atrial diastole

D. atrial systole

Answer: B



Watch Video Solution

- **175.** Number of action potentials that can be generated by sino-atrial node is
- a. 42-50/min
- b. 100-120/min c. 70-75/min
- d. 80-120/min
- A. 42-50/min
 - B. 100-120/min
 - C. 70-75/min
 - D. 80-120/min

Answer: C



176. universal recipent and universal donor blood group



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

A. Hypertension

B. Hypotension

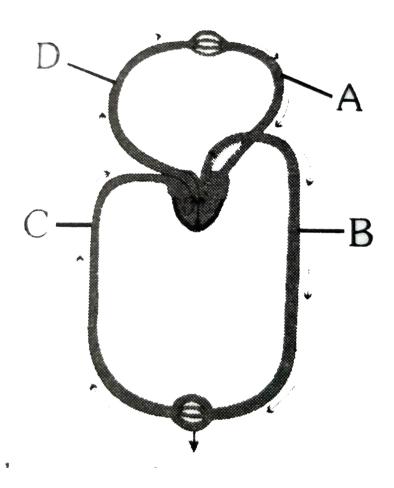
C. Normal

D. Ischemia

Answer: A



178. Figure shows schematic plan of blood circulation in humans with labels A to D, Identify the label and give its function / s.



A. C-vena Cava-takes blood from body parts to right auricle,

 $PCO_2=45\,\mathrm{mm}\,\mathrm{Hg}$

B. D-Dorsal aorta-takes blood from heart to body parts, $PO_2=95~\mathrm{mm}$

Hg

C. A-Pulmonary vein-takes impure blood from body parts, $PO_2=60$

mm Hg

D. B-Pulmonary artery-takes blood from heart to lungs, $PO_2=90~\mathrm{mg}$

Hg

Answer: A



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179. If two persons with 'AB' blood group marry and have sufficiently large number of children, these children could be classified as 'A' blood group: 'AB' blood group 'B' blood group in 1:2:1 ratio. Modern technique of protein electrophoresis reveals presence of both 'A' and 'B' type proteins in 'AB' blood group individuals. This is an example of

A. Partial dominance

B. Complete dominance

C. Codominance

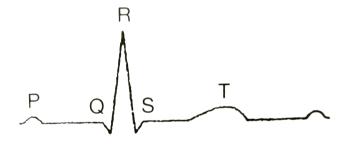
D. Incomplete dominance

Answer: C



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



- A. Beginning of the systole
- B. End of systole
- C. Contraction of both the atria
- D. Both 1 & 3

Answer: D



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181. Assertion. Smaller the organism, higher is the rate of metabolism per gram weight.

Reaons. The heart rate of six months old bady is much higher than that of an old person

A. If both Assertion and Reason are true and the Reason is the correct explanation of the Assertion, then mark a.

B. If both Assertion and Reason are true but the Reason is not the correct explanation of the Assertion, then mark b.

C. If Assertion is true statement but Reason is false, then mark c.

D. If both Assertion and Reason are false statements then mark d.

Answer: B



182. Assertion: Persons sufffering from haemophilia fail to produce blood cloting factor. VIII.

Reason: Prothrombin producing plateles in such persons are found in very low concentration

A. If both Assertion and Reason are true and the Reason is the correct explanation of the Assertion, then mark a.

B. If both Assertion and Reason are true but the Reason is not the correct explanation of the Assertion, then mark b.

C. If Assertion is true statement but Reason is false, then mark c.

D. If both Assertion and Reason are false statements then mark d.

Answer: C



183. How do parasympathetic neural signals affect the working the heart

A. Heart rate decrease 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



184. 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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185. A man with blood group 'A' marries a women with blood group 'B'.

What are all the possible blood groups of their offspring?

- A. A,B and AB only
- B. A,B, AB and O
- C. O only
- D. A and B only

Answer: B



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186. Which one of the following is correct?

