



# 14

CHAPTER

## TRANSPORT

1. Which of the following processes does need energy?  
(A) Diffusion (B) Facilitated diffusion  
(C) Osmosis (D) Active transport
2. The movement of minerals or water through plasomdesmata is called:  
(A) Symplast (B) Apoplast  
(C) Vascular (D) None the above
3. The movement of minerals or water through extracellular pathway is called:  
(A) Symplast (B) Apoplast  
(C) Vascular (D) None the above
4. The membrane of vacuole is called:  
(A) Plasma membrane (B) Tonoplast  
(C) Epidermis (D) None of the above
5. Casparian strips are present in:  
(A) Epidermis (B) Endodermis  
(C) Cortex (D) Vascular bundle
6. The total kinetic energy of the water molecules is called:  
(A) Water potential (B) Pressure potential  
(C) Osmotic potential (D) None of the above
7. The pressure exerted by protoplast against the cell wall of the plant cells is called:  
(A) Water potential (B) Pressure potential  
(C) Osmotic potential (D) None of the above



8. The upward movement of sap through the xylem is:  
(A) Ascent of sap (B) Plasmolysis  
(C) Deplasmolysis (D) Guttation
9. Which of the followings is mismatched for ascent of sap?  
(A) Cohesion tension (B) Water potential  
(C) Root pressure (D) Imbibition
10. The attraction between the water molecules and cell wall of xylem is called:  
(A) Cohesion (B) Tension  
(C) Adhesion (D) None of above
11. The attraction among the water molecules is:  
(A) Cohesion (B) Tension  
(C) Adhesion (D) None of above
12. The evaporation of water from the aerial parts of the plants is called:  
(A) Ascent of sap (B) Plasmolysis  
(C) Deplasmolysis (D) Plasmolysis
13. The loss of liquid through the hydathodes is called:  
(A) Ascent of sap (B) Plasmolysis  
(C) Deplasmolysis (D) Guttation
14. The absorption of water by a compound without dissolving in it is called:  
(A) Ascent of sap (B) Plasmolysis  
(C) Imbibition (D) Guttation
15. The flow of sap from cut plants is:  
(A) Bleeding (B) Plasmolysis  
(C) Imbibition (D) Guttation
16. Which of the following transpirations is 90% of the total transpiration?  
(A) Cuticular (B) Lenticular  
(C) Stomatal (D) None of above
17. Starch sugar hypothesis was proposed by:  
(A) Dixon (B) Mohi  
(C) Sanger (D) Drebs



18. Which of the following elements has role in the opening and closing of stomata:
- (A) K (B) Mg  
(C) Cu (D) Fe
19. The hormone which is involved in the opening and closing of stomata is:
- (A) Citric acid (B) Oxaloacetic acid  
(C) Absciscic acid (D) None of above
20. The stomata are closed at temperature (in centigrade):
- (A) 35 (B) 45  
(C) 25 (D) 15
21. Which of the following cells is absent in the phloem?
- (A) Companion cell (B) Sieve tube members  
(C) Vessels (D) Parenchyma
22. Which of the followings cannot become sink during translocation?
- (A) Root (B) Fruits  
(C) Stem (D) Leaves
23. Pressure flow theory was proposed by:
- (A) Dixon (B) Mohl  
(C) Sanger (D) Munch
24. Intestinal coeca are present in:
- (A) Hydra (B) Planarian  
(C) Cockroach (D) None the above
25. Which of the followings is irrelevant for the circulatory system of cockroach?
- (A) Heart (B) Ventral Blood vessel  
(C) Aorta (D) Dorsal blood vessel
26. Number of hearts in earthworm are:
- (A) 5 (B) 6  
(C) 7 (D) 8



27. Which of the following arteries supply blood to heart muscles?  
(A) Pulmonary (B) Coronary  
(C) Systemic (D) None the above
28. The proximal swollen part of the heart of fish is:  
(A) Sinus venous (B) Atrium  
(C) Ventricle (D) Conus arteriosus
29. Which of the followings is irrelevant for the heart of amphibians?  
(A) Right auricle (B) Truncus arteriosus  
(C) Right ventricle (D) Sinus venosus
30. The vein which brings back blood from all the body is:  
(A) Pulmonary (B) Systemic  
(C) Precavel / Postcavel (D) None the above
31. The percentage of plasma in the blood is:  
(A) 45 (B) 50  
(C) 55 (D) 65
32. The pH of blood is:  
(A) 6.4 (B) 7  
(C) 7.4 (D) 8.4
33. Which of the following proteins acts as catalyst in the process of protein synthesis?  
(A) Antibodies (B) Prothrombin  
(C) Fibrinogen (D) None the above
34. Which of the following is mismatched in the followings about RBC?  
(A) Haemoglobin (B) Bone marrow  
(C) Transport of oxygen (D) Fibrinogen
35. Which of the followings is not granulocyte?  
(A) Neutrophils (B) Eosinophils  
(C) Basophils (D) Monocytes
36. Which of the following RBCs destroy the small particles by phagocytosis?  
(A) Neutrophils (B) Eosinophil  
(C) Basophil (D) Monocyte



37. Which of the following compounds destroy the nucleic acid of the invading organism?
- (A) Fibrinogen (B) Interferon  
(C) Heparin (D) Histamine
38. Match platelets with one of the followings:
- (A) Fibrinogen (B) Interferon  
(C) Heparin (D) Histamine
39. Maintaining of the internal condition constant is:
- (A) Buffer (B) Homeostasis  
(C) Osmoregulation (D) None the above
40. Match leucaemia with one of the followings:
- (A) RBC (B) WBC  
(C) Platelets (D) Interferon
41. The chemical which maintain the acid base concentration is:
- (A) Buffer (B) Homeostasis  
(C) Osmoregulation (D) None the above
42. Match thalassaemia with one of the followings:
- (A) RBC (B) WBC  
(C) Platelets (D) Interferon
43. Match microcytes with one of the followings:
- (A) RBC (B) WBC  
(C) Platelets (D) Interferon
44. The presence of excessive fluid in the tissue is:
- (A) Thalasseamia (B) Oedma  
(C) Splleenomegaly (D) Leuceamia
45. The cardiac muscles are:
- (A) Epicardium (B) Myocardium  
(C) Endocardium (D) None the above
46. The fibrous chords in the heart are:
- (A) Papillary muscle (B) Tricuspid valve  
(C) Choradae tendinae (D) Bicuspid valve



