

Body fluids and circulation

1. What are the 2 types of body fluids in humans?

2. Muscles : Mesodermal origin

Heart :

3. Erythrocyte : Transport of respiratory gases

Thrombocyte:.....

4. Visceral organ: Skeletal muscle

Muscles of heart:.....

5. Man :Double circulation

Fish :

6. 120mm Hg : systolic pressure

80mm Hg :

7. Lub : first heart sound

.....: second heart sound

8. Most abundant WBC : Neutrophil

Least abundant WBC:.....

9. Universal donor : blood group O

Universal recipient :

10. Lub : closure of tricuspid and bicuspid valve

Dub:.....

11. Fibrinogen : Blood coagulation

Albumin :

12. Tunica intima : Squamous epithelium

Tunica media :

13. Thrombocyte : blood coagulation

Laeukocyte :

14. Classify the following organism based on the circulatory system

Annelida, Mollusca, chordata, arthropoda, echinodermata

15. Find the odd one and write the peculiar features of other three

a)basophil, esoinophil,neutrophil,lymphocyte

b)RBC,basophil,eosinophil,neutrophil

c)Blood, bone, cartilage, tendon

d)Fibrinoge, albumin,globulin, WBC

16. Fill in the blanks

Blood group	Antigen on RBC	Antibody in plasma	Donor's group
A	A		O,A
B		Anti-A	O, B
AB	A, B	Nil	
O		Anti-A, B	O

17. Which of the following couples have higher chance of erythroblastosis foetalis

Father mother Child
RH+ve Rh-ve Rh-ve

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Rh+ve Rh-ve Rh+ve

Rh-ve Rh-ve Rh+ve

Rh-ve Rh+ve Rh+ve

18. Lymph act as a connecting link blood and tissue, explain ?

19. Explain, how the following WBC fight against pathogen?

a)Basophil b)monocyte

c)Eosinophil c)Lymphocyte

20. Categorize the following under 2 heading

Basophil, neutrophil, monocyte, lymphocyte, eosinophil

a)What is the basis of your classification?

b)How neutrophil and monocyte are involved in defence mechanism ?

21. What are the functions of valves in human heart?

22. Why there is no mixing of oxygenated and deoxygenated blood occur in Ventricles of human heart ?

23. Platelets also called thrombocytes, are cell fragments produced from specialized cells in the bone marrow called

24. Due to developmental anormality the wall of left ventricle of an infant's heart has the same thickness as that of right ventricle. What would be its specific effect on circulation of blood?

25. Answer the following in a few words

a)Why SAN is called pacemaker/heart of heart?

b)where do you find SAN and AVN ?

c)What will happened if AVN got damaged ?

26. Which organ in human body is called graveyard of RBC?

27. All reptiles has incomplete double circulation, do you agree with this statement?

28. Which of the following WBC are associated with allergic reactions

a)Basophil b)Eosinophil c)Monocyte

d)Lymphocyte

29. Why circulatory system of fish is called single circulation?

30. Which the most commonly used body fluid in human?

31. How and why clumping or destruction of RBC take place if Blood group of donor mismatched with recipient blood group.?

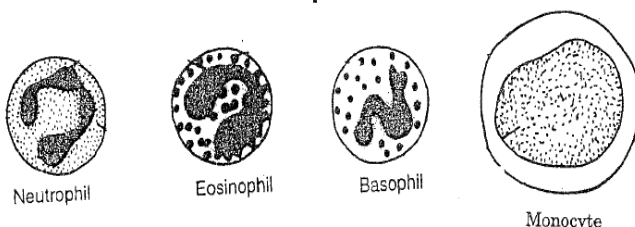
32. Dr Akash observed a patient with murmuring heart beat. What is his problem ?

