BIOLOGY

BOOKS - CENGAGE BIOLOGY (HINGLISH)

BREATHING AND EXCHANGE OF GASES

Exercies

1. Which of the following structure is not supported by in complete cartilaginous rings.

A. Trachea

B. Secondary bronchi

C. Terminal bronchioles

D. Primary bronchi

Answer: C

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2. Trachea is a straight tube extending up to the mid-thoracic cavity, which divides at the level of

A. Second cervical vertebra

B. Fifth cervical vertebra

C. Fifth thoraic vertebra

D. Fifth lumbar vertebra.

Answer: C

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3. Outer pleural membrane is in close contant with

A. Surface of lungs

B. Thoracic cavity

C. Both (1) and (2)

D. Alveoli

Answer: B

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4. The volume of air present in the lungs after forceful expiration is called as

A. Expiratory reserve volume

B. Expiratory capacity

C. Residual volume

D. Both (1) and (2)

Answer: C

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5. The maximum volume of air a person can breathe in after a forced expiration is

A. vital capacity

B. ERV+TV+IRV

C. TLC+RV

D. Both A and B

Answer: D

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6. Which of the following statement is incorrect w.r.t the mechanism of breathing ?

A. The movement of air into and out of the lungs is carried out by creating a pressure gradient between the lungs and atmosphere.

B. Inspiration is initiated by the concentration of diaphragm which increases the volume of thoracici chamber.

C. The contraction of external intercostal muscles lifts up the ribs and sternum causing decrease in the volume of thoracic chamber.

D. On an average, a healthy human breathes 12-16 times/ min.

Answer: C

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7. The thoracic cage of man is formed of

A. Ribs and sternum

B. Ribs, sternum and thoracic vertebrae

C. Ribs , sternum, and lumbar vertebrae

D. Ribs and thoracic vertebrae

Answer: B

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8. Trachea is lined with incomplete rings of

A. Fibrous cartilage

B. Calcified carilage

C. Elastic cartilage

D. Hyaline cartilage

Answer: D

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9. Lungs have a large number of alveoli for

A. Having spongy texture and proper shape

B. More surface are for diffusion of gases

C. More space for increasing volume of inspired air

D. More nerve supply.

Answer: B

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10. The ventilation movements of the lungs in mammals are governed by

A. Muscular wall of lungs

B. Intercostal muscles

C. Disphragm

D. Diaphragm and intercostal muscles.

Answer: D

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11. What will be the pO_2 and pCO_2 in the atmospheric air compared to those in the alveolar air?

A. p_{O_2} lesser , p_{CO_2} higher

B. p_{O_2} higher , p_{CO_2} lesser

C. p_{O_2} higher, p_{CO_2} higher

D. p_{O_2} lesser ,p_{CO_2} lesser

Answer: B

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12. What is the partial pressure of oxygen and carbon dioxide in atmospheric air ?

A. p_{O_2} 159 mm Hg, p_{CO_2}0.3 mm Hg

B. p_{O_2} 104 mm Hg, p_{CO_2}40 mm Hg

C. p_{O_2} 40 mm Hg, p_{CO_2}45 mm Hg

D. p_{O_2} 95 mm Hg, p_{CO_2}40 mm Hg

Answer: A

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13. Diffusion membrane is made up of which of the following layers gt

A. Thin squamous epithelium of alveoli

B. Basement membrane

C. Endothelium of alveolar capillaries

D. All of these

Answer: D

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14. Which of the following statement is incorrect about the transport of gases ?

A. About 97% of O_2 is transported by RBCs in the blood.

B. About 3% of O_2 is carried in dissolved state in the plasma

C. About 20-25% of CO_2 is transported by RBCs.

D. About 70% carbon dioxide is carried in dissolved state in plasma.

Answer: D

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15. Binding of oxygen with haemoglobin is primarily related to :

A. Partial pressure of CO_2

B. Partial pressure of O_2

C. Hydrogen ion concentrated

D. Temperature

Answer: B

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16. Which of the following factorss ar favorable for the formation of oxyhemoglobin ?

(a) High p_{O_2}, low p_{CO_2}

(b) Lesser H^+ concentration, lower temperature

(c) Low p_{O_2}, high CO_2

(d) High H^+ , higher temperature

A. (a) only

B. (a) and (b)

C. (b) and (c)

D. (c) and (d)

Answer: B

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17. Under which condition the oxygen dissociation curve will move towards the right ?

A. Low p_{O_2}

B. High CO_2

C. High H^+ concentrated and higher temperature

D. All of these

Answer: D

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18. Tick mark of incorrect statement .

A. Every 100 mL of deoxygentated blood delivers approximately 4 mL of CO_2 to the alveoli.

B. Carbonic anhydrase is present in very high concentration in RBC.

C. High p_{CO_2} and low p_{O_2} in tissue help in the binding of carbon dioxide.

D. CO_2 is carried in hemoglobin as carboxyhemoglobin.

Answer: D

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19. Carbon dioxide is carried in the blood mainly as

A. Sodium bicarbonate

B. Potassium bicarbonate

C. Carbamino- hemoglobin

D. Dissolved gas in plasma.

Answer: A

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20. The hemoglobin of a human fetus.

A. Has higher affinity for oxygen than that of an adult

B. Has a lower affinity for oxygen than that of an adult

C. Has same affinity for oxygen as that of an adult

D. Has two protein sub- units instead of four.

Answer: A

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21. Ring - like cartilage of larynx is known as

A. Thyroid cartilage

B. Arytenoid catilage

C. Cricoid cartilage

D. Cartilage of Santorini

Answer: C

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22. Which of the following prevent collaspsing of trachea ?

A. Muscles

B. Diaphragm

C. Ribs

D. Catilaginous rings.

Answer: D

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23. Trachea is lined with incomplete rings of

A. Fibrous cartilage

B. Calcified carilage

C. Elastic cartilage

D. Hyaline cartilage

Answer: D

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24. The number of alveoli in the human lungs has been estimated to be approximately

A. 100 million

B. 300 million

C. 125 million

D. 300 billion

Answer: B

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25. In human, oblique fissure is present in

A. Right lung

B. Left lung

C. Both of these

D. None of these

Answer: C

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26. The covering of lungs is called

A. Pericardium

B. Perichondrium

C. Pleural membrane

D. Peritoneum

Answer: C

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27. The terminal bronchiole is lined by

A. Simple squamous epithelium

B. Ciliated columnar or cuboidal epithelium

C. Stratified epithelium

D. Pseudostratified epithelium

Answer: B

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28. Which of the following muscles contracts during normal expiration ?

A. Internal intercostal muscles

B. Diaphragm

C. Abdominal muscles

D. None of these

Answer: D

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29. Chest movement are inconspicuous during

A. Normal breathing

B. Abdominal breathing

C. Thoracic breathing

D. Both (1) and (2)

Answer: D

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30. Tidal volume is

A. The volume of air breathed in our out in one normal inspiration/ expiration

B. Volume of air breathed out by forced expiration after normal inspiration

C. Volume of air breathed out by forced expiration after forced inspiration

D. Volume of air that remains in lungs even after maximum expiration

Answer: A

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31. Which of the following pulmonary volume cannot be measured by spirometer directly ?

A. Tidal volume

B. Vital capacity

C. Inspiratory capacity

D. Residual volume.

Answer: D

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32. Ribs move outward during respiration with

A. Intercostal muscles

B. Petrohyal muscles

C. Pharyngeal muscles

D. None of these

Answer: A

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33. Functional residual capacity (FRC) includes

(a) TV (b) IRV

(c) RV (d) ERV

A. (a)+(c)

B. (b) +(d)

C. (c)+(d)

D. (a)+(b)+(d)

Answer: C

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34. If a person exhales out forcefully by applying all his efforts, what will be the pulmonary volume inhaled by

him immediately under normal condition without applying any extra effort ?

A. TV+IRV

B. TV only

C. TV+ERV

D. TV+IRV+ERV

Answer: C

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35. The p_{CO_2} level in the expired air under normal condition is approximately

A. 46 mm of Hg

B. 100 mm of Hg

C. 32 mm of Hg

D. 116 mm of Hg

Answer: C

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36. Which of the following factors will decrease oxygenation ?

A. High Hb

B. Increased blood flow

C. Anemia

D. Increased blood volume

Answer: C

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37. Which statement is wrong ?