47. Match semi lunar valve with one of the following:  
(A) Right auricle (B) Right ventricle  
(C) Pulmonary trunk (D) Left auricle
48. The muscles present inside the ventricle are:  
(A) Cardiac muscle (B) Smooth muscles  
(C) Papillary muscles (D) Skeletal muscles
49. Which of the followings is the largest artery?  
(A) Coronary (B) Aorta  
(C) Iliac (D) Vena cava
50. The artery which supplies blood to leg is:  
(A) Coronary (B) Aorta  
(C) Iliac (D) Femoral
51. Which of the followings supply blood to liver?  
(A) Renal vein (B) Hepatic portal  
(C) Hepatic vein (D) Hepatic artery
52. Interrelated discs are present in:  
(A) Vein (B) Artery  
(C) Heart (D) Kidney
53. Which of the followings brings blood form liver?  
(A) Renal vein (B) Hepatic portal  
(C) Hepatic vein (D) Hepatic artery
54. Match cynosis with one of the followings:  
(A) ECG (B) Artificial pace  
(C) Blue baby (D) SA node
55. The recording of electrical potential is:  
(A) ECG (B) Artificial pace  
(C) Blue baby (D) SA node
56. Which of the followings is not present in the wall of artery?  
(A) Artery (B) Vein  
(C) Capillary (D) Heart



57. **Select one of the followings for atherosclerosis:**  
(A) Artery (B) Vein  
(C) Capillary (D) Heart
58. **The exchange of material takes place through:**  
(A) Artery (B) Vein  
(C) Capillary (D) Heart
59. **Pulse is felt in:**  
(A) Artery (B) Vein  
(C) Capillary (D) Heart
60. **The condition of high blood pressure is called:**  
(A) Stroke (B) Oedma  
(C) Hypertension (D) Myocardial infraction
61. **Match heart attack with one of the followings:**  
(A) Stroke (B) Oedma  
(C) Hypertension (D) Myocardial infraction
62. **A plug of blood is called:**  
(A) Clot (B) Bolus  
(C) Embolus (D) Hypertension
63. **Bolus on new location is called:**  
(A) Clot (B) Bolus  
(C) Embolus (D) Hypertension
64. **Match stroke with one of the followings:**  
(A) Stroke (B) Cerebral infraction  
(C) Hypertension (D) Myocardial infraction
65. **Lacteal is a:**  
(A) Lymph capillary (B) Lymph vessel  
(C) Lymph trunk (D) Lymph node
66. **The discharge of blood from blood vessels is called:**  
(A) Stroke (B) Oedma  
(C) Hypertension (D) Haemorrhage



67. **Lymphocytes are present at:**  
(A) Lymph capillary (B) Lymph vessel  
(C) Lymph trunk (D) Lymph node
68. **Match plasma cells with one of the following:**  
(A) T lamphocyte (B) B lamphocyte  
(C) Basophils (D) Neutrophils
69. **Which of the followings is used in active immunity?**  
(A) Antibody (B) Vaccine  
(C) Antisera (D) Antigen
70. **Which of the followings is used in passive immunity?**  
(A) Antibody (B) Vaccine  
(C) Antisera (D) Antigen
71. **Which of the followings is not transport in organisms?**  
(A) The movement of material within the body  
(B) The movement of material form inside to out the body  
(C) The movement of material outside the body  
(D) The movement of material form outside to inside
72. **Which of the following processes is not involved in transport of material within the body of plants:**  
(A) Respiration (B) Transportation  
(C) Photosynthesis (D) Reproduction
73. **Which of the following nutrient a plant does not need?**  
(A) Carbon dioxide (B) Water  
(C) Oxygen (D) Minerals
74. **Symplest pathway is the pathway in which material:**  
(A) Move through the plasmodesmata  
(B) Move through the spaced between the cells  
(C) Move through the tonoplast of the vacuole  
(D) All of the above



75. **Apoplast pathway is the pathway in which martial:**
- (A) Move through the plasmodesmata
  - (B) Move through the spaced between the cells
  - (C) Move through the tonoplast of the vacuole
  - (D) All of the above
76. **The casparian strips are special structures which are present in the endodermis. These are used to:**
- (A) Make the movement materials fast through the endodermis
  - (B) Make the movement of materials slow through the endodermis
  - (C) Block the movement of materials through the endodermis
  - (D) None of the above
77. **Which of the following processes does not take place during active transport?**
- (A) The movement of materials form higher to lower concentration
  - (B) The movement of materials form lower to higher concentration
  - (C) The use of ATP during movement of materials
  - (D) All of the above
78. **Which of the followings is the process of osmosis?**
- (A) The movement of materials from higher to lower concentration
  - (B) The movement of materials from higher water potential to lower potential
  - (C) The movement of material through semi permeable membrane
  - (D) All of the above
79. **The cytoplasmic strands which extend through the pores in adjacent cells are:**
- (A) Cell wall
  - (B) Plasmodesmata
  - (C) Endoplasmic reticulum
  - (D) Cell skeleton
80. **Which of the followings is water potential?**
- (A) The change of water potential of a system due to presence of solute molecules
  - (B) The pressure exerted by the protoplast against the cell wall of the plant cell
  - (C) The total kinetic energy of the water molecules
  - (D) None of the above