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33. What is the difference between blood and lymph ?
34. Rakesh went to a doctor with a lab report. Study the lab report and answer the following question

Formed elements	Count
RBC	5-5.5million/ mm ³
WBC	2000-2500/MM ³
Thrombocyte	50000-60000/mm ³

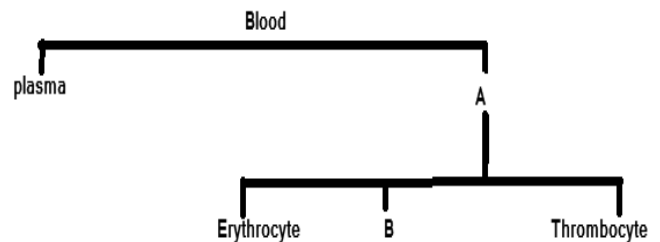
- a) Write a short note on the above report?
- b) What will be its consequences?
35. In a medical seminar Dr. Rohith expressed his views on blood transfusion by saying
 "Hey friends during blood transfusion, any blood cannot be used; the blood of a donor has to be carefully matched "
 a) Do you agree with this statement?
 b) Explain?
36. A person has stroke volume of 70ml, and cardiac output of 5040 ml.
 a) Find out the relationship between stroke volume and cardiac output
 b) what will be his heart beat
37. Observe the blood cells and attempt the following questions



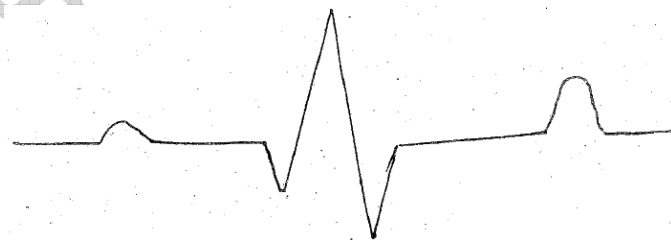
- a) which among the above cells least possibly found when you observe a drop of blood?
- b) write one function of any two types
- c) categorize the WBC based on the presence or absence of protein granules?
38. The sequential events in the heart which are cyclically repeated are called cardiac cycle
 a) What are the phases of cardiac cycle?
 b) why do we call the human heart as myogenic?
 c) what is the role of SAN (Sinu Atrial Node) on a human heart?
39. What are the main functions of lymph ?
40. Explain erythroblastosis foetalis? How it can be avoided?
41. Answer the following
 a) Plasma without clotting factor

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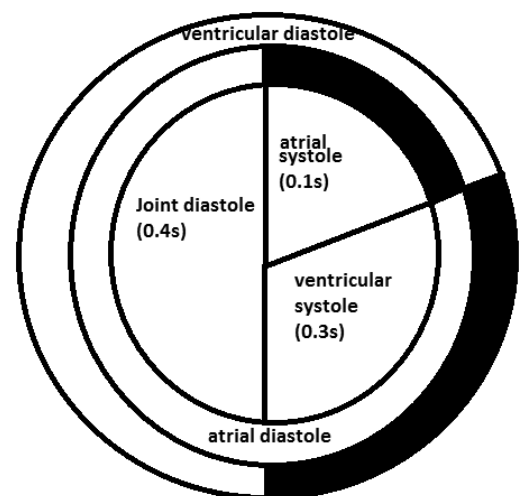
- b) blood group contain both antigen A and B
 c) Ion responsible for blood coagulation
 d) Plasma protein helps in osmoregulation
 e) Vitamin essential for blood clotting
42. A) Fill in the blanks



- b) What are the different types of plasma protein present in plasma ?
- c) What are the function of thromocytes ? from where it is formed ?
43. Mohan said in class room that "heart beat will continue even after your brain death".
 Do you agree with this statement explain?
44. What is the difference between artery and vein?
45. Observe the ECG



- a) Label P, Q, R, S, T in the graph
- b) what does the T wave represent?
46. What is serum? why serum lacks clotting factor ?
- 47.



