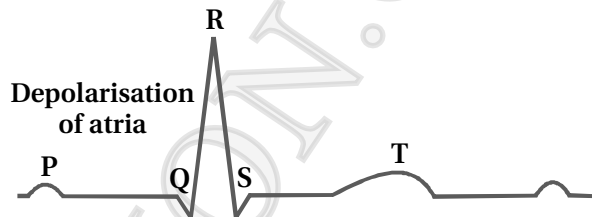


Section A

● Write the answer of the following questions. [Each carries 1 Mark] [20]

- 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.
- 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.

- Depolarisation of atria
- Repolarisation of atria
- Depolarisation of ventricles
- Repolarisation of ventricles



- The second heart sound (dub) is associated with the closure of .....  
 (A) Tricuspid valve  
 (B) Semilunar valves  
 (C) Bicuspid valve  
 (D) Tricuspid and bicuspid valve
- Match the following columns.

Column-I	Column-II
(a) Lymphatic system	(i) Carries oxygenated blood
(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

- (A) (a - ii), (b - i), (c - iii), (d - iv)  
 (B) (a - iii), (b - i), (c - iv), (d - ii)  
 (C) (a - iii), (b - i), (c - iii), (d - iv)  
 (D) (a - ii), (b - i), (c - iii), (d - iv)
- 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
  - 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 2 is dependent on action mentioned in Statement 1  
 (C) Action mentioned in Statement 1 and 2 are independent of each other.  
 (D) Action mentioned in Statement 1 and 2 are synchronous.
  - When electric waves reach from S. A. node to A. V. node it slows down in heart. This slowing down is essential as .....  
 (A) It gives rest to auricles.  
 (B) It makes strong contraction of right auricle.

- (C) It helps ventricle in receiving more blood from auricles.  
 (D) Helps right auricle to receive blood from vena cava.
8. For the contraction of cardiac muscles circulatory system produces potentiality in each part but sino-atrial node act as pace maker because ..... .  
 (A) Each part of the heart do not have potentiality.  
 (B) Only sino-atrial node is auto stimulating and auto rhythmic.  
 (C) S.A. node has high depolarisation rate by birth.  
 (D) S.A. node has less depolarisation rate by birth.
9. In four slides separately drop of each is placed. Among which drop will not coagulate ?  
 (A) Thin fluid portion of blood.  
 (B) One sample from thoracic duct of lymphatic system.  
 (C) All blood of pulmonary vein.  
 (D) Serum
10. Patient brought in hospital with myocardial infection, should normally given ..... immediately.  
 (A) Penicillin (B) Streptokinase (C) Cyclosporin-A (D) Statins
11. Heart of crocodiles and birds are  
 (A) 3 chambered (B) 4 chambered  
 (C) 2 chambered (D) incomplete 3 chambered
12. Pacemaker of heart is  
 (A) SA Node (B) AV Node (C) AV septa (D) IA septa
13. Graveyards of RBC  
 (A) Liver (B) Spleen (C) Kidney (D) Heart
14. Following are Agranulocytes  
 (A) Monocytes (B) Eosinophils (C) Lymphocytes (D) Both (A) and (C)
15. Duration of cardiac cycle is  
 (A) 0.1 sec (B) 0.2 sec (C) 0.4 sec (D) 0.8 sec
16. What is very common among middle aged and elderly women and men ?  
 (A) CAD (B) Angina (C) Cardiac arrest (D) All of these
17. A : SA node acts as pacemaker.  
 R : SA node is located in the wall of right atrium near interatrial septa.  
 (A) A and R both are correct and R is correct explanation of A.  
 (B) A and R are correct but R is not correct explanation of A.  
 (C) A is correct and R is false.  
 (D) Both A and R are false.
18. A : Pulmonary vein contains oxygenated blood.  
 R : It brings oxygenated blood from lungs.  
 (A) A and R both are correct and R is correct explanation of A.  
 (B) A and R are correct but R is not correct explanation of A.  
 (C) A is correct and R is false.  
 (D) Both A and R are false.
19. Given below are two statements :  
 Statement I : The coagulum is formed of network of threads called thrombins.  
 Statement II : Spleen is the graveyard of erythrocytes.  
 In the light of the above statements, choose the most appropriate answer from the options given

below :

- (A) Statement I is correct but Statement II is incorrect
- (B) Statement I is incorrect but Statement II is correct
- (C) Both Statement I and Statement II are correct
- (D) Both Statement I and Statement II are incorrect

20. Match the following columns and select the correct option.

Column-I	Column-II
(a) Eosinophils	(i) Immune response
(b) Basophils	(ii) Phagocytosis
(c) Neutrophils	(iii) Release histaminase destructive enzymes
(d) Lymphocytes	(iv) Release granules containing histamine

(A) (a - iv) (b - i) (c - ii) (d - iii)

(B) (a - i) (b - ii) (c - iv) (d - iii)

(C) (a - ii) (b - i) (c - iii) (d - iv)

(D) (a - iii) (b - iv) (c - ii) (d - i)