81. Which of the followings is osmotic potential?
- (A) The change of water potential of a system due to presence of solute molecules
  - (B) The pressure exerted by the protoplast against the cell wall of the plant cell
  - (C) The total kinetic energy of the water molecules
  - (D) None of the above
82. Which of the followings is pressure potential?
- (A) The change of water potential of a system due to presence of solute molecules
  - (B) The pressure exerted by the protoplast against the cell wall of the plant cell
  - (C) The total kinetic energy of the water molecules
  - (D) None of the above
83. There are two cells A and B  
A cell has water potential =  $-200$  kPa  
B cell has water potential =  $-300$  kPa, then find:
- (A) Water will move from A to B
  - (B) Water will move from B to A
  - (C) Water will not move in any direction
  - (D) None of the above
84. The solute potential of a cell =  $-1000$  kPa, its pressure potential =  $800$  kPa, then its water potential will be:
- (A)  $1800$  kPa
  - (B)  $-200$  kPa
  - (C)  $-1800$  kPa
  - (D)  $200$  kPa
85. The solute potential of a cell =  $-2000$ , its pressure potential =  $1300$ , then its water Solute potential will be:
- (A)  $-3300$
  - (B)  $-700$
  - (C)  $700$
  - (D)  $3300$
86. The incipient plasmolysis is a point at which:
- (A) Plasmolysis starts
  - (B) Plasmolysis stops
  - (C) Plasmolysis is fast
  - (D) Plasmolysis is slow
87. Maximum pressure potential is achieved when a cell is placed in:
- (A) Distilled water
  - (B) Water with low osmotic pressure
  - (C) Salty water
  - (D) None of the above



88. **Osmoregulation is a mechanism to:**  
(A) Increase the osmotic pressure  
(B) Decrease the osmotic pressure  
(C) Make the osmotic pressure constant  
(D) All the above
89. **The forces of attraction between the water molecule and tracheid water are:**  
(A) Adhesive forces (B) Cohesive forces  
(C) Tensile forces (D) Electrostatic forces
90. **The pulling of one molecule by the other molecule is:**  
(A) Adhesive forces (B) Cohesive forces  
(C) Tensile forces (D) Electrostatic forces
91. **Which of the followings is not relevant to cohesion tension theory?**  
(A) Transpiration (B) Adhesion  
(C) Diffusion (D) Tension
92. **Hydrostatic pressure in xylem is increased when:**  
(A) Root pressure is increased (B) Root pressure is decreased  
(C) Root pressure is static (D) All of the above
93. **Guttation is a process in which:**  
(A) Water is lost from the stomata  
(B) Water is lost from the lenticels  
(C) Water is lost from secreting glands  
(D) Water is lost from root
94. **The cause of Guttation is:**  
(A) Transpiration (B) Ascent of sap  
(C) Root pressure (D) All of the above
95. **Which of the following is relevant to Imbibition?**  
(A) It is a process in which a substance absorbs water  
(B) It is a process in which a substance swells  
(C) It is a process in which a substance does not dissolve  
(D) All of the above



96. Which of the followings is not an importance of imbibition?
- (A) It helps in the germination of seed
  - (B) It helps in the osmosis of water
  - (C) It helps in the ascent of sap
  - (D) It helps in the absorption of water by seed
97. Which of the pressures is responsible for the process of bleeding?
- (A) Osmotic pressure
  - (B) Solute pressure
  - (C) Hydrostatic pressure
  - (D) Tensile pressure
98. Which of the following transpirations is most abundant in plants?
- (A) Cuticular transpiration
  - (B) Lenticular transpiration
  - (C) Stomatal transpiration
  - (D) None of the above
99. The guard cells have special characteristics which help greatly in the opening and closing of stomata. This characteristic is:
- (A) It has thick wall
  - (B) It has large size
  - (C) It has chloroplast
  - (D) It has large vacuole
100. Which of the followings is not true about the opening and closing of stomata?
- (A) Light helps in the opening and closing of stomata
  - (B) K ion are responsible for the opening and closing of stomata
  - (C) The osmosis of water is responsible for the opening and closing of stomata
  - (D) All of the above
101. The rate of transpiration is increased when:
- (A) Low light
  - (B) Temperature decrease
  - (C) Humidity increased
  - (D) CO<sub>2</sub> is lowered
102. The hormone abscisic acid is responsible for:
- (A) Opening of stomata
  - (B) Closing of stomata
  - (C) Both A and B
  - (D) It never affect it
103. Which of the following is not the importance of transpiration?
- (A) Ascent of sap
  - (B) Transport of minerals
  - (C) Exchange of gases
  - (D) Cooling of plants



- 104. Which of the following cells is not present in phloem cells?**  
(A) Companion cells (B) Sieve tube cells  
(C) Parenchyma cells (D) Sclerenchymatous cells
- 105. Which of the following cells of phloem are dead?**  
(A) Companion cells (B) Sieve tube cells  
(C) Parenchyma cells (D) None of the above
- 106. Which of the following is area of supply of what?**  
(A) Leaf (B) Stem  
(C) Root (D) Fruit
- 107. Which of the following is area of sink of what?**  
(A) Leaf (B) Stem  
(C) Root (D) Fruit
- 108. The average of the sugar movement in the phloem is:**  
(A) 1 meter per hour (B) 2 meter per hour  
(C) 3 meter per hour (D) 4 meter per hour
- 109. Which of the following is not relevant to pressure flow theory?**  
(A) Formation of starch from glucose  
(B) Consumption of glucose by respiration  
(C) Increase of hydrostatic pressure in the phloem cells  
(D) Movement of water in to cells
- 110. A planarian does not need a separate system for transportation because:**  
(A) It has flat body (B) It is acoelomate  
(C) It has intestinal coeca (D) All of the above
- 111. Which of the following animals has open circulatory system?**  
(A) Hydra (B) Man  
(C) House fly (D) Earthworm
- 112. Which of the following animals has close circulatory system?**  
(A) Hydra (B) Snail  
(C) House fly (D) Earthworm