A. The partial pressure of $CO_2(p_{CO_2})$ is higher in the air inside the lungs than inside the venous blood.

B. The partial pressure of $O_2(p_{O_2})$ is higher in the air inside the lungs than in the arterial blood.

C. The partial pressure of $O_2(p_{O_2})$ is lower inside the venous blood than in the air in the lung

D. The partial pressure of $CO_2(p_{CO_2})$ is higher inside the venous blood than in the air.

Answer: A

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38. The exchange of gases between alveolar air and alveolar capillaries occurs by

A. Osmosis

B. Active transport

C. Absorption

D. Diffusion

Answer: D

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39. The amount of oxygen transported by 1L of blood under strenuous condition is approximately

A. 5 mL

B. 50 mL

C. 15 mL

D. 150 mL

Answer: D

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40. In alveoli, surfactante in produced by

A. Type I pneumocyte

B. Type II pneumocyte

C. Kuffer's cells

D. Dust cells

Answer: B

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41. The combination of O_2 with hamoglobin can be increased mostly by

A. Increasing O_2 concentrated in air

B. Decreasing O_2 concentrated in blood.

C. Increasin CO_2 concentration in air

D. Decreasing CO_2 concentration in blood.

Answer: D

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42. The effect of CO_2 concentration on dissociation of oxyhemoglobin was explained by

A. G.S Carter

B. Yapp

C. William Hoar

D. Christian Bohr.

Answer: D

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43. Oxygen haemoglobin dissociation curve will shift to right on decrease of

A. Acidity

B. Carbon dioxide concentration

C. Temperature

D. pH

Answer: D

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44. If CO_2 level gels increased in the bood, it favours

A. Loading of O_2 in the blood

B. Unloading of O_2 from the blood

C. Decreased availability of oxygenated to tissues

D. Both (1) and (3)

Answer: B

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45. If oxyhemoglobin dissociation curves are drawn for maternal and fetal hemoglobin, which of the following is true ?

A. Maternal curve will be on the right side

B. Fetal curve will be on the right side

C. Both will overlap each other

D. Maternal curve will be on left side

Answer: A

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46. Reverse of the chloride shifts occurs during

A. Internal respiration

B. External respiration

C. Cellular respiration

D. Anaerobic respiration

Answer: B

47. The percentage amount of CO_2 carried or transported by Hb is

A. 0.1

B. 0.8

C. 0.7

D. 0.23

Answer: D

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48. In the process of transport of CO_2, which phenomenon occurs between RBCs and plasma ?

A. Osmosis

B. Adsorption

C. Chloride shift

D. Absorption

Answer: C

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49. Which of the following can be termed as opposited of Bohr's effect ?

A. Haldane's effect

B. Hamburger's phenomenon

C. Hering-Breuer reflex

D. None of these

Answer: A

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50. The impulse for voluntary muscles for forced breathing starts in

A. Cerebellum

B. Medulla

C. Vagus nerve

D. Cerebrum

Answer: D

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51. Respiration control center lies in

A. Pons

B. Medulla oblongata

C. Cerebrum

D. Both (1) and (2)

Answer: D

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52. Which of the following statement is wrong ?

A. The inspiration center increases the strength of contraction of rib muscles.

B. The pneumotaxic centre controls the switch off point of inspiration .

C. Breathing movements are caused by change in concentration of CO_2 in the blood.

D. The expiratory center lies in pons and inspiratory center lies in medulla.

Answer: D

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53. Which of the following controls the switch off point of inspiration ?

A. Apneustic center

B. Pneumotaxic center

C. Pons varolii

D. Cerebrum

Answer: B

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54. Which of the following is not possible when pneumotaxic center is sending a strong signal ?

A. Rate of breathing increases

B. Complete filling of lungs

C. Decreased duration of inspiration

D. Decreased duration of expiration

Answer: B

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55. Overstretching of the lungs is prevented due to

A. Bohr's effect

B. Hering - Breuer reflex.

C. Conditioned reflex

D. Haldane's effect

Answer: B

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56. The rate and depth of respiration shall increase when

A. Oxygen concentration increases

B. CO_2 concentration increases in alveolar air

C. Bicarbonate concentration increases

D. Bicarbonate concentration decreases.

Answer: B

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57. The " mountain sickness" in persons climbing to high altitudes with any aid of oxygen cylinders is due to

A. Anemic hypoxia

B. Arterial hypoxia

C. Lack of sufficient amount of hemoglobin

D. Lack of sufficient number of erythrocytes.

Answer: B

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58. Cyanide poisoning will lead to

A. Hypoxic hypoxia

B. Histotoxic hypoxia

C. Stagnant hypoxia

D. Anemic hypoxia

Answer: B

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59. Asthma is a respiratory disease caused by:

A. Infection of trachea

B. Infection of lungs

C. Bleeding into pleural cavity

D. Spasm in bronchial muscles.

Answer: D

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60. Which of the following is related to occupational lung disease ?

A. Silicosis

B. Asbestosis

C. Fibrosis of the upper part of lung

D. All of these

Answer: D

61. Breakdown of alveoli of lungs resulting in the reducing surface area for gas exchange is known as

A. Emphysema

B. Sneezing

C. Pneumonia

D. Tuberculosis.

Answer: A

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62. If thorax is injured and pleura damaged, the air enter the pleural catity and the lungs are collapsed. This condition is knonw as

A. Hyponea

B. Orthopnea

C. Dyspnea

D. Pneumothorax

Answer: D

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63. Protective respiratory blast is

A. Hiccupping

B. Coughing

C. Sneezing

D. None of these

Answer: C

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64. Low oxygen tension in the blood causes

A. Coughing

B. Hiccups

C. Sneezing

D. Yawning.

Answer: D

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65. Disorder/disease related with bubbling of N_2 in the blood resulting in pain or severe problem is

A. Caisson's disease

B. Cheyne-stokes respiration

C. Hypopnea

D. Asthma

Answer: A

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66. With the increase of temperature, the respiratory rate will

A. Increase

B. Decrease rapidly

C. Remain unaffected

D. Decrease slowly.

Answer: A

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67. Which of the following gases makes the most stable combination with the haemoglobin of RBCs?

A. CO_2

B. CO

C. O_2

D. N_2

Answer: B

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68. One of the following is not a respiratory pigment.

A. Hemoglobin

B. Chlorocruorin

C. Hemocyanin

D. Hemozoin

Answer: D

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69. Pneumonia can be caused by

A. Bacteria (Streptococcus penumoniae)

B. Protozoan

C. Fungi

D. All of these

Answer: D

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70. Asbestosis or silicosis is characterized by the proliferation of fibrous tissue in

A. Respiration tract

B. Upper part of lung

C. Lower part of lung

D. Pulmonary cappilary

Answer: B

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71. Respiratory system is derived from

A. Endoderm

B. Mesoderm

C. Ectoderm

D. None of these

Answer: A

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72. Which of the following is false ?

A. Blood from the right side of heart is carried to lungs by pulmonary artery.

B. Pleura is double covering of kidney .

C. Pancreas is both exocrine and endocrine gland.

D. Scurvy is due to vitamin C deficiency.

Answer: B

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73. Pleural fluid is secreted by

A. Myocardium

B. Parietal Pleura

C. Visceral Pleura

D. Both 2 and 3

Answer: C

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74. vocal cords are situated at

A. Larynx

B. Pharynx

C. Glottis

D. Bronchial tube

Answer: A

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75. Body tissues obtain oxygen from haemoglobin because of its dissociation in tissues caused by

A. Low oxygen concentration and high carbon dioxide concentration

B. Low oxygen concentration

C. Low carbon dioxide concentration

D. High carbon dioxide concentration

Answer: D

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76. Lungs have a large number of alveoli for

A. Having spongy texture and proper shape

B. More surface are for diffusion of gases

C. More space for increasing volume of inspired air

D. More nerve supply.

Answer: B

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77. Respiratory organs of scorpions are

A. Gills

B. Book lungs

C. Skin

D. Book gills

Answer: B

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78. Which energy is consumed in breathing?