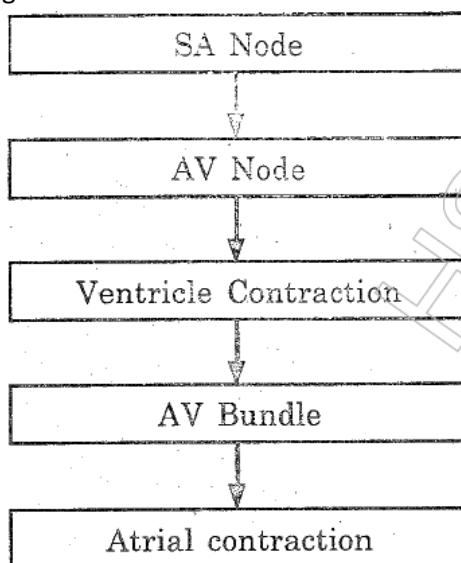
- a) Identify the pie diagram ?

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- b)What is the relationship between cardiac output and stroke volume ?
48. Blood is a fluid connective tissue with plasma as the matrix
- a)Which is the most abundant type of cell in the blood?
- b)what is the normal amount of Hb in human?
- c)What is the main role of Hb in human?
49. Match the following

Column-1	Column-2
Basophil	20-25%
Neutrophil	0.5-1 %
Monocyte	60-65%
Erythrocyte	150000-350000/mm ³
Lymphocyte	6-8%
Thromocyte	5-5.5million/mm ³

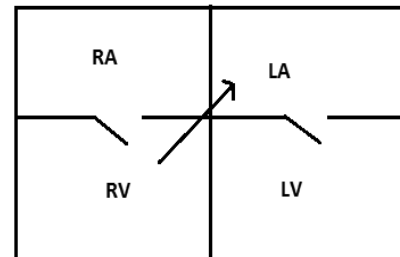
50. Due to dengue fever Rohith's platelet count decreased to 15000/mm³
- a)What is the function of platelet?
- b)What will be its consequences ?
51. Observe the flow chart and answer the questions given below



- a)Draw the flow chart correctly?
- b)what will happen if the SA node is not working properly?
- a)significance of pulmonary circulation in man?
- b)functions of erythrocytes
- c)pacemaker for a human heart and its significance?
52. Which of the following WBC attack the pathogen by Phagocytosis ?
- a)Basophil b)monocyte
- c)Eosinophil c)Lymphocyte

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53. If a person having blood group A is given blood transfusion of blood group B by mistake. What will be its effect?
54. A person is admitted in cardiac hospital due to fainting. The doctor immediately checked his ECG. After a few minutes the ECG shows pip..pip..pip..peeeee sound
- a)What it indicate ?
55. Study the diagram



- a)Identify the circulation ?
- b)What are portal veins ?
56. Name the two types of heart valves and mention their function?
- In man normal ECG consist of 3 waves
- a)P wave b)QRS wave c)T wave
- what does the above wave means ?
57. A person with A-ve blood group is injured severely in an accident. His relatives with A+ve and B-ve blood group were ready to donate blood for him. Infer the consequence if he receive the blood from him?
58. Study the chart below and answer the following



- a)what kind of circulation is this ?
- b)Write the name of the blood vessel which carry Blood from intestine to liver ?
59. What are the functions of the following
- a)Pulmonary artery
- b)carotid artery
- c)Aorta
60. Classify the following blood vessel based on the blood it carry (Oxygenated and deoxygenated ?

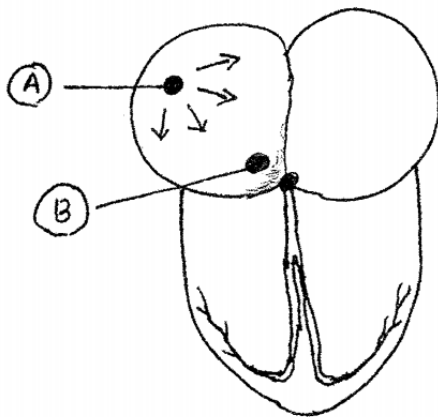
Pulmonary artery
Pulmonary vein
Aorta
Carotid artery
Superior vena cava
Inferior vena cava
Carotid artery

b)What will happened if the SA node is not working properly?

