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BIOLOGY

BOOKS - CHETANA PUBLICATION

Respriration and circulation

Example

1. Define respiration

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2. List the types of cellular respiration.

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3. Why we respire all the time?

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4. What will happen if respiration take place in one single step?

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5. Why is respiration in insect called direct respiration?

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6. Write a short note on Respiration.

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7. What are the main features of respiratory surface?

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8. Which are the parts of plant that help in the process of gaseous exhange?

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9. Why large animals can not carry out respiration without the help of the circulatory system?

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10. Which is the organ that supports for singing?

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11. Name the structural and functional unit of Lungs.

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12. Name the catilage which separates right and left nasal chambers.

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13. Write a note on nasal chamber regions.

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14. What are tonsils?

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15. Define epiglottis.

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16. Role of epiglottis is

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17. Name the organ which prevent the following -the entry of food into the trachea while eating.

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18. Enlist the various parts of respiratory system.

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19. Kavya underwent a surgical procedure called Rhinoplasty. What could have been the reson for such a surgery? On which part of the body is it carried out?

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20. What is the role of tonsils in our body? How many pairs of tonsils do we have?

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21. Shreyas choked while eating dinner. How can you help him? What is the immediate help that can be give to him?

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22. Describe the human respiratory system with the help of a neat labelled diagram.

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23. What is the importance of pleural fluid?

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24. Find the total surface covered by the alveoli.

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25. Why does trachea have 'C' shaped rings of cartilage?

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26. Name the organ which prevent the following -the entry of food into the trachea while eating.

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27. Write a note on Larynx.

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28. Write a note on Lungs.

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29. Write a note on Alveoli

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30. Write a note on Trachea.

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31. Differentiate between right and left lungs:

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32. Differentiate between pharynx and larynx:

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33. Why is it advisable not to talk while eating?

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34. Diffusion of gases occurs in the alveolar region only and not in the other parts of respiratory system why?

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35. Enlist the processes involved in mechanism of respiration.

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36. Why is respiration in insect called direct respiration?

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37. Explain the exchange of gases at the alveolar level.

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38. Explain the process of breathing.

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39. Explain the process of inspiration.

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40. Write a short note on Respiration.

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41. Explain the process of expiration.

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42. Explain the exchange of gases at the alveolar level.

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43. Write a note external respiration.

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44. Why does gas exchange in the alveolar region very rapid?

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45. Explain the mechanism of internal respiration in relation to O_2 transport.

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46. What are lung volumes?

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47. What is Tidal volume(T.V.)?

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48. What is Inspiratory Reserve Volume (IRV)?

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49. What is Expiratory Reserve Volume (ERV)?

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50. What is Dead Space?

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51. What is Residual Volume?

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52. Write a note on Transport of CO_2.

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53. Describe cellular respiration.

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54. What is the role of haemoglobin in the transport of oxygen in the blood.

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55. Write a note on chloride shift.

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56. While working with the car engine in a closed garage Johan suddenly felt dizzy and fainted. What is the possible reason?

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57. Differentiate between Transport of O_2 and Transport of CO_2.

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58. Laxmi does various activity like running swimming which involved breathing. Can you explain the regulation of her breathing?

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59. Explain Hering-Breuer reflex

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60. Differentiate between Inspiration and Expiration:

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61. Why is it advantageous to breathe through the nose than through the mouth?

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62. Given below are the characteristics of some modified respiratory movement.

Spasmodic contraction of muscles of expiration and forceful expulsion of air through nose and mouth

An inspiration followed by many short convulsive expiration accompanied by facial expression

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63. Given below are the characteristics of some modified respiratory movement.

Spasmodic contraction of muscles of expiration and forceful expulsion of air through nose and mouth

An inspiration followed by many short convulsive expiration accompanied by facial expression

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64. A transverse section of the trunk of a tree shows concentric rings which are known as growth rings. How are these rings formed? What is the significance of these rings?

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65. Why is difficult to hold one's breath beyond a limit?

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66. If Sunita is suffering from laryngitis, state the symptoms she have. Also describe the treatment she can take.

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67. Smita was working in a garage with the doors closed and automobiles engine running. After some time she felt breathless and fainted. What could be the reason? How can she be treated?