A. Mechanical

B. Chemical

C. Bioelectrical

D. Physical

Answer: B

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79. During inspiration, the diaphragm

A. Relaxes

B. Contracts

C. Expands

D. Shows no change

Answer: B

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80. CO_2 is carried in blood as

A. Sodium bicarbonate

B. Sodium carbonate

C. Potassium carbonate

D. Magnesium carbonate

Answer: A

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81. The vital capacity of human lung is equal to

A. 3500 mL

B. 4800 mL

C. 500mL

D. 1200mL

Answer: B

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82. The type of respiration in mammals is called

A. Pulmonary respiration

B. Gill respiration

C. Cutaneous respiration

D. Tracheal respiration

Answer: A

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83. Normal breathing in called

A. Apnea

B. Dyspnea

C. Eupnea

D. Hyperpnea

Answer: C

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84. Hb most strongly combines with

A. CO

B. O_2

C. CO_2

D. O_3

Answer: A

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85. Tissue respiration is a process by which

A. Carbohydrate are synthesized

B. Proteins are broken down

C. Fat molecules are metabolized

D. Energy is liberated

Answer: D

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86. The exchange of gases in the alveoli of the lungs takes place by

A. Active transport

B. Osmosis

C. Simple diffusion

D. Passive trasport .

Answer: C

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87. CO_2 is transported mainly as : —

A. Respiratory pigment

B. Dissolution of gases

C. O_2 taken by tissues

D. Bicarbonates

Answer: D

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88. In which form iron is present hemoglobin ?

A. Ionic

B. Unionic

C. Fe^{2+}

D. Fe^{3+}

Answer: A

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89. Ventilation / respiratory control is present in

A. Medulla oblongata

B. Cerebellum

C. Cerebrum

D. Diencephalon

Answer: A

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90. Match the column

ColumnI	Column II
(a) Larynx	(p) Lid of larynx
(b) Trachea	(q) Air sacs
(c) Alveoli	(r) Voice box
(d) Epiglottis	(s) Wind pipe
	(t) Common passage

A. $(a) \to (r), (b) \to (s), (c) \to (q), (d) \to (p)$

B. $(a) \to (t), (b) \to (s), (c) \to (p), (d) \to (q)$

C. $(a) \to (r), (b) \to (s), (c) \to (q), (d) - (t)$

D. $(a) \to (r), (b) \to (t), (c) \to (q), (d) \to (p)$

Answer: A

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91. Respiration center is present in

A. Cerebrum

B. Hypothalamus

C. Cerebellum

D. Medulla oblongata

Answer: D

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92. Which of the following is shifted in chloride - shift ?

A. O_2 and CO_2

B. Bicarbonate ions

C. CO_2

D. O_2

Answer: B

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93. Which one of the following is capable of carrying oxygen ?

A. Plasma

B. Blood

C. Serum

D. Lymph

Answer: B

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94. Bicarbonate ion is produced inside

A. Lymphocytes

B. Neutrophil

C. Basophil

D. RBCs

Answer: D

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95. Adam's Apple represents

A. Cricoid cartilage

B. Thyroid cartilage

C. Both (1) and (2)

D. None of the above

Answer: B

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96. Amount of oxygen present in one gram of haemoglobin is

A. 1.34mL

B. 13.4 mL

C. 134 mL

D. 20 mL

Answer: A

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97. Book-lungs are respiratory organs which are found in

A. Mollusca

B. Mammals

C. Arachnida

D. Earthworm

Answer: C

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98. The respiratory centre in the brain is stimulated by

A. CO_2 concentration in venous blood

B. O_2 concentration in artery blood

C. CO_2 concentration in artery blood

D. O_2 concentration in venous blood.

Answer: C

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99. Energy currency of the cell is

A. 10 AMP

B. ATP

C. Carbohydrates

D. NAD

Answer: B

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100. What can determine the percentage of oxygen carried by Hb?

A. pH of blood

B. Percentage of CO_2

C. Partial pressure of oxygen

D. All of the above

Answer: D

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101. Hamburger phenomenon is also known as

A. Sodium shift

B. Chloride shift

C. Lead shift

D. None of these

Answer: B

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102. The correct order of structures through which the air passes in the body is

A. Nasal cavity, larynx, trachea, bronchi air sacs

B. Bronchi, nasal cavity, laryns, trachea air sacs

C. Larynx, bronchi, nasal cavity, trachea air sacs

D. Nasal cavity, trachea, larynx, bronchi air sacs.

Answer: A

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103. During inspiration ,

A. The diaphragm gets raised and ribs get lowered

B. Both diaphragm and ribs get lowered

C. Ribs get raised and diaphragm get lowered

D. The diaphragm gets flattered and ribs get raised.

Answer: D

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104. Which one of the following can respire in the absence of oxygen ?

A. Amoeba

B. Tapeworm

C. Housefly

D. Hydra

Answer: B

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105. When CO_2 concentration in blood increases breathing becomes

A. Slow and deep

B. Faster and deeper

C. Shallower and slow

D. There is no effect on breathing

Answer: B

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106. Ascent of high mountains may cause altitude sickness in men. Prime cause of this is

A. Exces of CO_2 in blood

B. Decreased efficiency of hemoglobin

C. Decreased partial pressure of oxygen

D. Decreased proportional of oxygen in air.

Answer: C

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107. In lungs there is definiteexchange of ions between RBC and plasma. Removal of CO_2 from blood involves

A. Efflux of Cl^- ions from RBC

B. Influx of Cl^- ion into RBC

C. Influx of HCO_3^- ions into RBC

D. Efflux of HCO_3^- ions form RBC \

Answer: A

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108. Which enzyme is most abundantly found in RBC ?

A. Carbonic anhydrase

B. Hemoglobin

C. Albumin

D. Thrombinase

Answer: A

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109. Combination of haemoglobin with O_2 in lungs can be promoted by

A. Decreasing O_2 concentration in blood

B. Increasin O_2 concentration in air

C. Increasing CO_2 concentration in air

D. Decreasing CO_2 concentration in air.

Answer: B

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110. SARS is caused by the variant of

A. Pneumococcus pneumonia

B. Common cold coronavirus

C. Asthma

D. Brochitis

Answer: B

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111. Pleurisy is the disease of

A. Liver

B. Heart

C. Lungs

D. Kidneys .

Answer: C

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112. At higher altitudes, a man suffers much from

A. Cold

B. Oxygen deficiency

C. Higher atmospheric pressure

D. Ultraviolet radiations.

Answer: B

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113. Tuberculosis is mas is caused by

A. Tuberculosis virus

B. Streptococci

C. Staphylococci

D. Tuberculosis bacillus.

Answer: D

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114. Asthma is a respiratory disease caused by:

A. Infection of lungs

B. Tracheal infection

C. Bleeding in the pleural cavity

D. Cramps in the bronchial muscles obstructing the air passage.

Answer: D

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115. The exchange of gases in the alveoli of the lungs takes place by

A. Active transport

B. Osmosis

C. Simple diffusion

D. Passive trasport .

Answer: C

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116. vocal cords are situated at

A. Pharynx

B. Larynx

C. Glottis

D. Bronchial tube

Answer: B

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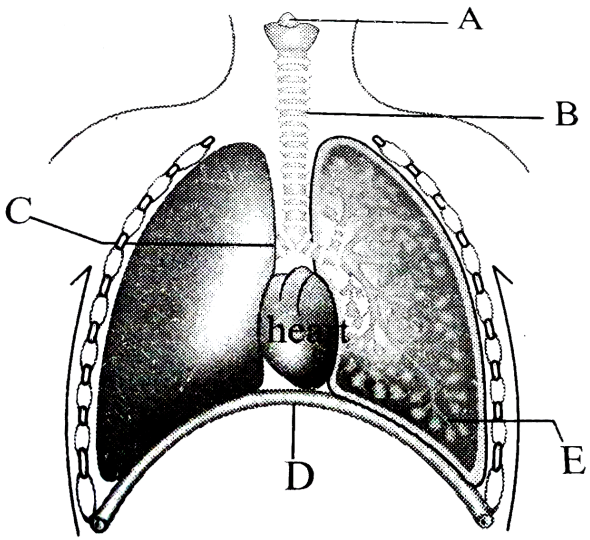
117. Identify A,B,C,D and E in the diagram (Fig-17.13) of human respiratory system.



Choose the correct option.