67. Why the blood through the artery flows under high pressure?

68. Identify the blood vessel

61. Observe the figure and answer the question



a)Name the nodal tissue A and B

b)Why A is called pace maker

b)Expand ECG

c)What is the use of ECG ?

62. What is the significance of pulmonary and systemic circulation?

63. What will happen if the SAN get damaged?

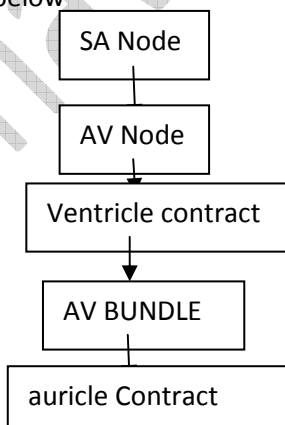
64. Why human heart is called myogenic ?

65. Circulatory system is well developed in most of the organism

a)What is the significance of a circulatory system in organism?

b) What is the difference between open and closed type of circulatory system?

66. Observe the flow chart and answer the question given below



a)Re draw the flow chart correctly?



69. Using the following parts ,arrange to form a complete circulatory pathway

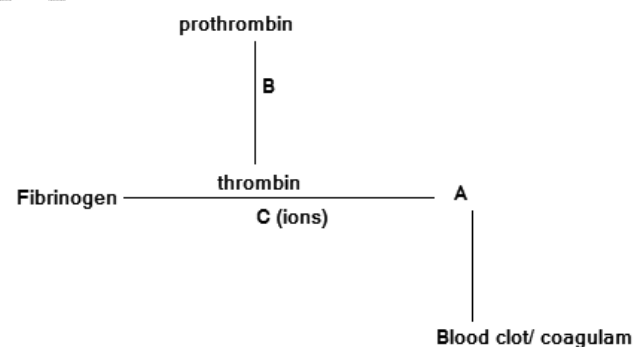
Artery, venule, arteriole, body parts, heart, vein ,venule ,

70. Expand

a)CAD

b)WBC c)RBC d)ECG

71. The flow chart shows schematic representation of blood clot



a) Label A,B and C

b)which blood cells helps in blood coagulation?

c)Write an example for anticoagulant ?

72. What are the two types of atrio-ventricular valves? Where it is present? What are its functions?

73. What is the deference between pulmonary artery and vein?

74. Johnson likes eating high cholesterol content food.

a)do you like this habit of eating?

b) is it affect his circulation? Explain?

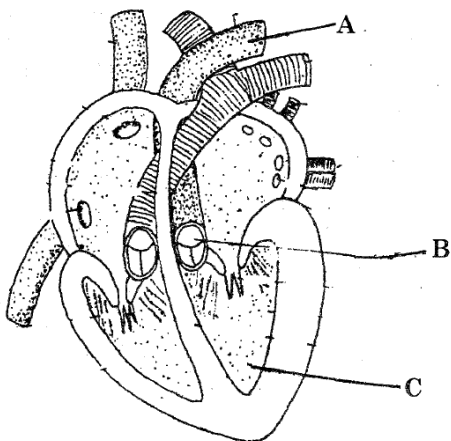
75. Identify the disease

a) A symptom of acute chest pain appears when no enough oxygen is reaching the heart muscle

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- b) it affects the vessels that supply blood to the heart muscle. It is caused by deposits of calcium, fat, cholesterol and fibrous tissues, which makes the lumen of arteries narrower
- c) the state of heart when it is not pumping blood effectively enough to meet the needs of the body
- d) Heart stop beating

76.



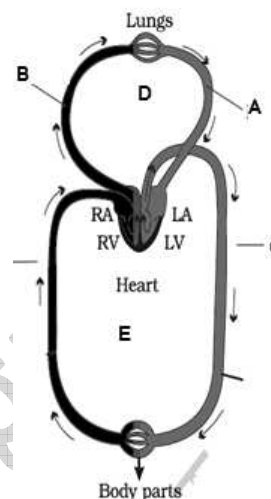
a) Label A, B and C

C) Write the flow chart of coronary circulation?

