

**Chapter-07**  
**BODY FLUIDS AND CIRCULATION**

**Each question carry one score**

1. Plasma without clotting factor is called.....
2. Observe the first pair of words and write a suitable word for the second
  - a) Universal Donor: O blood group  
 Universal Recipient :.....
  - b) Normal systolic pressure: 120mm Hg :  
 Normal Diastolic pressure .....
  - c) First Heart sound :Lub  
 Second Heart sound :.....
  - d) Lub : closure of tricuspid and bicuspid valve  
 . Dub:.....
  - e) Lungs:Pleura  
 Heart:.....
3. A graphical representation of the electrical activity of the heart during a cardiac cycle is called.....
4. Which of the following couple/s may have chance of getting Erythroblastosis foetalis

a	Father A+ , Mother A- , foetus A-
b	Father O+ , Mother O+ , foetus O-
c	Father A+ , Mother A- , Foetus A+
d	Father O+ , Mother O+ , Foetus O-

5. In the medical record of a patient blood pressure is marked as 140/90mm Hg. What does it indicate ?
6. Blood pressure of an individual can be estimated by.
  - (a) Stethoscope
  - (b) Hygrometer
  - (c) Sphygmomanometer
  - (d) Spirometer
7. ECG depicts the depolarisation and repolarisation processes 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

8. The second heart sound (dubb) is associated with the closure of
  - (a) tricuspid valve
  - (b) semilunar valves
  - (c) bicuspid valve
  - (d) tricuspid and bicuspid valves.
9. 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 m
10. 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 cannot 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.
11. 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) SA Node-A V Node- A V Bundle- Purkinje fiber
  - d) S A Node- Purkinje fiber- A V Bundle- A V Node
12. How will you detect electrical activity of human heart?

**Each question carry two score**

13. Raju has Both antigen (Antigen A and Antigen B) on his RBC.
  - a) Identify his blood group
  - b) He can donate his blood .....group during emergency
14. The blood pressure of a person is shown as 170/130mmHg. What would be his disease? How it affect his body?
15. Expand
  - a) CAD b) ECG c) SAN d) AVN
16. Identify the disease
  - a) A symptom of acute chest pain appears when no enough oxygen is reaching the heart muscle
  - b) it affects the vessels that supply blood to the heart muscle.

- b) 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

17. 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

18. SA node has the key role in the rhythmic activity of human heart. Give reason ?

19. "Sinu atrial node is called pacemaker of human heart"

- a) Justify the statement?
- b) Define Ventricular systole and Ventricular Diastole?

20. a) Person with 'AB' blood group is called 'universal recipient'. Give a reason"

- b) List out any two disorders of human circulatory system.

21. Thrombocytes/ Platelets are essential for coagulation of blood. Comment.

22. 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?

23. Differentiate between

- a) Cardiac arrest and Heart attack
- b) SAN and AVN

24. Fill in the Blanks

- a) \_\_\_\_\_ ions play a significant role in clotting.
- b) One can determine the heart beat rate by counting the number of \_\_\_\_\_ in an ECG

25. Which coronary artery disease is caused due to narrowing of the lumen of arteries ? Write the reason for CAD.

26. Electrocardiogram of a person gives 12 QRS complex in 10 seconds.

- a) Calculate his Heart beat in a minute?

b) What is the difference between Electrocardiograph and Electrocardiogram

27. What physiological circumstances lead to erythroblastosis foetalis?

28. Briefly describe

- a) Atherosclerosis
- b) Angina pectoris

29. Differentiate between

- a) Tricuspid valve and bicuspid valve
- b) Lub and Dubb sounds of heart beat

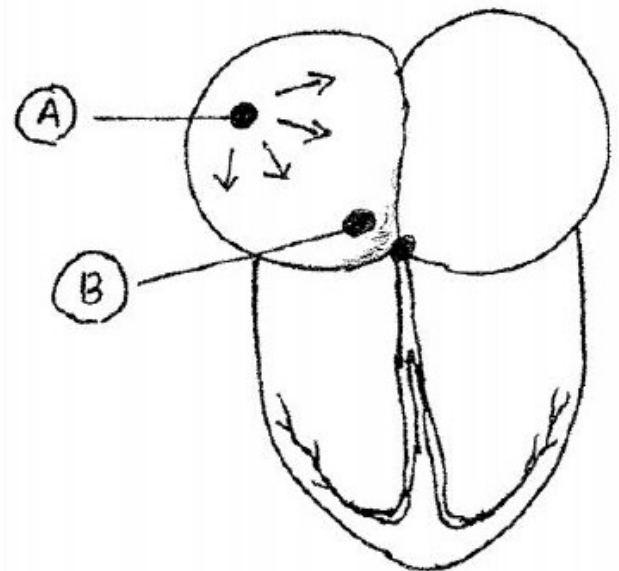
30. Given below are the abnormal conditions related to blood circulation. Name the disorders.