A. A-Epiglottis, B-Trachea, C-Glottis, D-Diaphragm,E-Bronchiole

B. A-Glottis, B-Trachea, C-Bronchus,D-Diaphragm, E-Bronchiole

C. A-Adams apple, B-Trachea,C-Bronchus,D-Diaphragm,E-Bronchiole

D. A-Epiglottis,B-Trachea,C-Bronchus, D-Diaphragm, E-Bronchiole.

Answer: A

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118. Adam's Apple represents

A. Arytenoid cartilage of larynx

B. Cricoid cartilage of larynx

C. Thyroid cartilage of larynx

D. All the above.

Answer: C

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119. The respiratory centre in the brain is stimulated by

A. Carbon dioxide content in venous blood

B. Carbon dioxide content in oxygentated blood

C. Oxygen content in venous blood

D. Oxygen content in arterial blood.

Answer: B

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120. Carbon dioxide entering erythrocytes reacts with wwater to form carbonic acid.The enzyme

A. Carbonic anhydrase

B. Carboxypeptidase

C. Hydrolase

D. Oxidoreductase.

Answer: A

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121. Arytenoid cartilage occurs inÂ

A. Hyoid

B. Sternum

C. Larynx

D. Nose

Answer: C

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122. During expiration, the diaphragm becomes

A. Oblique

B. Normal

C. Flattened

D. Dome-shaped

Answer: D

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123. Exchange of bicarbonates and chloride ions between RBC and plasma is called : –

A. Chloride shift

B. Bohr's effect

C. Haldane's effect

D. Intra cellular respiration

Answer: A

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124. When CO_2 concentration in blood increases breathing becomes

A. There is no effect on breathing

B. Slow and deep

C. Faster

D. Shallower and slow

Answer: C

Watch Video Solution

125. When CO_2 concentration in blood increases breathing becomes

A. Increase

B. Decrease rapidly

C. Stop

D. Remain unchanged

Answer: A

Watch Video Solution

126. Hering-Breuer reflex related to : —

A. Effect of pH on respiratory center

B. Effect of CO_2 on respiratory center

C. Effect of nerves on respiratory center

D. Effect of temperature on respiratory center

Answer: C

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127. The toxic effect of carbon monoxide is due to its greater affinity for haemoglobin as compared to

oxygen approximately by

A. 2 time

B. 20 times

C. 2000 times

D. 200-300 times

Answer: D

Watch Video Solution

128. CO_2 is transported mainly as : —

A. Plasma

B. Carbonic acid

C. Bicarbonate

D. Carboxyhemoglobin

Answer: C

Watch Video Solution

129. By which mechanism, oxygen is released out from lungs to cells

A. Diffusion

B. Facilitated diffusion

C. Transpiration

D. Osmosis

Answer: A

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130. Why is CO poisonous for man ?

A. CO effects the nerves of the lungs.

B. CO affects the diaphragm and intercostal muscles.

C. CO reacts with oxygen reducing percentage of O_2 in air.

D. Hemoglobin combines with CO instead O_2 and the product cannot dissociate.

Answer: D

Watch Video Solution

131. Hamburger phenomenon is also known as

A. Bicarbonate shift

B. Chloride shift

C. Potassium shift

D. All of these

Answer: B

Watch Video Solution

132. Haemoglobin is having maximum affinity with

A. Carbon monoxide

B. Carbon dioxide

C. Oxygen

D. Ammonia

Answer: A

Watch Video Solution

133. Dissociation curve shifts to the right when

A. CO_2 concentration decrease

B. CO_2 concentration increases

C. O_2 concentration decrease

D. Cl^- concentration increases

Answer: B

Watch Video Solution

134. The epithelium of bronchioles is

A. Pseudostratified and columnar

B. Sqamous and sensory

C. Pseudostratified and sensory

D. Cuboidal and columnar .

Answer: B

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135. If a man from sea coast goes to Everest peak then

A. His breathing and heart beat will increase

B. His breathing and heart will decrease

C. His respiratory rate will decrease

D. His heart beat will decrease

Answer: A

136. the structre which prevents the entry of food into respiratory is

A. Gullet

B. Glottis

C. Tonsil

D. Epiglottis

Answer: D

Watch Video Solution

137. Carbonic anhydrase is found in high concentration in

A. Leucocytes

B. Blood plasma

C. Erythrocytes

D. Lymphocytes

Answer: C

Watch Video Solution

138. What would happen if human blood becomes acidic (low pH) ?

A. Oxygen - carrying capacity of hemoglobin increases.

B. Oxygen-carrying capacity of hemoglobin decreases.

C. RBCs count increases.

D. RBCs count decreases.

Answer: B

Watch Video Solution

139. Which of the following is correct regarding respiration ?

A. No organism can live without respiration.

B. It takes place at every time day and night.

C. It involves production of carbon dioxide and water.

D. All of these

Answer: D

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140. Respiratory coefficient is

A. The amount of CO_2 produced to O_2 utilized.

B. The amount of O_2 obtained to the amount of O_2 consumed.

C. Always more than one.

D. Always less than one.

Answer: A

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141. Dyspnea is the

A. Normal breathing

B. Difficult breathing

C. Rapid breathing

D. Stage without breathing

Answer: B

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142. Oxygen carrier or the respiratory pigment in blood of frog and other vertebrates is

A. Hemocyanin

B. Cytochorme

C. Hemoglobin

D. None of these

Answer: C

Watch Video Solution

143. Although much CO_2 is carried in blood, yet blood does not become acidic, because

A. Neutralization of H_2CO_3 by Na_2CO_3

B. Absorption by leucocytes

C. Blood buffers

D. Non- accumulation

Answer: C

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144. The respiratory center , which regulates respiration, is located in

A. Cerebral penduncle

B. Vagus nerve

C. Pons

D. Medulla oblongata

Answer: D

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145. Respiration mechanism is controlled by

A. Central nervous system

B. Sympathetic nervous system

C. Parasympathetic nervous system

D. Autonomic nervous system.

Answer: A

Watch Video Solution

146. Low oxygen tension in the blood causes

A. Coughing

B. Yawning

C. Hiccupping

D. Sneezing

Answer: B

Watch Video Solution

147. The dissociation curve is associated with

A. Sigmoid

B. Hyperbolic

C. Straight line

D. Parabolic

Answer: A

Watch Video Solution

148. The affinity of CO with Hb is more than oxygen by

A. 2 times

B. 20 times

C. 200 times

D. 2000 times

Answer: C

Watch Video Solution

149. The exchange of gases in the alveoli of the lungs takes place by

A. Simple diffusion

B. Active transport

C. Passive transport

D. Osmosis

Answer: A

Watch Video Solution

150. there is a membrane covering the lungs , called

A. Pleura

B. Pericardia

C. Peritoneum

D. Mediastinum

Answer: A

Watch Video Solution

151. Hamburger phenomenon is also known as

A. Calcium shift

B. Bohr effect

C. Chloride shift

D. $Na^+ - K^+$ pump

Answer: C

Watch Video Solution

152. Even when there is no air in it, human trachea does not collapse due to the presence of

A. Bony rings

B. Turgid pressure

C. Chitinous rings

D. Cartilaginous rings

Answer: D

Watch Video Solution

153. The movement of true vocal cords in man is controlled by cartilages

A. Arytenoids

B. Cricoid

C. Thyroid

D. Both(1) and (2)

Answer: A

Watch Video Solution

154. The presence of large number of alveoli around alveolar ducts opening into bronchioles in mammalian lungs is

A. Inefficient system of ventilation with little of residual air

B. Inefficient system of ventilation with high percentage of residual air

C. Efficient system of ventilation with no residual air

D. Efficient system of ventilation with little residual air

Answer: D

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155. Exposure to carbon monoxide (from coal gas) is extremely dangerous and can kill a patient because

A. The compound carboxy-hemoglobin is formed with hemoglobin which can gradually clot the

blood resulting in circulatory failure.

B. Caboxy-hemoglobin reduces the ability of blood to transport oxygen by rupturing a vast majority of erythrocyte.

C. Carboxy-hemoglobin greatly modifies the structure of hemoglobin, thus making it lose its affinity for oxygen.

D. The compound formed, carboxy-hemoglobin does not allow RBCs to act for their respiratory function.

Answer: D

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156. Which is correct ?