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68. Shreyas went to a garden on a wintry morning. When he came back,he found it difficult to breath and started wheezing.What could be the possible condition and how can he be treated?

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69. State the symptoms and treatment for Emphysema.

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70. State the symptoms and treatment for Pneumonia.

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71. Explain artificial ventilation.

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72. Write a short note on: Ventilators

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73. Which type of circulation in present in cockroach? How it is different from that of human?

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74. What is cyclosis? State examples.

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75. How is circulation done in sponges and coelenterates?

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76. Name the type of circulation in flatworms.

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77. How does circulation take place in round worm?

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78. What is the co-relationship between activeness of organism and complexity of transport system.

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79. Which types of circulation is present in amphibians and reptiles?

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80. Enlist organisms without a proper transport system.

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81. Explain the type of circulation in Arthropods and Mollusca.

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82. Write a short note on: Open Circulatory system.

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83. Write a note on closed circulatory system.

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84. Give scientific reason.

Closed circulation is more efficient than open circulation.

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85. What are the two types of closed circulation?

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86. With the help of neat labeled diagram explain single circulation.

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87. Venous heart is an example for which organism. Explain.

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88. Differentiate between:

Open circulatory system and closed circulatory system.

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89. Describe Double circulation in detail.

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90. Name respiratory pigments present in the blood of different animals.

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91. Find the difference between coelom and haemocoel?

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92. What is Hematology?

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93. State the functions of blood vascular system?

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94. Write a note on blood plasma.

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95. Find out the percentage and functions of different blood proteins.

Watch Video Solution

96. What is the clinical importance of haematocrit value?

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97. Differentiate between plasma and serum.

Watch Video Solution

98. Describe human blood and give its functions.

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99. Write a note on

Erythrocytes.

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100. Define blood.

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101. Define erythropoiesis.

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102. What is polycythemia?

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103. What is erythrocytopenia?

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104. In the erythrocytes, nucleus and mitochondria are absent. Explain?

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105. Compare between myoglobin and haemoglobin.

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106. What is diapedesis?

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107. Correct the following false statement and rewrite Leucocytes are coloured, enucleated and oval cells larger than RBCs.

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108. What is normal adult average count of WBCs?

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109. Define Leukopenia.

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110. In which patients do we find leukopenia?

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111. Define leukocytosis.

Watch Video Solution

112. In which patients do we find the condition of leukocytosis?

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113. Describe the general characters of Granulocytes.

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114. Write a short note on Neutrophils.

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115. Write a short note on Basophils.

Watch Video Solution

116. Write a short note on Eosinophils.

Watch Video Solution

117. State general characters of agranulocytes.

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118. Describe the types of Agranulocytes.

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119. Differentiate between Granulocytes and Agranulocytes

Watch Video Solution

120. Why and when do the leucocytes perform diapedesis?

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121. What are the granules in granulocytes?

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122. What are the reasons for change in number of neutrophils and the importance of completye count (CBC)

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123. Why and when are heparin, histamine and serotonin secreted? Are these biomolecules secreted by any other cell organ in out body?

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124. How do monocytes modify into macrophages?

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125. How do monocytes perform amoeboid movement and phagocytosis?

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126. What is immunity? Name its types.

Watch Video Solution

127. Why does our immune system fail against pathogens like Trypanosoma and Plasmodium?

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128. What is the relation between immunity and organ transplantation?

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129. What is blood clotting? How and when does it occur?

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130. Explain blood clotting in short.

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131. Why does the platelet count decreases in dengue patient?

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132. Match the columns:

Column A		Column B		Column C	
(i)	Triad	(a)	Lightest and negatively charged particle in all the atoms.	(1)	Mendeleev
(ii)	Octave	(b)	Concentrated mass and positive charge	(2)	Thomson
(iii)	Atomic number	(c)	Average of the atomic mass of the first and the third elements	(3)	Newlands
(iv)	Period	(d)	Properties of the eighth element similar to the first	(4)	Rutherford
(v)	Nucleus	(e)	Positive charge on the nucleus	(5)	Dobereiner
(vi)	Electron	(f)	Sequential change in molecular formulae	(6)	Moseley

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133. Distinguish between:

Intrinsic and extrinsic process of clotting.