A. Serum = Blood + Fibrinogen

B. Lymph = Plasma + RBC + WBC

C. Blood = Plasma + RBC + WBC+platelets

D. Plasma= Blood-Lymphocytes

Answer: C



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187. Blood pressure in the mammalian aorta is maximum during

A. diastole of the right ventricle

B. systole of the left ventricle

C. diastole of the right atrium

D. systole of the left atrium

Answer: B



188. Erythropoiesis starts in A. liver B. Spleen C. Red bone marrow D. Kidney Answer: C Watch Video Solution 189. Which one of the following animals has two separate circulatory pathways A. Frog B. Lizard C. Whale

D. Shark			

Answer: C



190. If you suspect major deficiency of antibodies in a person, to which of the following would you look for confirmatory evidence

- A. Fibrinogin in plasma
- B. Serum albumins
- C. Haemocytes
- D. Serum globulins

Answer: D



191. Doctors use stethoscope to hear the sounds produced during each cardiac cycle. The second sound is heard when

A. AV valves open up

ventricles

B. Ventricular walls vibrate due to gushing in of blood from atria.

C. Semilumar valves close down after the blood flows into vessels from

D. AV node receives signal from SA node

Answer: C



Watch Video Solution

192. Blood pressure in the pulmonary artery is

A. more than that in the carotid

B. more than that in the pulmonary vein

C. less than that in the venae cavae

D. same as that in the aorta

Answer: B



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193. It is much easier for a small animal to run uphill than for a large animal, because:

A. smaller animals have a higher metabolic rate

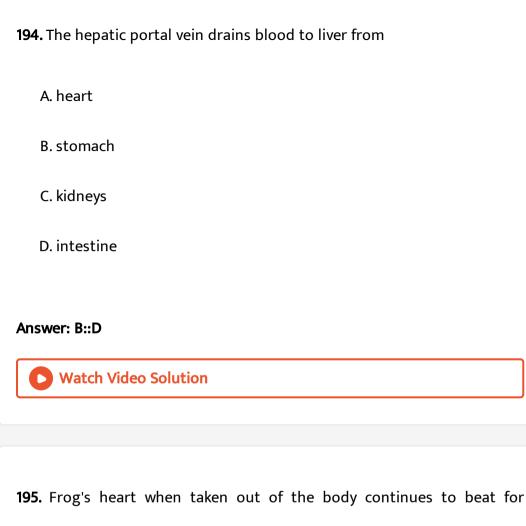
B. small animals have a lower \mathcal{O}_2 requirement.

C. the efficiency of muscles in large animals is less than in the small animals.

D. It is easier to carry a small body weight.

Answer: A

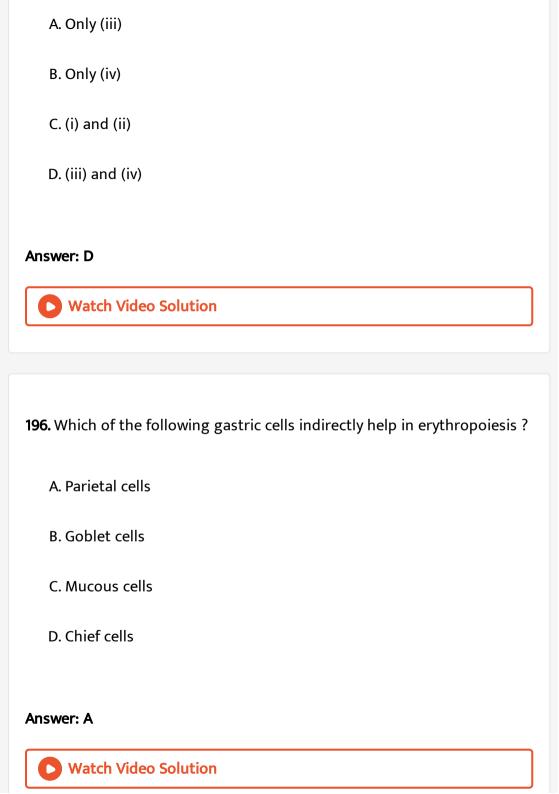




sometime

Select the best option from the following statements

- (A) Frog is a poikilotherm
- (B) Frog does not have any coronary circulation
- (C) Heart is "Myogenic" in nature
- (D) Heart is autoexcitable



197. Match the items given in Column I with those in Column II and select

the correct option given below

Column II Column II

- (A) Fibrinogen (i) Osmotic balance
- (B) Globulin (ii) Blood clotting
- (C) Albumin (iii) Defence mechanism
 - A. $egin{matrix} a & o & c \ ii & iii & i \end{pmatrix}$
 - $\mathsf{B.} \begin{array}{cccc} a & b & c \\ i & iii & ii \end{array}$
 - $\mathsf{C.} \begin{array}{ccc} a & b & c \\ i & ii & iii \end{array}$
 - D. a b c

Answer: A



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

Column I Column II Tricuspid valve A. (i) Between left atrium and left ventricle В. (ii) Bicuspid valve Between right ventricle and pulmonary artery C. Semilunar (iii) Between right atrium and right ventricle iiiicii iiic. a bciiiiib caD. iii i ii**Answer: D**