A. Respiratory centers are not affected by CO_2.

B. In human, vital capacity is just double the expiratory volume.

C. A human lung has 1000 alveoli.

D. During inspiration, the lungs act as suction pump.

Answer: D

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157. In lungs, the air is separated from the venous blood through

A. Squamous epithelium + Endothelium of blood vessel

B. Squamous epithelium + Tunica externa, media, and interna of blood

C. Squamous epithelium+ Basement membrane + Endothelium of blood vessels

D. None of these

Answer: C

Watch Video Solution

158. Intercostal muscles are found attached with

A. Diaphragm

B. Ribs

C. Pleura

D. Lungs

Answer: B

Watch Video Solution

159. Match the disorders given in Column I with symptoms under column II. Choose the answer which gives the correct combination of alphabets with numbers.

	Column-I		Column-II
A.	*Asthma*	i.	Inflammation of nasal tract
B.	*Bronchitis*	ii.	Spasm of tracheal muscle
C.	*Rhinitis*	iii.	Fully blown out alveoli
D.	*Emphysema*	iv.	Inflammation of bronchi
		v.	Cough with blood stained 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

Answer: D

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160. Which one of the following statement is incorrect ?

A. The presence of non-respiratory air sacs increase the efficiency of repiration in birds .

B. In insects, circulating body fluids serve to distribute oxygen to tissues.

C. The principle of countercurrent flow facilitates efficient respiration in gills of fishes .

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

Answer: B

Watch Video Solution

161. Assertion : Carbonic anhydrase is present in the erythrocytes.

Reason : In erythrocytes the carbon dioxide combine with water and is transported.

A. Statement A is correct and is responsible for statement B

B. Statement A is not correct, but statement B is correct.

C. Both statement A and B are wrong .

D. Statement A is correct, but not involved in statement

Answer: A

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162. Carboxyhaemoglobin complex results due to this pollutant:

A. CO_2

B. CO

C. H_2CO_3

D. SO_2

Answer: B

Watch Video Solution

163. One haemoglobin carries how many molecules of O_2 ?

A. 4

B. 2

C. 6

D. 8

Answer: A

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164. Respiration center is present in

A. Cerebellum

B. Cerebrum

C. Medulla oblongata

D. Hypothalamus

Answer: C

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165. After deep inspiration, capacity of maximum expiration of lung is called : —

A. Total lung capacity

B. Functional residual capacity

C. vital capacity

D. Inspiratory capacity

Answer: C

Watch Video Solution

166. Pneumotaxic centre is present on

A. Cerebrum

B. Cerebellum

C. Medulla oblongata

D. Pons varolii

Answer: D

Watch Video Solution

167. The specialty common in the alveoli of lungs and villi of intestine in mammals is that both

A. Provides a large surface area

B. Have ciliated epithelium

C. Are suited for diffusion of gases

D. Have rich supply of blood vessel and lymph ducts

Answer: A

Watch Video Solution

168. During inspiration the diaphragm

A. Relaxes to become dome -shaped

B. contracts and flattens

C. Expands

D. Shows no change

Answer: B

Watch Video Solution

169. The primary sites ofthe gaseous exchange are

A. Tracheoles

B. Alveoli

C. Bronchioles

D. Pulmonary chambers.

Answer: B

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170. Respiration without a distinct respiratory organ occurs in

A. Fish

B. Cockroach

C. Tadpole

D. Earthworm

Answer: D

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171. In lungs there is definiteexchange of ions between RBC and plasma. Removal of CO_2 from blood involves

A. Influx of Cl^- ions into RBC

B. Influx of HCO_3^- into RBC

C. Efflux of Cl^- ions from RBC

D. Efflux of HCO_3^- ions form RBC

Answer: D

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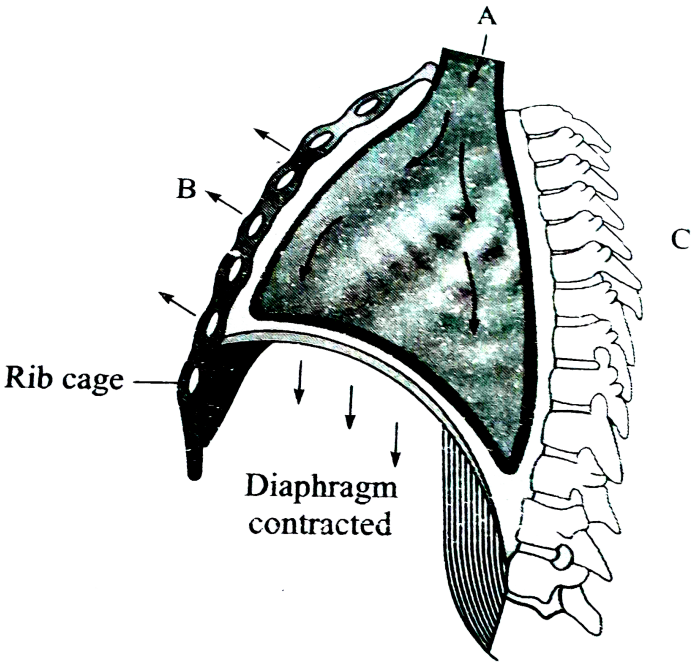
172. In Fig. 17.14, identify what is depicted by A,B and C.



Choose the correct options :

Column-I	Column-I
A	(i) Ribs and sternum raised
B	(ii) Air entering lungs
C	(iii) Volume of the rope increased

A. A-i,B-ii,C-iii

B. A-ii,B-iii,C-i

C. A-i,B-iii,C-ii

D. A-ii,B-i,C-iii

Answer: D

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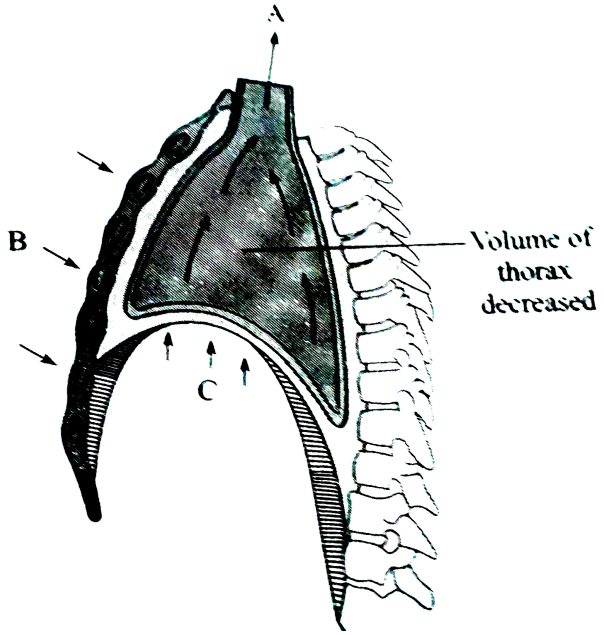
173. what does A,B and C depict ?



A. A- Air goes inside to lungs, B-Ribs and sternum return to original position, C-Diaphragm contracted

B. A-Air expelled from lungs, B- Ribs and sternum return to original position, C-Diaphragm relaxed

and arched upwards.

C. A-Air expelled from lungs, B-Ribs and sternum goes upward, C-Diaphragm relaxed and arched upwards

D. A- Air goes inside from lungs, B- Ribs sternum goes upward, C-Diaphragm relaxed and arched upwards.

Answer: B

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174. The ventilation movements of the lungs in mammals are governed by

A. Diaphragm

B. Coastal muscles

C. Both (1) and (2)

D. None of these

Answer: C

 Watch Video Solution

175.