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134. Describe the internal features of human heart.

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135. Describe pericardium.

Watch Video Solution

136. Describe valves of human heart.

Watch Video Solution

137. Describe the internal features of human heart.

Watch Video Solution

138. Describe the internal features of human heart.

Watch Video Solution

139. Sketch and label internal structure of human heart.

Watch Video Solution

140. What is the role of the papillary muscles and the chordae tendinae in the human heart?

Watch Video Solution

141. Describe valves of human heart.

Watch Video Solution

142. Differentiate between Atria and ventricles

Watch Video Solution

143. What is Cardiology?

Watch Video Solution

144. Give scientific reason.

Left ventricle is thick than all other chambers of heart.

Watch Video Solution

145. Explain the pumping action of the heart.

Watch Video Solution

146. Sketch and label conducting system of human heart.

Watch Video Solution

147. Give scientific reason.

Human heart is called as myogenic and

autorhythmic.

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148. Write a note on

conducting system of human heart.

Watch Video Solution

149. Sketch and label conducting system of human heart.

Watch Video Solution

150. Write a note on cardiac cycle.

Watch Video Solution

151. Explain Cardiac output.

Watch Video Solution

152. Describe arteries and veins.

Watch Video Solution

153. Write a note on capillaries.

Watch Video Solution

154. Write a note on Portal vein.

Watch Video Solution

155. Write a note on Pulse.

Watch Video Solution

156. Give scientific reason.

Arteries are thicker than veins.

Watch Video Solution

157. Defferentiate between arteries and veins

Watch Video Solution

158. Why do the veins have valves?

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159. Which blood vessel of the heart will have the maximum content of Oxygen and why?

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160. If the duration of the atrial systole is 0.1 sec and that of complete diastole is 0.4 sec, then how does one cardiac cycle complete in 0.8 sec?

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161. How is blood kept moving in the large veins of the legs?

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162. Describe histological structure of artery, vein and capillary.

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163. Enlist the pulse points throughout the human body.

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164. man's pulse rate is 68 and cardiac output is 5500 cm^3.Find the stroke volume

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165. Why can you feel a pulse when you keep a finger on the wrist or neck but not when you

keep them on a vein?

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166. Distinguish between:

Blood capillary and lymph capillary.

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167. Write a note on arterial blood pressure.

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168. What is blood pressure? How is it measured? Explain factors affecting blood pressure.

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169. Explain in brief the factors affecting blood pressure.

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170. Arun went to the doctor for normal checkup. During the checkup the doctor took his blood pressure. Name the instrument of describe it.

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171. The cardiologist informed Juhi that her blood pressure is 180/120mmHg. He said this reading was dangerous to health. What is the

reason for her higher reading of blood pressure? Explain.

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172. Why do obese persons are prone to hypertension?

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173. Write short notes on the following.

Coronary Artery Disease

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174. What is angina pectoris

Watch Video Solution

175. Describe Angiography.

Watch Video Solution

176. Define heart transplant.

Watch Video Solution

177. What is silent heart attack?

Watch Video Solution

178. Describe silent myocardial infarction.

Watch Video Solution

179. Why the heart-recipient has to rely upon lifetime supply of immunosuppressants?

Watch Video Solution

180. Why the heart-recipient has to rely upon lifetime supply of immunosuppressants?

Watch Video Solution

181. Why the transplanted heart beats at a higher rate than normals?

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182. Who discovered ECG?

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183. What is depolarization and repolarization?

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184. What is the correlation between depolarization and repolarization as well as contraction and relaxation of the heart?

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185. How are the signals detected and amplified by electrocardiograph?

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186. Location of lymph nodes in human body.

Watch Video Solution

187. Explain the functional significance of the lymphatic system.

Watch Video Solution

188. Distinguish between:

Blood and lymph.

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189. Identify the incorrect statement and correct it,

A. Respiratory surface should have large surface area

B. Respiratory surface area should be kept dry

C. Respiratory surface are should be thin maybe 1mm or less

D.

Answer:

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190. Find incorrect statement.