- 113. The blood of the insects is called haemolymph because:**  
(A) It has hemoglobin (B) It is colorless  
(C) It has lymph (D) It moves openly
- 114. Which of the followings is not part of haemocoel in cockroach?**  
(A) Perivisceral sinus (B) Perineural sinus  
(C) Pericardial sinus (D) None of the above
- 115. Which of the following functions is not performed by blood vascular system of the cockroach?**  
(A) Transport of nutrients (B) Transport of gases  
(C) Transport of waster material (D) Transport of water
- 116. The close circulatory system is more efficient than the open circulatory system because it shows:**  
(A) Rapid movement in body (B) Rapid exchange of material  
(C) It does not come in contact (D) Economy of blood
- 117. The difference between the heart of earthworm and cockroach is that:**  
(A) The heart of earthworm is more efficient than the cockroach  
(B) The earth worm has more hearts while cockroach has one heart  
(C) The heart of earthworm is closed while of cockroach is open  
(D) None of the above
- 118. The heart of which of the following animals functions as single circuit heart?**  
(A) Fish (B) Amphibian  
(C) Reptiles (D) Mammals
- 119. The number of chambers in the heart of the fishes is:**  
(A) Two (B) Three  
(C) Four (D) Five
- 120. The number of chambers in the heart of Amphibians is:**  
(A) Two (B) Three  
(C) Four (D) Five
- 121. The number of chambers in the heart of the Mammals is:**  
(A) Two (B) Three  
(C) Four (D) Five



- 122. The number of chambers in the heart of the birds is:**
- (A) Two (B) Three  
(C) Four (D) Five
- 123. Which of the following arteries supply blood to heart muscles?**
- (A) Aorta (B) Pulmonary artery  
(C) Coronary artery (D) Renal artery
- 124. Which of the following chambers of the heart of fish has oxygenated blood?**
- (A) Sinus venosus (B) Atrium  
(C) Ventricle (D) None of the above
- 125. Which of the following chambers of the heart of Amphibians has oxygenated blood?**
- (A) Right atrium (B) Left atrium  
(C) Ventricle (D) Sinus venosus
- 126. In which animals of the following mixing of oxygenated and deoxygenated blood does not take place in ventricle?**
- (A) Frog (B) Lizards  
(C) Crocodile (D) None of the above
- 127. The ventricle of the crocodiles are completely portioned in but still there is mixing of oxygenated and deoxygenated blood in it, because:**
- (A) The membrane between the ventricles is very thin  
(B) The ventral aorta is undivided  
(C) The dorsal aorta is undivided  
(D) None of the above
- 128. There is separation of oxygenated and deoxygenated bloods in birds and mammals because:**
- (A) The ventricles are completely divided  
(B) The ventral aorta is divided into aortic and pulmonary trunk  
(C) The aortic arch is divided into two systemic arches  
(D) None of the above



- 129. Which of the following blood vessels has oxygenated blood:**  
(A) Pulmonary artery (B) Pulmonary vein  
(C) Per-caval (D) Post-caval
- 130. The amount of plasma in blood is:**  
(A) 35% (B) 45%  
(C) 55% (D) 65%
- 131. The percentage of inorganic salts and ions in the plasma is:**  
(A) 0.6 (B) 0.7  
(C) 0.8 (D) 0.9
- 132. The normal pH of the human blood is:**  
(A) 6.4 (B) 7.4  
(C) 8.4 (D) 9.4
- 133. The percentage of the plasma protein in the blood is:**  
(A) 4-5 (B) 5-6  
(C) 7-8 (D) 7-9
- 134. Which of the following proteins is not present in the plasma of the blood?**  
(A) Immunoglobulin or antibodies (B) Prothrombin  
(C) Haemoglobin (D) Fibrinogen
- 135. Steroid hormones are synthesized from:**  
(A) Nucleic acid (B) Cholesterol  
(C) Amino acids (D) Carbohydrates
- 136. Which of the following substances is not present in the plasma of blood?**  
(A) CO<sub>2</sub> (B) Oxygen  
(C) Urea (D) Proteins
- 137. Which of the following cells is most abundant in the blood?**  
(A) Red blood cells (B) White blood cells  
(C) Platelets (D) None of the above
- 138. A cubic millimeter blood of male contains RBC:**  
(A) 5-5<sup>1/2</sup> million (B) 4-4<sup>1/2</sup> million  
(C) 3-4 million (D) None of the above



- 139. Which of the following not a Granulocyte?**  
(A) Neutrophils (B) Eosinophils  
(C) Monocytes (D) Basophils
- 140. Pus is formed from which of the following dead white blood cells?**  
(A) Lymphocytes (B) Eosinophils  
(C) Monocytes (D) Basophils
- 141. Which of the following substances inhibit the clotting of blood?**  
(A) Histamine (B) Heparin  
(C) Interferon (D) None of the above
- 142. Which of the following structures is not cells?**  
(A) Lymphocytes (B) Eosinophils  
(C) Monocytes (D) Platelets
- 143. Buffer is a substance which maintains the:**  
(A) Concentration of proteins in blood  
(B) pH of the blood  
(C) Amount of gases in the blood  
(D) Amount of water in the blood
- 144. Which of the following processes is a homeostasis?**  
(A) To maintain the amount of water constant in the blood  
(B) To maintain the functioning of the body  
(C) To maintain the process of respiration  
(D) To maintain the muscular activity
- 145. Which of the followings is not the function of blood?**  
(A) It transports gases in the body (B) It transports reproductive cells in the body  
(C) It transports food within the body (D) It transports waste material in body
- 146. Which of the followings is Leucaemia?**  
(A) Uncontrolled production of RBC  
(B) Uncontrolled production of WBC  
(C) Uncontrolled production of Platelets  
(D) All of the above