	Column I		Column II
A.	TV	i.	5800
B.	IRV	ii.	4600
C.	ERV	iii.	2300
D.	RV	iv.	3500
E.	IC	v.	1200
F.	FRC	vi.	1100
G.	VC	vii.	3000
H.	Total lung capacity	viii.	500

A. $\begin{matrix} A & B & C & D & E & F & G & H \\ viii & iv & vi & v & vii & iii & ii & i \end{matrix}$

B. $\begin{matrix} A & B & C & D & E & F & G & H \\ viii & vii & vi & iv & v & iii & ii & i \end{matrix}$

C. $\begin{matrix} A & B & C & D & E & F & G & H \\ viii & vii & vi & iv & v & iii & ii & i \end{matrix}$

D. $\begin{matrix} A & B & C & D & E & F & G & H \\ viii & vii & vi & v & iv & iii & ii & i \end{matrix}$

Answer: D

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176. Floating ribs of the thoracic cage are

A. 1^{st} to 7^{th} pairs

B. 8^{th} to 9^{th} pairs

C. 8^{th} to 10^{th} pairs

D. 11^{th} to 12^{th} pairs

Answer: D

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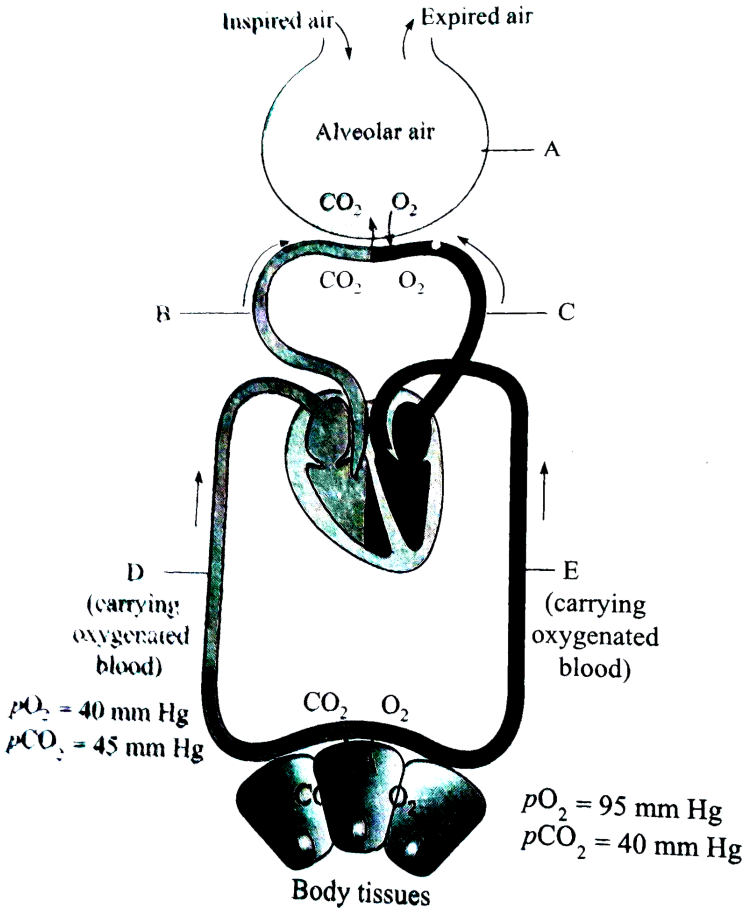
177. Identify A to E choose the correct option accordingly .



A. A-Alveolus, B-Pulmonary artery , C-Pulmonary vein, D-Systemic vein, E-systemic arteries

B. A-Alveolus, B- Pulmonary vein, C- Pulmonary artery, D-Systemic vein, E-systemic arteries

C. A-Alveolus, B-Pulmonary vein, C-Pulmonary artery, D-Systemic arteries, E-Systemic vein

D. A-Alveolus, B-Pulmonary vein, C-Pulmonary artery, D-Systemic arteries , E- Portal vein

Answer: A

 Watch Video Solution

178. Match the disorders given in Column I with symptoms under column II. Choose the answer which

gives the correct combination of alphabets with numbers.

	Column-I		Column-II
A.	Asthma	i.	Inflammation of nasal tract
B.	Bronchitis	ii.	Spasm of tracheal muscle
C.	Rhinitis	iii.	Fully blown out alveoli
D.	Emphysema	iv.	Inflammation of bronchi
		v.	Cough with blood stained sputum

A. $\begin{matrix} A & B & C & D \\ iv & ii & v & i \end{matrix}$

B. $\begin{matrix} A & B & C & D \\ v & iii & ii & i \end{matrix}$

C. $\begin{matrix} A & B & C & D \\ iii & i & v & iv \end{matrix}$

D. $\begin{matrix} A & B & C & D \\ ii & iv & i & iii \end{matrix}$

Answer: D

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179. Identify the correct group of statements.

I. Oxygen is carried by haemoglobin.

II. Oxygen is carried by carbonic anhydrase.

III. CO_2 is carried by haemoglobin

IV. SO_2 is carried by haemoglobin.

V. Only oxygen is transported by the blood.

VI. Only CO_2 is transported by the blood.

Choose the correct option :

A. I and VI

B. II and III

C. IV and V

D. I and III

Answer: D

Watch Video Solution

180. Which of the following statements are true/false

A.The blood transports CO_2 comparatively easily because of its higher solubility

B.Approximately 8.9% of CO_2 is transported being dissovled in the plasma of blood

C. The carbon dioxide produced by the tissues, diffuses passively into the blood stream and passes into red blood corpsucles and react with water to form H_2CO_3

D.The chlorde ions diffuse from palsma into the erythrocytes to maintain ionic balance

A. True False
I,II and V II and IV

B. True False
II and IV I,III and V

C. True False
I,II and IV III and IV

D. True False
III and V I,II and IV

Answer: D

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181. Which of the following equation is correct ?

A. $KHbO_2 + H^+ \underset{RBC}{\Longleftrightarrow} Hb + K + HO_2$

B. $Hb - O_2 \underset{\text{Dissociation in lungs}}{\overset{\text{Association in tissues}}{\longleftrightarrow}} HbHO_2$

C. $Na^+ + HCO_3 \underset{\text{Erythrocyte}}{\Longleftrightarrow} NaHCO_3$

D. $HbO_2 \underset{\text{Association in lungs}}{\overset{\text{Dissociation in tissues}}{\Longleftrightarrow}} Hb + O_2$

Answer: D

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182. Humans have to maintain the moderate respiratory rhythms to suit the demands of the body. For fulfilling that purpose, we have the

Respiratory rhytm centre in medulla =R

Pneumotaxic centre in pons =PT

Chemosensitive area in medulla $= C_1$

Peripheral chmoreceptors in aortic arch and Carotid

artery $= C_2$

Select the correct path for the regulation of respiration.

A. $C_1 \rightarrow \underset{\uparrow}{PT} \rightarrow C_2$
R

B. $PT \rightarrow \underset{\uparrow}{C_2} \rightarrow C_1$
R

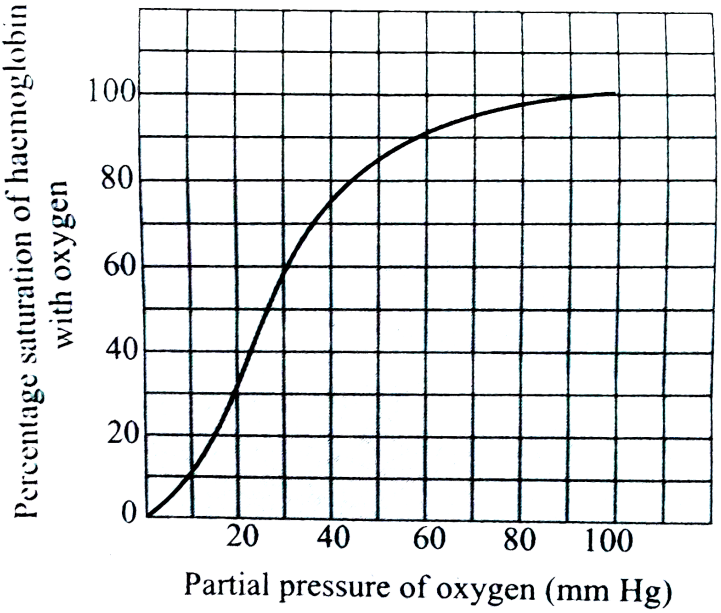
C. $PT \rightarrow \underset{\uparrow}{R} \rightarrow C_2$
C_1

D. $C_2R \rightarrow PT \rightarrow C_1$

Answer: C

View Text Solution

183. Shifting of the curve to right takes place in the case of



A. raise in pCO_2

B. fall in pH

C. raise in temperature

D. All of these

Answer: D

Watch Video Solution

184. Which of the following are correct differences between foetal haemoglobin (Hb-F) and adult haemoglobin (Hb-A) ?

(a) Hb-F has higher affinity for oxygen as compared to Hb-A

(b) The curve of Hb-F occurs towards the left of Hb-A

(c) Hb-F has higher affinity for oxygen as compare to HbA

(d) P_{50} valve of Hb-F is less than P_{50} valve Hb-A

A. a,b,c,d

B. a,b,d

C. a,b,c

D. b,c,d

Answer: C

Watch Video Solution

185. Following is a tabular respresentation of partial pressure (in mmHg) of oxygen and carbon dioxide at different parts involved in diffusion in cmparison to those in atmosphere :

