BIOLOGY

BOOKS - MODERN PUBLICATION

BREATHING AND EXCHANGE OF GASES

Exercise

1. Why is anaerobic respiration less energy producing than aerobic respiration?

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2. Internal respiration is called a physico-chemical process.Why?

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3. What is significance of respiratory pigment in respiration?

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4. Which type of respiration is fouind in the earthworm?

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5. Name the respiratory structures of cockroach.

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6. In insects,inspiration is called a passive process while expiration an active process.Why?

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7. Name three types of muscles found inside the human body.

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8. Give the significance of presence of turbinal in the nasal chambers.

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9. At puberty the male is with deeper voice?

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10. name the potential covering of the lung.

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11. Name the respiratory surface of human lungs.

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12. What is average rate of respiration in a normal adult man?

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13. Name the inspiratory muscles of man.

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14. Define respiration

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15. What is bronchial intercom?

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16. What is the amount of air of tidal volume and alveolar volume in a normal person?

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17. Give the percentages of O_2 in atmospheric air and alveolar air.

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18. Give the partial pressure of O_2 in atmospheric air and alveolar air.

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19. What is pulmonary gas exchange?

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20. State the P_{O_2} and P_{CO_2} in the blood after the pulmonary gas exchange.

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21. Name the factors which favour the dissociation of oxy-Hb at the body cells.

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22. What do youmean by loading of oxygen in blood?

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23. State the P_{O_2} and P_{CO_2} in the blood after respiration.

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24. Name two forms by which O_2 is transported by blood from the lungs to body tissues.

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25. How many molecules of oxygen can be maximally bound with one molecule of Hb of blood?

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26. Name the factors which favour about binding of O_2 with Hb at the lung level.

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27. What is the shape of oxygen dissociation curve?

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28. What is kharasch effect?

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29. What is amount of O_2 per deciliter of oxygenated and deoxygenated blood:?

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30. Name three forms by which CO_2 is transported by blood?

Watch Video Solution

31. What is the significance of chloride shift?

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32. What is the location of inspiratary and expiratory centres?

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33. Give the symptoms of respiratoy disorder asthma.

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34. State the major differernce between anaemic hypoxis and histoxic hypoxia.

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35. Severe Acute Respiratory syndrome (SARS) is :

A. Caused by a variant of Pneumococcus pneumoniae

B. An acute form of asthma

C. Caused by a variant of Corona virus

D. Affect non-vegetarians faster

Answer:

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36. Blood analysis of a patient reveals an unusually high quantity of carboxyhaemoglobin content .Which of the following conclucions is most likely to be

correct?The patient has inhalling polluted air containing high contents of :

A. Carbon dioxide

B. Carbon monoxide

C. Carbon disulphide

D. Chloroform

Answer:

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37. When CO_2 cncentratin in blood increases,breathing becomes:

A. Slow and deep

B. Faster and deeper

C. Shallower nd slow

D. No affect on breathing

Answer:

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38. Dough kept overnight in warm weather becomes soft and spongy because of:

A. Cohesion

B. Osmosis

C. Absorption of CO_2 from atmoshphere

D. Fermentation.

Answer:

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39. In glycolysis,during oxidation electrons are removed by:

A. NAD^+

B. Molecular oxygen

C. ATP

D. Glyceraldehyde-3-phosphate

Answer:

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40. Which is true for CO_2 concentration?

A. More in alveolar air than in expired air

B. More in expired air than in alvoelar iar

C. More in inspired air than in alveolar air

D. More in alveolar air than in inspired air

Answer:

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41. Respiration is controlled by:

A. Medulla oblongata

B. Cerebellum

C. hypothalamus

D. Crebrum

Answer:

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42. R.Q. of fat is :

A. Move than one

B. One

C. Less than one

D. Infinite.

Answer:

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43. Which does not affect oxy-haemoglobin curve:

A. High O_2 and low CO_2

B. High body temperature

C. High O_2 and high Hb

D. High pH

Answer:

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44. One molecule of haemoglobin carries molecules of oxygen:

A. One

B. Two

C. Three

D. Four

Answer:

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45. SARS is caused by a variant of:

A. Pneumocaccus pneumoniae

B. Common cold corona-virus

C. Asthma

D. Bronchitis

Answer:

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46. Alveoli beome enlarged and damaged with reduced surface area in heavy smokers.The condition is called:

A. Silicosis

B. Emphysema

C. Asthma

D. Bronchitis

Answer:

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47. During inspiration, the diaphragm:

A. become dome-shaped

B. Contracts and flattens

C. Expands

D. Shows on change

Answer:

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48. Which metal is constituent of haemoglobin?