- 147. Thalassaemia is an abnormality of:**  
(A) RBC (B) WBC  
(C) Platelets (D) None of the above
- 148. Thalassaemia is indicated by:**  
(A) Presence of leucocytes (B) Presence of microcytes  
(C) Presence of Lymphocytes (D) Presence of Monocytes
- 149. Which of the following is characteristic of the oedema?**  
(A) Release of fluid from the body  
(B) Presence of excessive fluid in the tissues  
(C) Presence of excessive proteins in the body  
(D) All of the above
- 150. Which of the followings is not the reason of the extracellular oedema?**  
(A) Abnormal leakage of fluid from the blood capillaries  
(B) Abnormal movement of fluid from the outside of body  
(C) Thy lymphatic system fails to bring back fluid form the intestinal fluid  
(D) The renal(kidney) retention of slats and water
- 151. Which of the followings is not the effect of oedema?**  
(A) It disturbs the exchange and concentration of minerals in the blood and body cells  
(B) It affects the blood pressure  
(C) It increases the heart load  
(D) It destroy the cells
- 152. Which of the following layers of heart has intercalated discs?**  
(A) Epicardium (B) Myocardium  
(C) Endocardium (D) None of the above
- 153. The valve present between right atrium and right ventricle is called:**  
(A) Tricuspid valve (B) Bicuspid valve  
(C) Semilunar valve (D) None of the above
- 154. The valve present between left atrium and left ventricle is called:**  
(A) Tricuspid valve (B) Bicuspid valve  
(C) Semilunar valve (D) None of the above



- 155. The valve present at the base of aorta is called:**  
(A) Tricuspid valve (B) Bicuspid valve  
(C) Semilunar valve (D) None of the above
- 156. Which of the following arteries supply blood to legs?**  
(A) Femoral artery (B) Renal artery  
(C) Coronary artery (D) Pulmonary artery
- 157. Which of the following veins collect blood from the digestive system and supply blood to liver?**  
(A) Hepatic vein (B) Hepatic portal vein  
(C) Renal veins (D) None of the above
- 158. The voice of lubb is produced during the contraction of heart when:**  
(A) Tricuspid valve is closed  
(B) Bicuspid valve is closed  
(C) Both tricuspid and bicuspid are closed  
(D) Semilunar valves are closed
- 159. The voice of dub is produced during the contraction of heart when:**  
(A) Tricuspid valve is closed  
(B) Bicuspid valve is closed  
(C) Both tricuspid and bicuspid are closed  
(D) Semilunar valves are closed
- 160. The heart of man contracts during his life for:**  
(A) 1.5 million (B) 2.5 million  
(C) 3.5 million (D) 4.5 million
- 161. The impulse of heart starts from:**  
(A) Sino-atrial node (B) Atrioventricular node  
(C) Bundle of His (D) None of the above
- 162. Cyanosis is a condition in which:**  
(A) Oxygen supply to skin is stopped (B) The skin becomes blue  
(C) Blood supply to skin is stopped (D) None of the above



- 163. Which of the following layers is present in the arteries?**
- (A) Connective tissues                      (B) Smooth and circular muscles  
(C) Connective tissues                      (D) All of the above
- 164. Which of the followings is Atherosclerosis?**
- (A) The breaking of the wall of the artery  
(B) The narrowness of the wall of the artery  
(C) The deposition of fats in the wall of the artery  
(D) None of the above
- 165. Which of the followings is the characteristic of capillaries?**
- (A) It has three layers of endothelium  
(B) It has one layer of endothelium  
(C) It has one layer of connective tissues  
(D) It has one layer of elastic tissues
- 166. Which of the followings is the main function of capillaries?**
- (A) Supply blood to tissues                      (B) Exchange of materials  
(C) Bring blood from tissues                      (D) Transport of materials
- 167. Interstitial is present:**
- (A) With in the blood                      (B) With in capillaries  
(C) Among the cells                      (D) With in the cell
- 168. Which of the following layers is thin in veins?**
- (A) Connective tissues and elastic fibers  
(B) Smooth and circular muscles  
(C) Connective tissues  
(D) All of the above
- 169. The movement of blood in veins takes place by the:**
- (A) Contraction and relaxation of the wall of the vein  
(B) Contraction and relaxation of the skeletal muscles  
(C) Pressure of the blood in the vein  
(D) None of the above



- 170. Which of the following veins has oxygenated blood?**  
(A) Renal vein (B) Hepatic vein  
(C) Pulmonary vein (D) Coronary vein
- 171. Which of the following materials is not present in the interstitial fluid?**  
(A) Water (B) Salts  
(C) Fats (D) Blood cells
- 172. In which of the following blood vessels valves are present?**  
(A) Artery (B) Vein  
(C) Capillary (D) None the above
- 173. Which of the following blood vessels has high blood pressure?**  
(A) Artery (B) Vein  
(C) Capillary (D) None the above
- 174. In which of the following blood vessels, pulse is felt?**  
(A) Artery (B) Vein  
(C) Capillary (D) None the above
- 175. Which of the following blood vessels is responsible for exchange of material?**  
(A) Artery (B) Vein  
(C) Capillary (D) None of the above
- 176. The systolic pressure of the heart is:**  
(A) 80 mm Hg (B) 100 mm Hg  
(C) 110 mmHg (D) 120 mmHg
- 177. The diastolic pressure of the heart is:**  
(A) 80 mm Hg (B) 100 mm Hg  
(C) 110 mmHg (D) 120 mmHg
- 178. In which blood vessels of the following the systolic and diastolic pressure is same?**  
(A) Artery (B) Aorta  
(C) Arterioles (D) Capillary
- 179. Which of the following blood vessels has greater cross sectional area?**  
(A) Artery (B) Vein  
(C) Capillary (D) Aorta