Respiratory gas	Atmospheric air	Alveoli	Blood deoxy-genated	Blood oxygen-ated	Tissues
O_2	A	104	C	95	E
CO_2	0.3	B	45	D	45

Choose from the option which correctly fills up the values A,B,C,D and E

A. $\begin{matrix} A & B & C & D & E \\ 40 & 159 & 40 & 45 & 40 \end{matrix}$

B. $\begin{matrix} A & B & C & D & E \\ 159 & 45 & 40 & 40 & 40 \end{matrix}$

C. $\begin{matrix} A & B & C & D & E \\ 159 & 40 & 40 & 40 & 40 \end{matrix}$

D. $\begin{matrix} A & B & C & D & E \\ 100 & 45 & 40 & 40 & 40 \end{matrix}$

Answer: C

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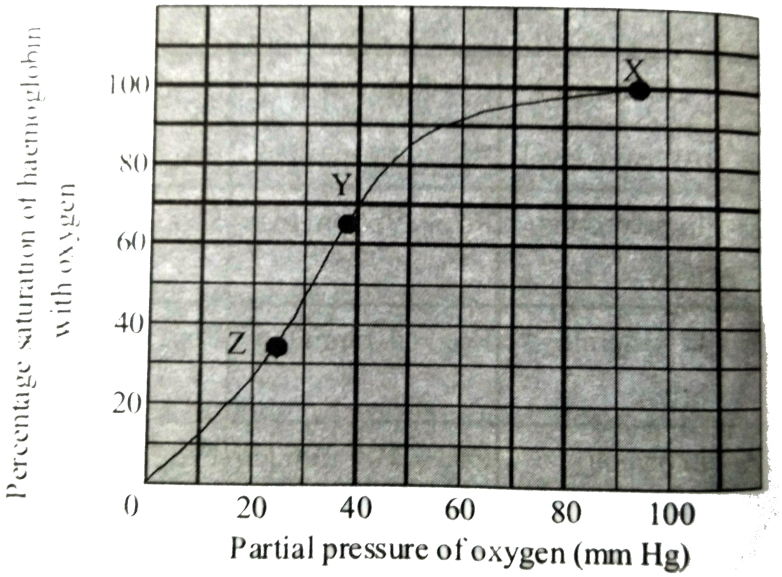
186. Given below graphs an oxygen dissociation curve

: —



Where in the body will haemoglobin be saturation at the percentage shown at points X,Y and Z.

A. X-Pulmonary artery, Y- Pulmonary vein, Z-carotid artery

B. X-Systemic artery, Y-Pulmonary artery, Z-Pulmonary vein

C. X- Pulmonary vein, Y-Systemic vein, Z-Systemic vein during exercise

D. X-Left ventricle, Y-Right ventricle, Z-Systemic artery

Answer: C

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187. Find out the correct match from the following table:

	Column-I	Column-II	Column-III
(i)	Tidal Volume (TV)	(EC – ERV)	500 mL
(ii)	Expiratory reserve volume (ERV)	(VC – IRV – TV)	3000 mL
(iii)	Vital capacity (VC)	IRV + ERV + RV	4500 mL
(iv)	Residual volume (RV)	FRC – ERV	1200 mL

A. (i) and (ii)

B. (i),(ii) and (iv)

C. (i),(ii) and (iii)

D. (i) and (iv)

Answer: D

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188. Which of the following statement is not correct ?

A. Formation of oxyhaemoglobin is a process of oxidation

B. Every 100 mL of oxygenated blood can deliver around 5 mL of O_2 tissue under physiological condition

C. Dissociation curve is curve between percentage saturation of Hb with oxygen and partial pressure of oxygen.

D. High concentration of CO_2 actives dissociation of oxyhaemoglobin is called Bohr's effect.

Answer: A

Watch Video Solution

189. In lungs there is definiteexchange of ions between RBC and plasma. Removal of CO_2 from blood involves

A. efflux of Cl^{Θ} ions from RBC.

B. influx of Cl^{Θ} ion into RBC.

C. influx of HCO_3^{Θ} ions into Plasma

D. efflux of HCO_3^{Θ} ions from RBC.

Answer: A

Watch Video Solution

190. A person suffers punctures in his chest cavity in an accident, without any damage to the lungs its effect could be

A. Reduced breathing rate

B. Rapid increase in breathing rate

C. No change in respiration

D. Cessation of breathing.

Answer: D

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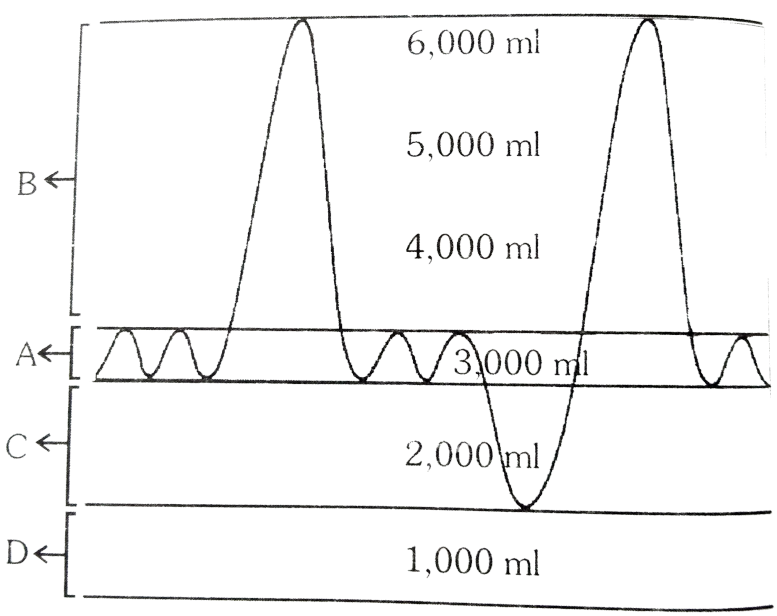
191. Given figure is showing spirogram of pulmonary volumes and capacities



Which represent expiratory reserve volume : —

A. A

B. B

C. C

D. D

Answer: C

Watch Video Solution

192. Assertion: Pneumotaxic center controls the rate of respiration .

Reason: Primarly, it controls the switch off point of inspiration.

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

B. If both Assertion and Reason are true ,but the Reason is not the correct explanation of the Assertion.

C. If Assertion is true, but Reason is false

D. If both Assertion and Reason are false.

Answer: A

Watch Video Solution

193. Assertion: Asthmatic patients use bronchodilator drugs as well as inhalers for symptomatic relief .

Reason : Asthma is characterized by the spasm of

smooth muscles in the wall of bronchioles due to allergen.

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

B. If both Assertion and Reason are true ,but the Reason is not the correct explanation of the Assertion.

C. If Assertion is true, but Reason is false

D. If both Assertion and Reason are false.

Answer: A

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194. Assertion : — Major part of CO_2 is transported in the form of sodium bicarbonate.

Reason : — 0.3 ml of CO_2 is transported per 100ml of blood in dissolved state in plasma of blood.

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

B. If both Assertion and Reason are true ,but the Reason is not the correct explanation of the Assertion.

C. If Assertion is true, but Reason is false

D. If both Assertion and Reason are false.

Answer: B

Watch Video Solution

195. Assertion: In cockroaches, inspiration is a passive process.

Reason: The expansion of abdominal cavity allows the space of expansion of tracheal trunk. As a result, air enter through spiracle.

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

B. If both Assertion and Reason are true ,but the Reason is not the correct explanation of the Assertion.

C. If Assertion is true, but Reason is false

D. If both Assertion and Reason are false.

Answer: A

 Watch Video Solution

196. Assertion: The diffusion of carbon dioxide is 20 times faster then oxygen.

Reason: It is due to difference in partial pressure as well as solubility of diffusing gases .

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

B. If both Assertion and Reason are true ,but the Reason is not the correct explanation of the Assertion.

C. If Assertion is true, but Reason is false

D. If both Assertion and Reason are false.

Answer: A

Watch Video Solution

197. Assertion: Oxidation of nutrients releases bond energy

Reason : Oxidation of nutrients is done by using molecular oxygen.

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

B. If both Assertion and Reason are true ,but the Reason is not the correct explanation of the Assertion.

C. If Assertion is true, but Reason is false

D. If both Assertion and Reason are false.

Answer: B

Watch Video Solution

198. Assertion : Aerobic respiration involves the exchange of respiratory gases twice.

Reason : Exchange occurs from lung to heart and then heart to lung.