A. It is a dipetide and preesnt in RBCs in blood worm

B. Present in dissolved state in blood plasma in earthworm

C. it is a dipeptide in mammals and present in RBCs

D. Present in dissolved state in blood plasma in scropin

Answer:

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49. Respiration result in:

A. Release of O_2

B. Anabolism

C. Transfer of CO_2

D. Release of CO_2.

Answer:

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50. After deep inspiration,maximum expiration of lungs is called:

A. Vital capacity

B. Total lung capacity

C. Insipiratory capacity

D. Functional residual capacity

Answer:

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51. Respiratory centre of brain is sensitive to:

A. More O_2 concentration in blood

B. More CO_2 concentration in blood

C. Accumulation of blood in brain

D. All of these

Answer:

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52. After taking a long deep breath ,we do not respire for some seconds due to:

A. More CO_2 in blood

B. More O_2 in blood`

C. Low CO_2 in blood

D. less O_2 in blood.

Answer:

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53. Lungs are covered by:

A. Pleural membrane

B. Peritoneum

C. Pericardium

D. None of these.

Answer:

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54. Maximum amount of oxygen is exchanged from the blood in the :

A. Capillaries surrounding the tissue cells

B. Arteries of the body

C. Left auricle of the heart

D. Capillaries surrounding the alveoli

Answer:

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55. A perosn with normal tidal volume has a respiratoy rate of 14 breaths per minture.What will be the total tidal respiratory volume per minure?

A. $3800ml/mt.$

B. $7000ml/mt.$

C. $14000ml/mt.$

D. $1300ml/mt.$

Answer:

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56. How much pre cent of CO_2 is expired?

A. 0.07

B. 0.32

C. 0.25

D. 20%.

Answer:

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57. Pulmonary ventilation movements are due to:

A. Costal muscles

B. Diaphragm

C. Wall of lungs

D. Costal muscels and diaphram

Answer:

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58. If R.Q is less than 1.0 in a respiratory metabolism,it would mean that:

A. Carbohydrates are used as respirtory substrate

B. Organic acids are used as respiratory ubstrate

C. Osication of repiratory substrate consumed lessO_2 and CO_2 released

D. REaction in anaerobic.

Answer:

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59. Partial peressure of oxygen in the lungs is:

A. 100 nm Hg

B. 110 nm Hg

C. 104 nm Hg

D. 40 nm Hg

Answer: 60 nm Hg

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60. In lungs,there is definite exchange of ions between RBC and plasma .Removal of CO_2 from blood involves:

A. Efflux of CI^- ions into RBC

B. Influx of CI^- ions into RBC

C. Influxj of HCO_3^- ions into RBC

D. Efflux of HCO_3^- ions into RBC.

Answer:

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61. Ascent of high mountains may casue altitude sickness is men.Prime casue of this is:

A. Excess of CO_2 in blood

B. Decreased effeciency of haemoglobin

C. Decreased partial pressure of oxygen

D. Decreased proportion of oxygen in air

Answer:

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62. Which of the following conditions is responsible for increase in ventilations rate of lungs?

A. Decrease in O_2 contents of inhales air

B. Decrease in O_2 ocntent of exhales air

C. Incerease of CO_2 content in inhaled air

D. Increase of CO_2 content in exaled air.

Answer:

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63. People living at the sea level have around 5 million RBC per cubic millimeter of their blood whereas those living at an altitude of 5400 meters have around 8 million.This is because at high altitude:

A. People get pollution free air to breathe and more oxygen is available

B. Atmospheric O_2 level is less and hence more RBCs are needed to absorb the required amount O_2 to survive

C. There is more UV-radiation which enhanced RBC-production

D. People eat more nutritive food,so more RBCs are formed

Answer:

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64. Which one of the following statements is incorect?

A. The residual air in lungs slightly decreases the efficiency of respiration in mammals.

B. The presence of non - respiratory air sacs increases the effiency or respiration in birds

C. In insects ,circulting body fluids serve to distribute oxygen to tissues

D. The principle of couner-current flow facilitates effcient respiration in gills of

dfishes.

Answer:

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65. The majority of carbon dioxide produced by our body cells is transported to hte lungs:

A. Dissolved in blood

B. As bicarbonates

C. As carbonates

D. Attached to haemoglobin

Answer:

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66. In which of the following animals,resiration occurs without any-repiratory organ?