- (a) Acute chest pain due to failure of O<sub>2</sub> supply to heart muscles
- (b) Increased systolic pressure

31. Given below is the diagrammatic representation of a standard ECG. Label its different peaks Using P, Q, R, S, T letters



32. Observe the figure and answer the question



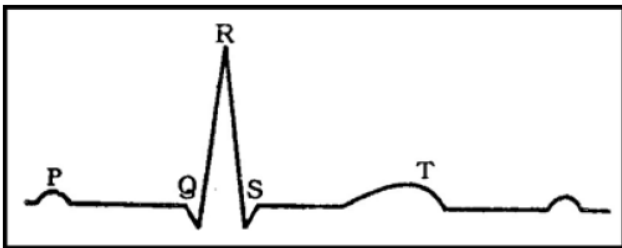
- a) Name the nodal tissue A and B
- b) Why A is called pace maker

33. If a person having blood group A is given blood transfusion of blood group B by mistake. What will be its effect?

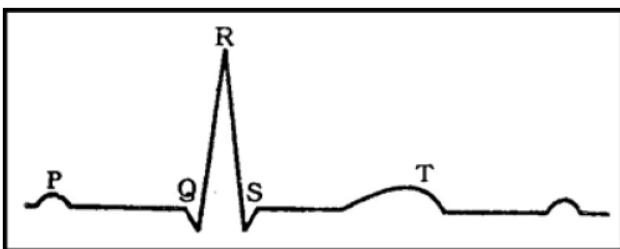
34. Stethoscope is an instrument which is used to detect the sounds of the heart.  
 a) Mention the two sound of the heart?  
 b) Give the cause of heart sound?
35. A person is admitted in cardiac hospital due to fainting. The doctor immediate checked his ECG. After a few minutes the ECG shows pip..pip..pip..peeeee sound  
 a)What it indicate ?  
 b)What you meant by Myogenic Heart?

**Each question carry three score**

36. SAN and AVN are two nodal tissue seen on the heart. Discuss how these nodal tissue regulating the contractile activity of the heart.
37. Observe the Diagram

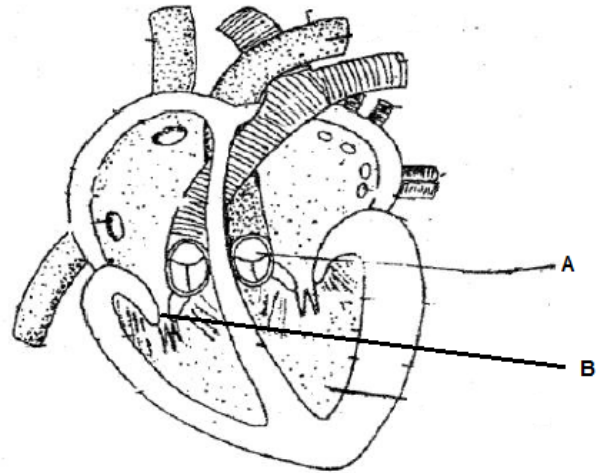


- (a) What does it denote ?  
 (b) What do P, QRS, T represent ?  
 (c) What is its clinical significance ?
38. (a) Make a flowchart showing cardiac impulse conduction using appropriate terms given in bracket.  
**[SAN, Right atrium, AVN, AV Bundle, Bundle of His, Ventricle]**  
 (b) Which part known as pacemaker ?
39. Diagrammatic representation of a standard ECG is given below.

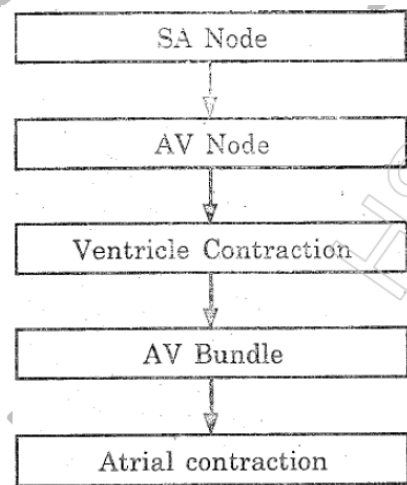


- a) Expand ECG  
 b) What does 'P', 'T' waves denote?  
 c) Mention the clinical significance of ECG ?
40. Blood coagulation, is a mechanism to prevent the excessive loss of blood.  
 (a) Identify the enzyme help the conversion of inactive fibrinogen into fibrin  
 (b) Mention the role of thrombokinase.

- (c) Which ion is necessary for blood clotting ?
41. Longitudinal section of the human heart showing internal structure is given below. Observe the diagram and answer the following question.



- a)Label Part A and B  
 b)What is the function of Valves in Human Heart  
 c)Write two sounds produced during heart beat
42. 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?
43. 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?
44. Answer the following in a few words  
 a)Significance of Heart valves

- b) Functions of Fibrinogen
  - c) Pacemaker for a human heart and its significance?
  - d) Normal blood pressure of a human being and its variation during hypertension
45. Briefly describe
- a) Cardiac arrest
  - b) Heart failure
  - c) Angina pectoris
46. Name any two heart valves and mention their function?
47. 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
48. In man normal ECG consists of 3 waves
- a) P wave b) QRS wave c) T wave
- What does the above wave mean ?
49. Explain Rh-incompatibility in humans
50. a) Select the correct statement regarding with ECG of man
- i) P-wave represents auricular repolarisation
  - ii) P- Wave represents ventricular repolarisation
  - iii) P- wave represents auricular depolarisation
  - iv) P-wave represents ventricular depolarisation
- b) Observe the diagram and label A, B, C and D

51. 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 happen if AVN got damaged ?
52. 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?



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