- 180. Which of the followings is hypertension?**  
(A) Low blood pressure (B) High blood pressure  
(C) Cholesterol (D) All of the above
- 181. Which of the followings is thrombus?**  
(A) A blockage of blood vessel (B) A clot in the vessel  
(C) A moving clot in vessel (D) None of the above
- 182. Which of the followings is embolus?**  
(A) A blockage of blood vessel (B) A clot in the vessel  
(C) A moving clot in vessel (D) None of the above
- 183. Which of the following conditions is helpful in the prevention of heart attack?**  
(A) Avoid too much fatty food rich in cholesterol  
(B) Maintain normal body weight  
(C) Control the blood pressure by regular walk and exercises  
(D) All of the above
- 184. Stroke is a condition in which:**  
(A) Heart does not receive proper blood  
(B) Liver does not received proper blood  
(C) Brain does not receive proper blood  
(D) None of the above
- 185. Which of the followings is the characteristic of the lymphatic system?**  
(A) The system which transports material between two blood vessels  
(B) The system which transports material between the tissues  
(C) The system which transports material between the tissues and blood  
(D) None of the above
- 186. Which of the followings is common between lymph vessels and veins?**  
(A) Both have small bore (B) Both have valves  
(C) Both have low blood pressure (D) Both are communicated
- 187. The lymph vessels transfer the lymph into the blood through:**  
(A) Subclavian artery (B) Subclavian vein  
(C) Iliac artery (D) Iliac vein



- 188. Which of the following organs filter the lymph?**  
(A) Heart (B) Liver  
(C) Spleen (D) Pancreas
- 189. Which of the followings is involved in humoral immune response?**  
(A) T-lymphocytes (B) Helper T-lymphocytes  
(C) B-lymphocytes (D) None of the above
- 190. Which of the followings is involved in cell mediated response?**  
(A) T-lymphocytes (B) Helper T-lymphocytes  
(C) B-lymphocytes (D) None of the above
- 191. The T lymphocytes become mature in:**  
(A) Thymus gland (B) Bursa of fabricius  
(C) Bone marrow (D) Lymph node
- 192. The B-lymphocytes become mature in:**  
(A) Thymus gland (B) Bursa of fabricius  
(C) Bone marrow (D) Lymph node
- 193. Which of the followings is active immunity?**  
(A) Injection of antibiotics (B) Injection of antigen  
(C) Injection of antibody (D) None of the above
- 194. Which of the followings is passive immunity?**  
(A) Injection of antibiotics (B) Injection of antigen  
(C) Injection of antibody (D) None of the above
- 195. If a snake bites a person, which of the following things is injected into the affected person?**  
(A) Antibody (B) Antigen  
(C) Antisera (D) None the above
- 196. The main processes involved for getting the material into and out of cells are:**  
(A) Endocytosis and exocytosis (B) Active and passive transport  
(C) Diffusion and osmosis. (D) All above
- 197. Most of the uptake of water and minerals from soil takes place through:**  
(A) Roots (B) Epidermal layers  
(C) Root cap (D) Root hair



- 198. The membrane of vacuole is named as:**  
(A) Tonoplast (B) Apoplast  
(C) Symplast (D) None of the above
- 199. Mycorrhizal fungi are present in how many families of flowering plants?**  
(A) 10% (B) 80%  
(C) 100% (D) 90%
- 200. The loss of liquid water through hydathodes in plants is called:**  
(A) Imbibition (B) Transpiration  
(C) Guttation (D) Bleeding
- 201. In which leaves the stomata are confined to only the lower epidermis?**  
(A) Isobilateral (B) Dorsiventral  
(C) Both A and B (D) None
- 202. The closing and opening of stomata is directly controlled by:**  
(A) Temperature (B) Wind  
(C) Light (D) Water
- 203. The pressure flow theory is the most acceptable theory for the transport in the phloem of:**  
(A) Gymnosperm (B) Bryophytes  
(C) Angiosperms (D) Pteridophyte
- 204. In Hydra ectodermal cells get food from endodermal cells by:**  
(A) Exocytosis (B) Diffusion  
(C) Endocytosis (D) Both A and B
- 205. The sites where exchange of materials between blood and body tissues takes place are:**  
(A) Arteries (B) Capillaries  
(C) Lymph vessels (D) Veins
- 206. The heart of which of these functions as a single circuit heart?**  
(A) Fishes (B) Reptiles  
(C) Mammals (D) Birds



207. The normal pH of human blood is:  
(A) 4 (B) 7.4  
(C) 7 (D) 4.7
208. The average life span of RBC is about:  
(A) 06 months (B) 04 months  
(C) One year (D) 08 months
209. A white substance called pus is produced at infection sites due to killing of:  
(A) Monocytes (B) Erythrocytes  
(C) Leucocytes (D) Platelets
210. The protective membrane of human heart is called:  
(A) Endocardium (B) Epicardium  
(C) Myocardium (D) Pericardium
211. Antiserum is a serum containing:  
(A) Haemoglobin (B) Antibodies  
(C) Lymph (D) Antigens
212. In humans the heart beat lasts for:  
(A) 18 seconds (B) 0.8 seconds  
(C) 1.8 seconds (D) 8 seconds
213. In the liver, every cell is in direct contact with:  
(A) None (B) Capillary  
(C) Artery (D) Vein
214. Heart beat involves how many distinct stages.  
(A) One (B) Four  
(C) Three (D) Two
215. The renal vein brings the impure blood from:  
(A) Liver (B) Kidney  
(C) Lungs (D) Brain
216. The roots of a plant not only ————— the plant in soil, but also absorb minerals and water from the soil.  
(A) Acoelomate (B) Active  
(C) ATP (D) Anchor