A. Frog

B. Fish

C. Cockroach

D. Earthworm

Answer:

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67. In man,total number of alveoli in both lungs are:

A. 3000

B. 30000

C. 500000000

D. 700000000

Answer:

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68. Membrane seprating air in pulmonary alveoli from blood capillaries is:

A. Alveolar epithellium

B. Cardiac epithelium

C. Capillary8 endothelium

D. Both(a) &(c)

Answer:

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69. During hibernation,frog respires through:

A. Gills

B. Lungs

C. Integument

D. Tympanum

Answer:

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70. Breathing becomes faster in fever because:

A. Fever stimulates the repiratory cenrtre of brain

B. O_2 carrying capacity becomes lower

C. Increase in temperature increases metalbolic rte requiring more oxygen

D. Oxygen is used in fighting the germs

Answer:

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71. Which one of the following mammalian cells is not capable of metabolising glucose to carbon dioxide aerbically?

A. Red blood cells

B. White bblood cells

C. Unstriated muscle cells

D. Liver cells

Answer:

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72. Increased asthmatic attacks in certain seasons are related to:

A. Low temperatuire

B. hot and humid environment

C. Eatig fruits preserved in containers

D. Inhalation of seasonal pollens

Answer:

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73. Hypoxia is the condition in whihc less energy becomes availabel to the tissues.This may be due to:

A. lesser oxygen in the atmoshere

B. More CO2 in the air

C. Less RBCs in blood

D. All of these

Answer:

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74. When CO_2 cncentratin in blood increases,breathing becomes:

A. Shallower and slower

B. There is no effect on breathing

C. Slow and deep

D. Faster and deeper

Answer:

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75. Vitial capaicty of lung is :

A. Tv+IEV+ERV

B. TV+IRV+RV

C. TV+ERV

D. IRV+ERV

Answer:

Watch Video Solution

76. During normal respiration without any effort,the volume of air inspired or expired is called:

A. Tidal volume

B. Reseve volume

C. residual volume

D. None of these.

Answer:

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77. Chloride shift occurs in repond to:

A. HCO_3^-

B. K^+

C. H^+

D. Na^+.

Answer:

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78. Oxygen dissociation curve is:

A. Parabolic

B. hyerbolic

C. Sigmoid

D. Straight

Answer:

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79. During inspiration, the diaphragm:

A. Explands

B. Shows no change

C. Contrats and flatters

D. Relaxed to become dome-shaned

Answer:

Watch Video Solution

80. The oxygen toxicity is related to:

A. blood posoning

B. Collapsing of alveolar wall

C. Failure of ventillation of lungs

D. Both(a) and (b)

Answer:

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81. Lungs have a large number of narrow tubes called:

A. Alveoli

B. Bronchioles

C. Bronchi

D. Trachease

Answer:

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82. Residual volume is :

A. Lesser than tidal volume

B. Greater than inspiratory volume

C. Greater than vital capacity

D. Greater than tidal volume

Answer:

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83. Vital capacity of lung includes:

A. IRV+TV+ERV

B. ERV+RV

C. IRV+TV

D. RV+ERV+TV+IRV

Answer:

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84. When temperatrue decreases ,oxy-Hb curve will b ecome:

A. More sleep

B. Straight

C. parabola

D. All of these

Answer:

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85. Pneumotaxic centre is present in:

A. Cerebrum

B. Cerebellum

C. Medulla

D. pons Varolli

Answer:

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86. haemoglobin is a :

A. Reproductive pigment

B. Respriatory pigment

C. Carbohydrate

D. Fat

Answer:

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87. Hamburger shift is also known as:

A. Bicarbonate shift

B. Chloride shift

C. Potassium shift

D. All of these

Answer:

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88. After deep inspiration,maximum expiration of lungs is called:

A. FVital capacity

B. Tidal volume

C. IRV

D. ERV

Answer:

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89. What is the vital capacity of lungs in a normal adult person.