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

B. If both Assertion and Reason are true ,but the Reason is not the correct explanation of the Assertion.

C. If Assertion is true, but Reason is false

D. If both Assertion and Reason are false.

Answer: C

Watch Video Solution

199. Assertion: Respiratory gas exchange occurs through osmosis.

Reason: Respiratory gas goes from lower partial pressure region to the region of higher partial pressure.

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

B. If both Assertion and Reason are true ,but the Reason is not the correct explanation of the

Assertion.

C. If Assertion is true, but Reason is false

D. If both Assertion and Reason are false.

Answer: D

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200. Assertion: The first step of gas exchange occurs through body surface in some animals.

Reason: Body surface or membrane of amphibia is thick in nature.

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

B. If both Assertion and Reason are true ,but the Reason is not the correct explanation of the Assertion.

C. If Assertion is true, but Reason is false

D. If both Assertion and Reason are false.

Answer: C

Watch Video Solution

201. Assertion: Abdominal muscles is related with respiration in animals.

Reason: Relaxation of abdominal muscles draws in air.

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

B. If both Assertion and Reason are true ,but the Reason is not the correct explanation of the Assertion.

C. If Assertion is true, but Reason is false

D. If both Assertion and Reason are false.

Answer: A

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Archives

1. Which one of the following mammalian cells is not capable of metabolising glucose to carbon-dioxide aerobically ?

A. Red blood cells

B. White blood cells

C. Unstriated muscle cells

D. Liver cells

Answer: A

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2. listed below are four respiratory capacities (A-D) and four jumbled respiratory volumes of a normal human adult

Respiratory capacities	–	Respiratory volumes
Residual volume	–	2500 mL
Vital capacit	–	3500 mL
Inspiratory reserve volume	–	$1200mL$
Inspiratory capacity	–	$4500mL$

Which one of the following is the correct matching of two capacities and volumes

A. (a) 4500 mL, (b) 3500 mL

B. (b) 2500 mL ,(c) 4500 mL

C. (c) 1200 mL ,(d) 2500 mL

D. (d) 3500 ml ,(a) 1200mL

Answer: C

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3. Which of the following statement is true about RBCs in humans?

A. They do not carry CO_2 at all

B. They carry about $20 - 25\ \%\ of CO_2$

C. They transport $99.5\ \%\ of O_2$

D. They transport about 80% oxygen only and the rest

Answer: B

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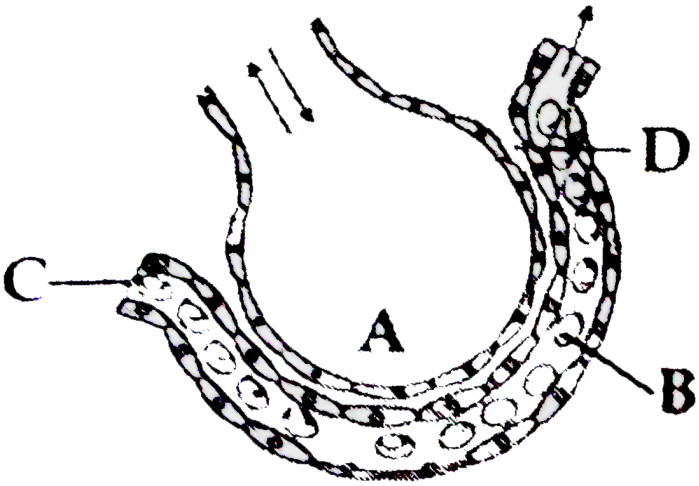
4. The figure given below shows a small part of human lung where exchange of gases takes place. In which one of the option given below, the one part A, B, C or D

is correctly identified along with its functions



A. B: red blood cell - transport of CO_2 mainly

B. C: arterial capillary - passes oxygen to tissues

C. A: alveolar cavity - main site of exchange of respiratory gases

D. D: capillary wall - exchange of O_2 and CO_2 takes place here

Answer: C

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5. A large proportion of oxygen is left unused the human blood even after its uptake by the body tissue. This O_2

A. help in releasing more O_2 to the epithelial tisses

B. acts as a reserve during muscular exercise

C. raises the pCO_2 of blood to 75 mm of Hg

D. is enough to keep oxyhaemoglobin saturation at 96%

Answer: B

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6. People who have migrated from the planes to an area adjoining Rohtang pass about six months back

A. Suffer from altitudes sickness with symptoms like nausea, fatigue, etc.

B. Have the usual RBC count but their haemoglobin has very high binding affinity to O_2.

C. Have more RBCs and their haemoglobin has a lower binding affinity to O_2.

D. Are not physically fit to play games like football

Answer: C

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7. Which one of the following is the incorrect statement for respiration in humans ?

A. Neural signals from pneumotoxic center in pons region of brain can increase the duration f inspiration

B. Workers in griding and ston-breaking industries may suffer from lung fibrosis.

C. About 90% of carbon dioxide (CO_2) is carried by hemoglobin as carbamino-hemoglobin.

D. Cigarette smoking may lead to inflmmation of bronchi.

Answer: B

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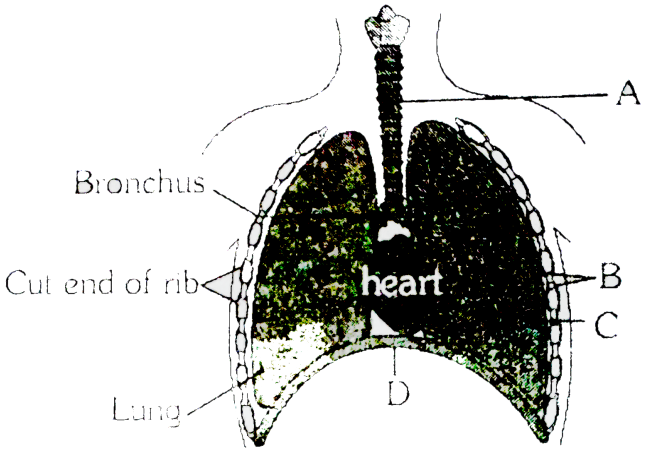
8. the figure shows a diagrammatic view of human respiratory system with labels A, B , C and D . Select the option which given correct identification and main

function and / or characteristic



A. B-Pleural membrane - Surrounds ribs on both sides to provide cushion against rubbing.

B. C-Alveoli -Thin-walled vascular bag-like structures for exchange of gases.

C. D-Lower end of lungs -Diaphragms pulls it down during inspiration.

D. A- Trachea-Long tueb supported by complete cartilaginous rings for conducting inspired air.

Answer: B

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9. Approximately seventy percent of carbon dioxide absorbed by the blood will be transported to the lungs

A. as bicarbonate ions

B. in the form of dissolved gas molecules

C. by binding to R.B.C.

D. as carbaminohaemoglobin

Answer: A

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10. When you hold your breath, which of the following gas changes in blood would first lead to the urge to breathe

A. rising CO_2 and fallling O_2 concentration

B. falling O_2 concentration

C. rising CO_2 concentration

D. falling CO_2 concentration

Answer: C

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11. In which disease, due to flattening of tracheal vessels, alveoli are deprived of oxygen

" " Or

Name the pulmonary disease in which alveolar surface area involved in gas exchange is drastically reduced due to damage in the alveolar walls

A. Asthma

B. Pleurisy

C. Emphysema

D. Pneumonia

Answer: C

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12. Name the chronic respiratory disorder caused mainly by cigarette smoking

A. Emphysema

B. Asthma

C. Respiratory acidosis

D. Respiratory alkalosis

Answer: A

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13. Asthma may be attributed to

A. bacterial infection of the lungs

B. allergic reaction of the mast cells in the lungs

C. inflammation of the trachea

D. accumulation of fluid in the lungs

Answer: B

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14. The partial pressure of oxygen in the alveoli of the lungs is

A. Less than that in the blood

B. Less than that of carbon dioxide

C. Equal to that in the blood

D. More than that in the blood.

Answer: D

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15. Lungs do not collapse between breaths some air always remains in the lungs which can never be expelled because

A. There is a positive intrapleural pressure

B. Pressure in the lungs in higher than the atmospheric pressure.

C. There is a negative pressure in the lungs.

D. There is a negative interapleural pressure pulling at the lung walls.

Answer: D

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