217. The root hair are extensions of ———— cells of roots.
- (A) Acoelomate (B) Exosmosis  
(C) Epidermal (D) Isobilateral
218. The passive uptake of minerals in plants involves which process?
- (A) Exosmosis (B) Imbibition  
(C) Isobilateral (D) Diffusion
219. The passive and active uptake of minerals by root cells involve the use of energy in the form of:
- (A) ATP (B) Active  
(C) Anchor (D) Solute
220. Most of ions are taken up by the roots by the process of:
- (A) Active transport (B) Epidermal  
(C) Anchor (D) ATP
221. Active transport is selective and is dependent on:
- (A) Exosmosis (B) Isobilateral  
(C) Respiration (D) Cuticular
222. The movement of water out of the cell by osmosis is called:
- (A) Endosmosis (B) Leucaemia  
(C) Exosmosis (D) Isobilateral
223. Pure ———— has maximum water potential.
- (A) Leucaemia (B) Water  
(C) Wind (D) Acoelomate
224. The total water potential is sum of pressure potential and:
- (A) Xylem (B) Solute potential  
(C) Dixon (D) One
225. Cohesion tension theory was proposed by:
- (A) Palms (B) Diffusion  
(C) One (D) Dixon



226. The lignin and cellulose provide strength to cell wall of:  
(A) Splenn (B) Dixon  
(C) Xylem vessels (D) Diffusion
227. About what % of total water pulled up in the leaves is used by the plants in various activities including photosynthesis?  
(A) One (B) Three  
(C) Two (D) Four
228. The volume of dry seed may increase up to 200 times by:  
(A) Imbibition (B) Palms  
(C) Osmosis (D) Splenn
229. The sap in some ————— contains sugar and water in addition to organic and inorganic substances.  
(A) Dixon (B) Acoelomate  
(C) Splenn (D) Palms
230. At night when the stomata are almost closed, through what transpiration takes place in plants?  
(A) Cuticular (B) Respiration  
(C) Water (D) Solute
231. In which leaves the stomata are present both in upper and lower epidermis?  
(A) Isobilateral (B) Imbibition  
(C) Epidermal (D) Solute
232. The air in motion is called:  
(A) Water (B) Solute  
(C) Wind (D) Wilting
233. Excess loss of water from the plant can lead to:  
(A) Wind (B) Wilting  
(C) Water (D) Solute
234. Organic solutes are transported by:  
(A) Isobilateral (B) Imbibition  
(C) Phloem tissue (D) Water



- 235. There is no body cavity in planaria hence, called as:**  
(A) Pseudocoelomate (B) Cuticular  
(C) Acoelomate (D) Isobilateral
- 236. Most of the plasma proteins are synthesized in the:**  
(A) Liver (B) Diffusion  
(C) Leucaemia (D) Systole
- 237. In the embryonic life RBC are formed in liver and:**  
(A) Imbibition (B) Leucaemia  
(C) Spleen (D) Diffusion
- 238. What is caused as a result of uncontrolled production of white blood cells?**  
(A) Blood clotting (B) Leucaemia  
(C) Imbibition (D) Isobilateral
- 239. One complete heartbeat consists of one diastole and one:**  
(A) Cuticular (B) Systole  
(C) Nervous (D) Splenn
- 240. The diameter of capillary can be changed by:**  
(A) Splenn (B) Leucaemia  
(C) Nervous stimulation (D) Phloem
- 241. Prothrombin:**  
(A) Body defence (B) Blood clotting  
(C) Catalyst (D) Pace maker
- 242. Fibrinogen:**  
(A) Blood clotting (B) Catalyst  
(C) Blueness of skin (D) Body defence
- 243. Immunoglobulin:**  
(A) Body defence (B) Blood clotting  
(C) Blueness of skin (D) Catalyst



**244. Cholesterol:**

- (A) Blood clotting
- (B) Steroid hormones
- (C) Body defence
- (D) Blueness of skin

**245. Cyanosis:**

- (A) Blood clotting
- (B) Blueness of skin
- (C) Pace maker
- (D) Body defence

**246. Leucaemia:**

- (A) High blood pressure
- (B) Cooley's anaemia
- (C) Heart attack
- (D) Blood cancer

**247. Thalassaemia:**

- (A) Excess of fluid in the body tissue
- (B) Cooley's anaemia
- (C) Low blood pressure
- (D) Blood cancer

**248. Myocardial Infarction:**

- (A) Low blood pressure
- (B) Heart attack
- (C) Cooley's anaemia
- (D) High blood pressure

**249. Hypertension:**

- (A) High blood pressure
- (B) Blood cancer
- (C) Cooley's anaemia
- (D) Low blood pressure

**250. Oedema:**

- (A) Blood cancer
- (B) Low blood pressure
- (C) Cooley's anaemia
- (D) Excess of fluid in the body tissue

**251. Cohesion tension theory:**

- (A) Thomas B. Cooley
- (B) Sacks
- (C) H. Van Mohl
- (D) Dixon

**252. Imbibition process:**

- (A) Dixon
- (B) H. Van Mohl
- (C) Sacks
- (D) Thomas B. Cooley



**253. Starch sugar Hypothesis:**

- |                 |                 |
|-----------------|-----------------|
| (A) H. Van Mohl | (B) Ernst munch |
| (C) Dixon       | (D) Sacks       |

**254. Pressure flow theory:**

- |                 |            |
|-----------------|------------|
| (A) Ernst munch | (B) Sacks  |
| (C) H. Van Mohl | (D) Mandel |

**255. Spleenomegaly:**

- |                      |                 |
|----------------------|-----------------|
| (A) Thomas B. Cooley | (B) Dixon       |
| (C) Ernst munch      | (D) H. Van Mohl |