A. Inspiratory reserve volume +Expiraory reserve volume

B. Total lung capacity-Residual volume

C. Inspiratory refserve volume+Tidal volume

D. Total lung capacity-Expiratory reserve volume

Answer:

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90. When CO_2 cncentratin in blood increases,breathing becomes:

A. Shallower and slow

B. There is no effect on breathing

C. Slow and deeper

D. Faster and deeper

Answer:

Watch Video Solution

91. Hamburger shift is also known as:

A. Chloride shif

B. Bicarbonate shift

C. potassium shift

D. All of these

Answer:

 Watch Video Solution

92. After a deep inspiration and maximum expiration, the capacity of lungs is known as:

A. Tidal volume

B. Vital capaity

C. IRV

D. ERV

Answer:

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93. If R.Q is less than 1.0 in a respiratory metabolism,it would mean that:

A. Carbohydrates are used as respirtory substrate

B. Organic acids are used as respiratory ubstrate

C. The oxidation of espiratory substrate consumed more oxygen than amount of CO_2 released

D. The oxidation of espiratory substrate consumed less oxygen than amount of CO_2 released

Answer:

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94. The number of gill present in Osteichthyes is :

A. 2 pairs

B. 6-15 pairs

C. 5 pairs

D. 4 pirs

Answer:

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95. The alveoli of lungs are lined by:

A. Simple epithelium

B. Squamous epithelium

C. Cuboidal epithelium

D. Columnar epithelium

Answer:

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96. A major percentage of O_2 (97%) is transported by RBCs in the blood. How does the remaining percentage (3%) of O_2 transported?

A. Dissolved in plasma and transported

B. Remains in lungs

C. In peroxisomes

D. Attached to cell membranes

Answer:

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97. The major amount of CO_2 in both invertebrates and vertebrates is transported as:

A. Carbonic acid

B. Carbaminohaemoglobin

C. Bicarbonates

D. None of these.

Answer:

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98. Respiratory quotient (RQ) is one in case of:

A. Fattuy acids

B. Nucleic acids

C. Carbohydrates

D. Organic acids

Answer:

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99. One molecule of haemoglobin carries molecules of oxygen:

A. Four

B. Two

C. Eight

D. Six

Answer:

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100. Oxygen is carried by:

A. Leucocytes

B. Erythrocytes

C. Platelets

D. None of these.

Answer:

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101. The epithelial tissue present on the inner surface of bronchioles and fallopian tubes is:

A. Cubiodal

B. Glandular

C. Ciliated

D. Squamous

Answer:

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102. Aerobic respiratory pathways is appropriately termed:

A. Catobolic

B. Parabolic

C. Amphibolic

D. Anabolic

Answer:

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103. During normal respiration without any effort,the volume of air inspired or expired is called:

A. Tial volume

B. Vital capaity

C. residual volume

D. Normal volume

Answer:

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104. Name three forms by which CO_2 is transported by blood?

A. Bicarbontes

B. Sulphates

C. Oxalates

D. Citrates

Answer:

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105. Which of the following is called Hamburger's shift?

A. Hydrogen shift

B. Bicarbonate shift

C. Chloride shift

D. Sodium shift

Answer:

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106. How many heme molecules are present in one molecule of haemoglobin?

A. 1

B. 2

C. 3

D. 4

Answer:

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107. Name two forms by which O_2 is transported by blood from the lungs to body tissues.

A. Plasma

B. Bicarbonate ion

C. Carbaminohaemoglobin

D. None of these.

Answer:

Watch Video Solution

108. During normal respiration without any effort,the volume of air inspired or expired is called:

A. Tidal volume

B. Inspiratory reserve volume

C. Expiratory reserve volume

D. REsidual volume

Answer:

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109. Which of the followingg statementes is correct?

A. During inspiration,external intercostal muscels and diaphragm contract

B. Cyanosis mens collapse of alveoli

C. EWuporia meands slow bereathing

D. Coryza is casued by jhuman corona virus

Answer:

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110. The urge to inhale in humans results from:

A. Rising P_{CO_2}

B. Rising O_2

C. Falling P_CO_2`

D. Falling P_{O_2}.

Answer:

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111. Hamburger's phenomenon is called:

A. Bicarbonate shift

B. Chloride shift

C. Hydrogen shift

D. Sodium shift

Answer:

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112. Breathing rate in human is controlled by:

A. Thalamus

B. Hypothalamus

C. Cerebellum

D. Medulla oblongata

Answer:

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113. In which of the following subjects,the dead space is highest?

A. Old man

B. Old woman

C. Young man

D. Young woman

Answer:

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114. Which of the following is the cofactor of carbonic anhydrase?

