

## TOPIC: CIRCULATION

- Globulin protein of blood plasma are mainly involved in the
  - Clotting
  - Osmotic balance
  - Defence mechanism
  - None of these
- Persons with \_\_\_\_\_ & \_\_\_\_\_ group are called universal recipients & universal donors respectively:
  - AB, B
  - O, AB
  - AB, O
  - A, B
- Blood clotting requires:
  - $Na^+ + K^+$
  - $Na^+ +$  Prothrombin
  - $Na^+ +$  Thromboplastin
  - $Ca^{2+} +$  Thromboplastin
- The Content of haemoglobin / 100 ml of Blood is:
  - 12-16 gm
  - 20-25 gm
  - 10-11 gm
  - 5-10 gm
- In which pair erythroblastosis foetalis occur:
  - $Rh^+$  male &  $Rh^-$  female
  - $Rh^-$  male &  $Rh^-$  female
  - $Rh^+$  male &  $Rh^+$  female
  - $Rh^-$  male &  $Rh^+$  female
- Agranulocytes are
  - Eosinophils & Neutrophils
  - Monocytes & Lymphocytes
  - Eosinophils & Lymphocytes
  - Lymphocytes & Basophils
- The mitral valve is supported by
  - Bundle of HIS
  - Ductus Arteriosus
  - Foramen ovule
  - Chorda tendinea
- Origin of heart beat and its conduction is represented by
  - AV node  $\rightarrow$  Bundle of His  $\rightarrow$  SA node  $\rightarrow$  Purkinje fibres
  - SA node  $\rightarrow$  Purkinje fibres  $\rightarrow$  AV node  $\rightarrow$  Bundle of His
  - Purkinje fibres  $\rightarrow$  AV node  $\rightarrow$  SA Node  $\rightarrow$  Bundle of His
  - SA node  $\rightarrow$  AV Node  $\rightarrow$  Bundle of His  $\rightarrow$  Purkinje fibres
- Cardiac output blood is
  - Received by heart per minute
  - Pumped by ventricles per sec
  - Pumped by each ventricle per minute
  - Pumped by left ventricle per hour
- Coronary heart disease is due to
  - Streptococci bacteria
  - Inflammation of pericardium
  - Weakening of the heart valves
  - Insufficient blood supply to the heart muscles
- Which is the first heart sound
  - Lubb due to closure of semilunar valves
  - Lubb due to closure of atrioventricular valves
  - Dub due to closure of semilunar valves
  - Dub due to closure of atrioventricular valves.
- During cardiac cycle about.....% of ventricular filling occurs prior to atrial contraction ..... % ventricular filling occurs due to atrial contraction
  - 50, 50
  - 70, 30
  - 30, 70
  - 10, 90
- 'X' is a cell fragment produced by bone marrow cells?
  - X is erythrocyte
  - X is thrombocyte
  - X is leukocyte
  - X is monocyte

14. How many statements are correct?

- (a) SA node is pacemaker & is present in lower left corner of right atrium
- (b) SA node is responsible for initiating & maintaining rhythmic contractile activity of heart
- (c) Maximum no. of action potentials generated by SA node is 70-75/min
- (d) Nodal fibres are not auto excitable

(1) 1                                      (2) 2                                      **(3) 3**                                      (4) 4

15. Duration of cardiac cycle is

- (1) 0.4 sec                                      (2) 0.6 sec                                      **(3) 0.8 sec**                                      (4) 0.8 min

16. Find out the correct statement /s.

- (A) In heart failure inadequate blood is pumped by heart.
- (B) Cardiac function is monitored through ANS by neural center located in hypothalamus.
- (C) Parasympathetic system increases speed of conduction of action potential in their by the cardiac output.

17. (D) The hormone that stimulates heart beat is Adrenaline.

- (1) Only A                                      **(2) A and D**                                      (3) A, C and D                                      (4) A, B and C

18. Read the following statements carefully and choose correct statements:

- (1) During the joint diastole, bicuspid and tricuspid valve remains closed
- (2) The valves in the heart allows the flow of blood only in one direction, i.e., from the atria to the ventricles.**
- (3) Each peak in the ECG is identified with a letter from P to T that corresponds to a specific neural activity of the heart.
- (4) During atrial systole, right ventricle pumps blood with more pressure than the left ventricle.

19. What is the correct order of these events?

- (I) Conversion of fibrinogen to fibrin
- (II) Clot retraction and leakage of serum
- (III) Thromboplastin formation
- (IV) Conversion of prothormbin to thrombin

(1) III, II, I, IV                                      **(2) III, IV, I, II**                                      (3) III, IV, II, I                                      (4) IV, I, III, II

20. Which of the following factor(s) increase blood pressure?

- (A) Increase of cardiac output                                      (B) Constriction of blood vessels
- (C) Activation of parasympathetic nervous system                                      (D) Increase of blood volume
- (1) A,B,D are correct**                                      (2) B,C, D are correct
- (3) A, C, D are correct                                      (4) All are correct

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

- (1) Neutrophils → Basophils → Lymphocytes → Acidophils (Eosinophils) → Monocytes
- (2) Neutrophils → Monocytes → Lymphocytes → Acidophils → Basophils
- (3) Neutrophils → Lymphocytes → Monocytes → Acidophils → Basophils**
- (4) Neutrophils → Acidophils → Basophils → Lymphocytes → Monocytes