**256. Myelogenous cells:**

- |                             |                           |
|-----------------------------|---------------------------|
| (A) Inactivate inflammation | (B) Antibodies production |
| (C) Blood formation         | (D) Bone marrow           |

**257. Microcytes:**

- |                       |                           |
|-----------------------|---------------------------|
| (A) Bone marrow       | (B) Enlargement of spleen |
| (C) Transports oxygen | (D) Blood formation       |

**258. Lymphocytes:**

- |                           |                           |
|---------------------------|---------------------------|
| (A) Enlargement of spleen | (B) Antibodies production |
| (C) Blood formation       | (D) Bone marrow           |

**259. Eosinophil:**

- |                             |                           |
|-----------------------------|---------------------------|
| (A) Inactivate inflammation | (B) Transports oxygen     |
| (C) Bone marrow             | (D) Enlargement of spleen |

**260. Erythrocyte:**

- |                     |                             |
|---------------------|-----------------------------|
| (A) Bone marrow     | (B) Transports oxygen       |
| (C) Blood formation | (D) Inactivate inflammation |



# Answers

Sr.	Ans.	Sr.	Ans.	Sr.	Ans.	Sr.	Ans.	Sr.	Ans.
1.	(D)	2.	(A)	3.	(B)	4.	(B)	5.	(B)
6.	(B)	7.	(A)	8.	(B)	9.	(A)	10.	(B)
11.	(C)	12.	(A)	13.	(D)	14.	(D)	15.	(C)
16.	(A)	17.	(C)	18.	(B)	19.	(A)	20.	(C)
21.	(A)	22.	(C)	23.	(D)	24.	(D)	25.	(B)
26.	(C)	27.	(A)	28.	(B)	29.	(A)	30.	(C)
31.	(C)	32.	(C)	33.	(C)	34.	(B)	35.	(D)
36.	(D)	37.	(A)	38.	(B)	39.	(A)	40.	(B)
41.	(B)	42.	(A)	43.	(A)	44.	(A)	45.	(B)
46.	(B)	47.	(C)	48.	(C)	49.	(C)	50.	(B)
51.	(D)	52.	(D)	53.	(C)	54.	(D)	55.	(C)
56.	(A)	57.	(D)	58.	(A)	59.	(C)	60.	(A)
61.	(C)	62.	(D)	63.	(B)	64.	(C)	65.	(B)
66.	(A)	67.	(D)	68.	(D)	69.	(B)	70.	(B)
71.	(C)	72.	(D)	73.	(C)	74.	(A)	75.	(B)
76.	(C)	77.	(A)	78.	(D)	79.	(B)	80.	(C)
81.	(A)	82.	(A)	83.	(A)	84.	(B)	85.	(A)
86.	(A)	87.	(A)	88.	(C)	89.	(B)	90.	(B)
91.	(D)	92.	(A)	93.	(C)	94.	(C)	95.	(D)
96.	(B)	97.	(C)	98.	(C)	99.	(B)	100.	(D)
101.	(D)	102.	(B)	103.	(B)	104.	(D)	105.	(B)
106.	(A)	107.	(D)	108.	(A)	109.	(B)	110.	(D)
111.	(C)	112.	(D)	113.	(B)	114.	(D)	115.	(B)
116.	(D)	117.	(B)	118.	(A)	119.	(A)	120.	(A)
121.	(C)	122.	(C)	123.	(C)	124.	(D)	125.	(B)
126.	(D)	127.	(B)	128.	(B)	129.	(B)	130.	(C)



Sr.	Ans.	Sr.	Ans.	Sr.	Ans.	Sr.	Ans.	Sr.	Ans.
131.	(D)	132.	(B)	133.	(D)	134.	(C)	135.	(D)
136.	(B)	137.	(A)	138.	(A)	139.	(C)	140.	(C)
141.	(B)	142.	(D)	143.	(B)	144.	(A)	145.	(B)
146.	(B)	147.	(A)	148.	(B)	149.	(B)	150.	(B)
151.	(D)	152.	(B)	153.	(A)	154.	(B)	155.	(C)
156.	(A)	157.	(B)	158.	(C)	159.	(D)	160.	(B)
161.	(A)	162.	(B)	163.	(D)	164.	(B)	165.	(B)
166.	(B)	167.	(C)	168.	(B)	169.	(B)	170.	(C)
171.	(D)	172.	(B)	173.	(A)	174.	(A)	175.	(C)
176.	(D)	177.	(A)	178.	(D)	179.	(C)	180.	(B)
181.	(B)	182.	(C)	183.	(D)	184.	(C)	185.	(C)
186.	(B)	187.	(B)	188.	(C)	189.	(B)	190.	(A)
191.	(A)	192.	(D)	193.	(B)	194.	(C)	195.	(C)
196.	(C)	197.	(D)	198.	(A)	199.	(D)	200.	(C)
201.	(B)	202.	(C)	203.	(C)	204.	(B)	205.	(B)
206.	(A)	207.	(B)	208.	(B)	209.	(C)	210.	(D)
211.	(D)	212.	(B)	213.	(C)	214.	(B)	215.	(D)
216.	(D)	217.	(C)	218.	(D)	219.	(A)	220.	(A)
221.	(C)	222.	(C)	223.	(B)	224.	(B)	225.	(D)
226.	(C)	227.	(A)	228.	(A)	229.	(D)	230.	(A)
231.	(A)	232.	(C)	233.	(B)	234.	(C)	235.	(C)
236.	(A)	237.	(C)	238.	(B)	239.	(B)	240.	(C)
241.	(C)	242.	(A)	243.	(A)	244.	(B)	245.	(B)
246.	(D)	247.	(B)	248.	(A)	249.	(D)	250.	(D)
251.	(C)	252.	(A)	253.	(A)	254.	(A)	255.	(A)
256.	(D)	257.	(B)	258.	(B)	259.	(A)	260.	(B)