A. Fe

B. Zn

C. Cu

D. Mg

Answer:

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115. Skin is an accesosry organ of repiration in:

A. Humans

B. Frogs

C. Rabbit

D. Lizard

Answer:

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116. Between breaths,the intrapleural pressure is approximately ..... mmHg less than atmospheric pressure:

A. 1

B. 4

C. 8

D. 10

Answer:

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117. A large proportion of oxygen is left unused in the human blood even after its uptake by the body tissues.This O_2:

A. Acts as a reserve during muscular exercise

B. Raises the $_pCO_2$ of blood to 75 mm of Hg

C. Is enough to keep oxyhemoglobin saturation at 96%

D. helps in releasing more O_2 to the epithelial tissues

Answer:

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118. your parents are going to buy a house. They have been offered one on the roadside and another three lanes away from the roadside. Which house would you suggest your parents should buy? Explain your answer.

A. Epiglottis

B. Diaphragm

C. milk

D. Tongue

Answer:

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119. Which one of the following can bind several hundred times more strongly to the hemoglobin than oxygen?

A. CO

B. CO_2

C. SO_2

D. H_2CO_3

Answer:

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120. Pneumotaxic centre is present in:

A. Pons regi9on of brainq

B. Thalamus

C. Spinal cord

D. Right cerbal hemisphere

Answer:

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121. The factor which does not affect the rate of alveolar diffusion is:

A. Solubility of gases

B. Thickness of membranes

C. Pressure gradient

D. reactivity of gases

Answer:

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122. Congestion of the lungs is one of the main symptoms in:

A. Hypotension

B. Coronary heart disease

C. Angina

D. heart failure

Answer:

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123. Dead space air in man is :

A. 500 ml

B. 150 ml

C. 250 ml

D. 1.5 l

Answer:

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124. How much pre cent of CO_2 is expired?

A. 0.0004

B. 0.0003

C. 0.036

D. 0.21

Answer:

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125. Emphysema is a :

A. Cardiovascular disease

B. Pulmonary disease

C. neural disease

D. Renal disease

Answer:

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126. Fill in the blanks:

The lungs are coverd by ..... membranes.

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127. Fill in the blanks:

Amount of air inspired or expired in a normal breath is ..... .

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128. Fill in the blanks:

The sites of respiration inside the lung, are.....

.

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129. Fill in the blanks:

Respiratory organs of insects are..... .

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130. Fill in the blanks:

.....act as air conditioners.

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131. Fill in the blanks:

.....elelment is present at the cenrer of Hb.

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132. Fill in the blank:

The volume of air left in the lungs after a maximum expiration is called .....while the volume of air breathed out during a normal restful respiration is called .....

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133. Fill in the blank:

Alveolar pO2 is .....than the venous pO2 while arterial pO2 is .....than the alveolar pO2.

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134. Fill in the blank:

Vital capacity of trained athletes is .....than that of non-athletes while the vital capacity of non-smokers is .....than that of smokers.

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135. Fill in the blanks:

..... is respiratory organ of earthworm.

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136. Fill in the blanks:

..... ml of oxygen is transported per decilitre of blood.

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137. Fill in the blanks:

Total lung capacity is ..... l.

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138. Match the disorders given in Column 1 with symptoms under Column II .Chooe the anwer which gives the concenp combination

of alphabets with numbers:

Column I (Disorder)	Column II (Symptom)
A. Asthma	1. Inflammation of nasal tract
B. Bronchitis	2. Spasm of tracheal muscles
C. Rhinitis	3. Fully blown out alveoli
D. Emphysema	4. Inflammation of bronchi
	5. Cough with bloody sputum

(a) A = 4, B = 2, C = 5, D = 1
(b) A = 5, B = 3, C = 2, D = 1
(c) A = 3, B = 1, C = 5, D = 4
(d) A = 2, B = 4, C = 1, D = 3
(e) A = 3, B = 1, C = 4, D = 2

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139. Match the tems in column - A with suitable terms in column - B and choose the correct answer:

Column-A	Column-B
A. Tidal volume	1. 2500–3500 ml of air
B. Inspiratory reserve volume	2. 1000 ml of air
C. Expiratory reserve volume	3. 500 ml of air
D. Residual volume	4. 3400–4800 ml of air
E. Vital capacity	5. 1200 ml of air

(a) A = 3, B = 4, C = 2, D = 1, E = 5
(b) A = 3, B = 1, C = 2, D = 5, E = 4
(c) A = 3, B = 1, C = 2, D = 5, E = 4
(d) A = 5, B = 4, C = 3, D = 1, E = 2
(e) A = 4, B = 3, C = 2, D = 1, E = 5

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140. True or False:

A person can expel all air from the lungs by forceful expiration.

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141. True or False:

Vital capacity represent the maximum capacity to ventile the lungs.