77. Write an account on 3 disorders of human circulatory system?
78. Suresh faced a problem that his coronary artery get filled with cholesterol and fat
 - a) What condition he is facing now?
 - b) What is the importance of coronary artery to human beings?
 - c) What is the difference between Heart attack and Heart failure?
79. Fishes pumps only deoxygenated blood.
 - a) Do you agree with this statement ?
 - b) Explain ?
 - c) How Deoxygenated blood in fish get oxygenated ?
80. Which of the following organism has open circulatory system
 - a) Insects b) Pila c) Balanoglossus d) all of these
81. How human heart is protected within thoracic chamber ?
82. All artery carries oxygenated blood?
 - a) Do you agree with this statement
 - b) Explain
83. What will be the cardiac output of a person with a heart rate of 72/minutes ?
84. Why platelet can't coagulate within human blood ?

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85. The sequential events in the heart which are cyclically repeated are called
86. The cardiac impulse is initiated and conducted further upto ventricle. The correct sequence of conduction of impulse is
 - a) S A Node - A V Node - Purkinje fiber - A V Bundle
 - b) S A Node - Purkinje fiber - A V Node - A V Bundle
 - c) S A Node - A V Node - A V Bundle - Purkinje fiber
 - d) S A Node - Purkinje fiber - A V Bundle - A V Node
87. Given below the diagrammatic sketch of human circulation



- a) Label A, B, and C blood vessels
- b) What type of circulation is D and E
- c) What is the importance of E in human body
88. Dr. Rahul checked BP of a patient and recorded his BP as 160/95 mm Hg ?
 - a) What he is suffering from?
 - b) What is normal BP?
 - c) Which instrument is used to detect blood pressure ?
 - d) How hypertension affects human body ?
89. What are the functions of the following?
 - a) RBC
 - b) Fibrinogen
 - c) SAN
90. Match the following

Column A	Column B
A. Lymphatic system	i. carries oxygenated blood
B. Pulmonary vein	ii. Immune response
C. thrombocytes	iii. To drain back the tissue fluid
D. Lymphocytes	iv. Coagulation of blood
91. How will you detect electrical activity of human heart ?

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92. Explain how Autonomic neural system regulates Human circulation?
93. the cardiac output of an athlete will be much higher than that of an ordinary man
a) Do you agree with this statement ?
b) Explain ?
94. All reptiles have double complete circulation.
a) Do you agree with this statement ?
b) Explain?
95. In man normal ECG consist of 3 waves
a) P wave b) QRS wave c) T wave
what does the above wave means ?
96. AIDS is a immunodeficiency disorder. It is due to HIV infection.
How immunity of AIDS patient is very low than others?
97. Is it possible to give O blood group to any one without checking the blood group of recipient ?
98. Pulmonary circulation is fast than systemic circulation
a) Do you agree with this statement?
b) Explain
99. Match the following

Column A	Column B
a) Superior vena cava	p. Carries deoxygenated blood to lungs
b) Inferior vena cava	q. Carries oxygenated blood from lungs
c) Pulmonary artery	r. Brings deoxygenated blood from lower parts of body to right atrium
d) Pulmonary vein	t. Brings deoxygenated blood from upper part of body into right atrium

100. Match the following

Column A	Column B
1) Stroke volume	a) 70-75 action potential per minute
2) Cardiac output	b) Ventricular repolarisation
3) SAN	c) 70ml of blood per cardiac cycle
4) P wave	d) 5L blood per cardiac cycle
5) T wave	e) Atrial depolarisation

101. Which hormone promote formation of RBC (Erythropoiesis) ?

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102. Anaemia is the one the main symptom of Erythroblastosis foetalis. How and why the child become anaemic ?
103. Which is the thickest wall of human heart ? What is the functions of such thick wall in human heart ?