A. Maximum Saturation of 40 to 60% is at PPO_2 in alveoli (100 mmHg)

B. At 30mm Hg of PPO_2 only 50% Saturation can be maintained

C.

D.

Answer:

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191. Identify the incorrect statement and correct it,

A. Get oxygen into tissue

B. Remove carbon dioxide from tissue

C. Help the patient breathe

D.

Answer:

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Excercise

1. The muscular structure that separated the thoracic and abdominal cavity is....

A. Pleura

B. Diaphragm

C. Trachea

D. Epithelium

Answer:

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2. What is the minimum number of plasma membrane that oxygen has to diffuse across

to pass from air in the alveolus to haemoglobin inside a R.B.C.?

A. two

B. three

C. four

D. five

Answer:

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3. ..... is a sound producing organ,

A. Larynx

B. pharynx

C. Tonsils

D. Trachea

Answer:

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4. The maximum volume of gas that is inhale during breathing in addition to T.V. is..... .

A. Residual volume

B. I.R.V

C. G.R.V

D. vital capacity

Answer:

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5. ..... Muscles contract when the external intercostal muscles contract

A. Internal abdominal

B. Jaws

C. Muscles in bronchial wall

D. Diaphragm

Answer:

Watch Video Solution

6. Movement of cytoplasm in unicellular organisms is called.....

A. Diffusion

B. cyclosis

C. circulation

D. thrombosis

Answer:

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7. Which of the following animals do not have closed circulation?

A. Earthworm

B. Rabbit

C. Butterfly

D. Shark

Answer:

Watch Video Solution

8. Diapedesis is performed by.....

A. Erythrocytes

B. thrombocytes

C. adipocytes

D. leucocytes

Answer:

Watch Video Solution

9. Pacemaker of heart is ..... .

A. SA node

B. AV node

C. HIS bundle

D. Purkinje fibers

Answer:

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10. Which of the following is without nucleus?

A. Red Blood corpuscles

B. neutrophil

C. Basophil

D. lymphocyte

Answer:

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11. cockroach shows which kind of circulatory system?

A. Open

B. closed

C. Lymphatic

D. Double

Answer:

Watch Video Solution

12. Diapedesis can be seen in .... Cell.

A. RBC

B. WBC

C. Platelet

D. neuron

Answer:

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13. Opening of inferior vena cava is guarded by ....

A. Biscupid valve

B. tricuspid valve

C. Eustachian valve

D. Thebasian valve

Answer:

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14. .... wave in ECG represents atrial depolarization.

A. P

B. QRS complex

C. Q

D. T

Answer:

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15. The fluid seen in the intercellular spaces in Human is....

A. Blood

B. lymph

C. interstitial fluid

D. water

Answer:

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16. Select the correct alternative and write the answer: Erythrocytes of the foetus are formed in _____

A. Kidney

B. Liver

C. Pancreas

D. Bone marrow

Answer:

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17. Select the correct alternative and write the answer: During systole_____

A. blood leaves the ventricle

B. blood enters lungs

C. blood leaves the heart

D. blood enters the heart

Answer:

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18. Select the correct alternative and write the answer: Thickening of arterial wall and loss of its elasticities is _____

A. Atherosclerosis

B. Arteriosclesrosis

C. Aneurysm

D. Ligamentum auteriosm

Answer:

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19. Answer the following questions: Name any one main lymphatic duct.

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20. Answer the following questions: Name any pace maker of human heart.

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21. Answer the following questions: Where is mitral valve present in the heart?

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22. Define erythropoiesis.

Watch Video Solution

23. Answer the following questions: Name the vessel having single layer of endothelium.

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24. Differentiate between systole and diastole.

Watch Video Solution

25. Describe histological structure of artery, vein and capillary.

Watch Video Solution

26. Write a note on Angina Pectoris.

Watch Video Solution

27. Write a note on cardiac output.

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28. Attempt any four: Match the column and rewrite.

Column "A"	Column "B"
(i) Sponges	(a) Tracheal tubes and spiracles
(ii) Insects	(b) External gills
(iii) Amphibian tadpole	(c) Book lungs
(iv) Scorpions	(d) Plasma membrane

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29. Write a note on arterial blood pressure.

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32. Describe valves of human heart.

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