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142. Write'True ' or 'False':

Respiration is a physical process and depends upon the principle of diffusion.

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143. True or False:

Fishes respire through their skin.

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144. Write'True ' or 'False':

A rise in Pco_2 increases the oxygen - affinity of haemoglobin.

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145. True or False:

Gas exchange continues uninterrupted in the lungs even during expiration.

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146. Write'True ' or 'False':

Oxyhemoglobin can bind much less CO_2 in the form of carbamino-haemoglobin than What deoxyhemoglobin can.

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147. Write'True ' or 'False':

First branches of bronchial intercom are bronchioles.

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148. In insects,inspiration is called a passive process while expiration an active process.Why?

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149. Write'True ' or 'False':

First branches of bronchial intercom are bronchioles.

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150. Write'True ' or 'False':

The alveolar air has less oxygen but more CO_2 than inspired air.

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151. Write'True ' or 'False':

Inspiratory reserve volume is the volume of air which can be inspired in addition to the normal inspiration.

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152. Write'True ' or 'False':

Vital capacity is a measure of maximum inspiration.

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153. Write'True ' or 'False':

Carbon dioxide cannot be transported with haemoglobin.

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154. Mark the odd one in each sereies:

Fish,Frog,Earthworm,leech.

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155. Mark the odd one

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156. Note the relationship between the first two words and suggest a suitable word for the

fourth place:

Aerobic respiration,Amoeba::Anaerobic repiration..... .

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157. Note the relationship between the first two words and suggest a suitable word for the fourth place:

Exergonic:Respiration::Endergonic ..... .

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158. Note the relationship betwent the first two words and suggest a suitable word for the fourth place:

Gill :Prawn::Tracheas----------. .

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159. Note the relationship between the first two words and suggest a suitable word for the fourth place:

Complete gill:Holobranch::Half gill..... .

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160. Note the relationship between the first two words and suggest a suitable word for the fourth place:

Inspiration:Phrenic muscles of diaphragm::Expiration..... .

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161. Oxygen-dissociation curve is at higher level in the persons living at high altitudes

than those living in the plains.

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162. Give reason for the following:

Far more O_2 is released from oxy Hb in a more active tissue than in a less active tissue.

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163. oxygenation of blood promotes the release of CO_2 from the blood in the lungs.

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164. Give reason for the following:

Contraction of inspiratory muscles causes inspiration while their relaxation causes expiration.

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165. Give reason for the following:

Nasal respiration is advantageous than mouth

respiration.

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166. Composition of alveolar air is different from that of atmospheric air.

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167. The dexygenated blood still has 75 per cent saturation of haemoglobin.

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168. Carbonic acid is more formed in the RBCs than the blood plasma.

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169. These questions consist of two statements each,printed as Assertion and Reason.While answering these questions you are required to choose any one of the following four responses.

Assertion:Oxygen dissociation curve of haemoglobin is sigmoid.

Reason:Oxygen dissociation curve moves toward left side with increase in CO_2 concentration in the air.

A. A. If both Assertion and Reason are true and Reason is correct explanation of Assertion

B. B. If both assertion and Reason are true but reason is not correct explanation of Assertion

C. C. If Assertion is true but Reason is false.

D. D. If both Assertion and Reason are false.

Answer:

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170. These questions consist of two statements each,printed as Assertion and Reason.While asnwering these questions you are required to choose any one of the following four responses.

Assertion:Carbonic acid is more formed inside the RBCs than the plasma

Reason:An enzyme carbonic anhydrase is present inside the RBCs.

A. A

B. B

C. C

D. D

Answer:

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171. These questions consist of two statements each,printed as Assertion and Reason.While asnwering these questions you are required to choose any one of the following four responses.

Assertion:At the lung alveoli level,blood releases carbon dioxide.

Reason: Oxy hb formed at the lung alveoli level acts as a weak acid which favours release of CO_2.

A. A

B. B

C. C

D. D

Answer:

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172. These questions consist of two statements each,printed as Assertion and Reason.While asnwering these questions you are required to choose any one of the

following four responses.

Assertion:All terrestrial vertebrates are air-breathers.

Reason:They have developed lungs for air breathing,an adaptation for land life.

A. A

B. B

C. C

D. D

Answer:

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173. These questions consist of two statements each,printed as Assertion and Reason.While asnwering these questions you are required to chose any one of the following four responses.

If both Assertion and Reason are true and Reason in correct explanation of Assertion.

If both assertion and Reason are true but reason is not correct explanation of Assertion.

If Assertion is true but Reason is false.

If both Assertion and Reason are false.

Assertion:Severe Acute Respiratory Syndrome (SARS) originatd in China.

Reason:China is the most populated contry of the world.

A. A

B. B

C. C

D. D

Answer:

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174. These questions consist of two statements each,printed as Assertion and Reason.While asnwering these questions you are required to chose any one of the following four responses.

If both Assertion and Reason are true and Reason in correct explanation of Assertion.

If both assertion and Reason are true but reason is not correct explanation of Assertion.

If Assertion is true but Reason is false.

If both Assertion and Reason are false.

Assertion:Haemoglobin is an oxygen carrieer.

REason:Oxygen binds as O_2 to Fe of haemoglobin.

A. A

B. B

C. C

D. D

Answer:

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175. These questions consist of two statements each,printed as Assertion and Reason.While asnwering these questions you are required to chose any one of the following four responses.

If both Assertion and Reason are true and Reason in correct explanation of Assertion.

If both assertion and Reason are true but reason is not correct explanation of Assertion.

If Assertion is true but Reason is false.

If both Assertion and Reason are false.

Assertion:Many visitors in the hills suffer from skin and respiratory allergy problems.

REason:Conifers trees produce a large quantity of wind-borne pollen grains.

A. A

B. B

C. C

D. D

Answer:

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176. These questions consist of two statements each,printed as Assertion and Reason.While asnwering these questions you are required to choose any one of the following four responses.

Assertion:Complete oxidation of one molecule of glucose yields 28 molecules of ATP.

Reason:Incomplete oxidation of glucose in muscle cells during active exercise leads to a build up of ethyl alcohol.

A. A

B. B

C. C

D. D

Answer:

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177. Name the protective sac which surrounds the lungs.

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178. Give values of tidal volume ,vital capacity ,residual volume and total lung capacity in man.

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179. What is the voice box of man?

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180. Name three forms by which CO_2 is transported by blood?

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181. Give values fo Alveolar Po_2 Venous Po_2 ,Arterial Pco_2 and Alveolar Pco_2.

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182. Give the position of diaphragm during inspiration and expiration.

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183. What is aim of Chloride-bicarbonate shiftf?

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184. Give the term for percentage of oxygen used by the body tissues.

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185. Which respiratory disease is characterized by spasm of bronchial muscles?

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186. Why there are more RBC count in the people living at high altitudes than those living in the plains.

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187. Name the inspiratory muscles of man.

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188. Define the following :

Respiratory quotient

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189. What do you mean by co-poisoning?

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190. What is the location of inspiratary and expiratory centres?

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191. Give another name for chloride shift.

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192. Name the respiratory organs of dolphin,scorpion and insects.

Watch Video Solution

193. Define Bohr's effect.

Watch Video Solution

194. How many molecules of oxygen can be maximally bound with one molecule of Hb of blood?

Watch Video Solution

195. Differentiate between tracheoloes and bronchioles.

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196. Give the term for the volume of air inhaled and exhaled during a normal effortless breathing.

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197. Name the respiratory organs of leech and prawn.

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198. What is carbamino-haemoglobin?

Watch Video Solution

199. What is vital capacity in regard to breathing?

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200. The venous blood in the lung has a P_{CO_2} of 46 mm Hg.Should the alveolar P_{CO_2} excceed or less than in diffuision of CO_2 from the blood in the alveolus?

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201. What is the vital capacity of lungs in a normal adult person.

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202. Which lung has a cardiac notch?

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203. How is haemoglobin differently located in humans and earthworms?

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204. What prevents collapsing of our trachea during breathing?

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205. Name the enzyme,which acts on carbonic acid in living cells.

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206. What is residual volume?How much is it in a normal adult man?

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207. Distinguish between: Vital capacity and Total lung capacity.

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208. List the conditions of respiration most important mode or respiration in frog.

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209. What is pleura?List its functions.

Watch Video Solution

210. What is vital capacity in regard to breathing?

Watch Video Solution

211. What is the role of carbonic anhydrase.

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212. Discuss the advantage of nose breathing over mouth breathing.

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213. How air is cleaned in the nasal chambers?

Watch Video Solution

214. Define the following terms

Tidal volume

Watch Video Solution

215. Define the following :

vital capacity.

Watch Video Solution

216. Write down the route adopted by the foul air,while movving out of the lungs in the atmosphere.

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217. Give the scientific name of pathogen causing Diphtheria.How is it transmitted?

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218. What is meant by Respiration Quotient (R.Q.)?When will be the value of R.Q be 1 and when will be it less than 1?

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219. What is the role of carbonic anhydrase.

Watch Video Solution

220. What is meant by vital capacity?Li8st any two categiories of people who possess higher vital capacity.

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221. How are respiratory gases transported in the human blood?

Watch Video Solution

222. Define the following terms

Tidal volume

Watch Video Solution

223. Define the following terms?

Residual volume

Watch Video Solution

224. Where is carbonic anhydrase located? What is its function?

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225. Where is pneumotaxic centre located in human brain?What is its significance?

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226. What is chloride shift? Write its significance during respiration.

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227. How do exchanges of gases take place in the lungs.

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228. State the P_{O_2} and P_{CO_2} in the blood after the pulmonary gas exchange.

Watch Video Solution

229. Differentiate inspiratory and expiratory muscles.

Watch Video Solution

230. Differtiate between:

Inspired air and alveolar air.

Watch Video Solution

231. Distinguish between: Inspiratory capacity and Expiratory capacity.

Watch Video Solution

232. Differtiate between:

Carbaminohaemoglobin and carboxyhaemoglobin.

Watch Video Solution

233. Tabulate the respiratory organs and modes of respiration found in various groups of animals.

Watch Video Solution

234. Differtiate between:

Postive pressure breathing and Negative pressure breathing.

Watch Video Solution

235. Draw diagram to show the difference between right lung and left lung.

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236. Differentiate between:

Residual volume and Minute volume.

Watch Video Solution

237. Differentiate inspiratory and expiratory reserve volume.

Watch Video Solution

238. Define oxygen dissociation curve.Discuss Bohr's effect.

Watch Video Solution

239. Give cause and symptoms of following respiratory disorders:

Asthma.

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240. Give cause and symptoms of following repiratory disorders:

Emphysema.

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241. Write a note on nervous control on respiration.

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242. How does haemoglobin help in transport of oxygen from the lungs to body tissues?

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243. How are respiratory gases transported in the human blood?

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244. Give an account of histology of human lungs.

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245. Write the role of diaphragm and intercostal muscles in breathing process.

Watch Video Solution

246. Define the following terms

Tidal volume

Watch Video Solution

247. Define the following and give their values in a normal adult man:

Expiratory reserve volume

Watch Video Solution

248. Define the following and give their values in a normal adult man:

Inspiratory capacity.

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249. Describe ,how the respiratory gases are exchanged between the blood and alveolar air?

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250. Describe the exchange of respiratory gases at the lung level and at tissue level.

Watch Video Solution

251. What is bronchial intercom?

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252. Explain how CO_2 is transported from metabolically active cells of human body to

the organs from where it is released out into the atmosphere.

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253. Describe the respiratory tract and give the function of various parts of it.

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254. Enumerate various pulmonary volumes and pulmonary capactities.

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255. Explain the Nervous and chemical control of respiration.

Watch Video Solution

256. Describe the mechanism of breacthing in human beings?

Watch Video Solution

257. What is residual volume?How much is it in a normal adult man?

Watch Video Solution

258. Explain the role of diaphragm and rib cage in respiration in humans.

Watch Video Solution

259. List and explain the three ways by which CO_2 is transported by blood in the human body.Support the answer with a suitable diagram.

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260. Describe human respiratory system with the help of labelled diagram.

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Example

1. Define vital capacity. What is its significance?

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2. State the volume of air remaining in the lungs after a normal breathing.

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

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4. What are the major transport mechanisms for CO_2? Explain.

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5. What will be the P_{O_2} and P_{CO_2} in the expired air compared to those in the alveolar air?

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6. Explain the process of inspiration under normal conditions.

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7. How is respiration regulated?

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8. What is the effect of pCO_2 on oxygen transport?

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9. What happens to the respiratory process in a man going up a hill?

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10. What is the site of gaseous exchange in an insect?

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11. Define oxygen dissociation curve. Can you suggest any reason for its sigmoidal pattern?

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12. Have you heard about hypoxia? Try to gather information about it, and discuss with your friends.

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13. Distinguish between: IRV and ERV

Watch Video Solution

14. Distinguish between: Inspiratory capacity and Expiratory capacity.

Watch Video Solution

15. Distinguish between: Vital capacity and Total lung capacity.

Watch Video Solution

16. What isTidal volume? Find out theTidal volume (approximate value) for a healthy human in an hour.

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