



BIOLOGY

BOOKS - NEET PREVIOUS YEAR (YEARWISE + CHAPTERWISE)

Breathing and Respiration

Exercise

1. Lungs are made up of air-filled sacs, the alveoli . They do not collapse even after forceful expiration because of

A. Residual volume (RV)

B. Inspiratory Reserve volume (IRV)

C. Tidal volume (TV)

D. Expiratory reserve volume (ERV)

Answer: A



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

A. ashtma

B. repiratory acidosis

C. respiratory alkalosis

D. emphysema

Answer: D



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3. Reduction in pH of blood will

A. reduce the blood supply to the brain

B. decreases the affinity of haemoglobin with
oxygen

C. release bicarbonate ions by the liver

D. reduce the rate of heartbeat

Answer: B



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

- A. there is a negative pressure in the lungs
- B. there is an negative intrapleural pressure pulling
at the lung walls
- C. there is a positive intrapleural pressure

D. pressure in the lungs is higher than the atmospheric pressure

Answer: B



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

- A. equal to that in the blood
- B. more than that in the blood
- C. less than that in the blood
- D. less than that of carbon dioxide

Answer: B



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6. 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. pleurissy
- B. Emphysema
- C. Pneunonia

D. Asthma

Answer: B



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

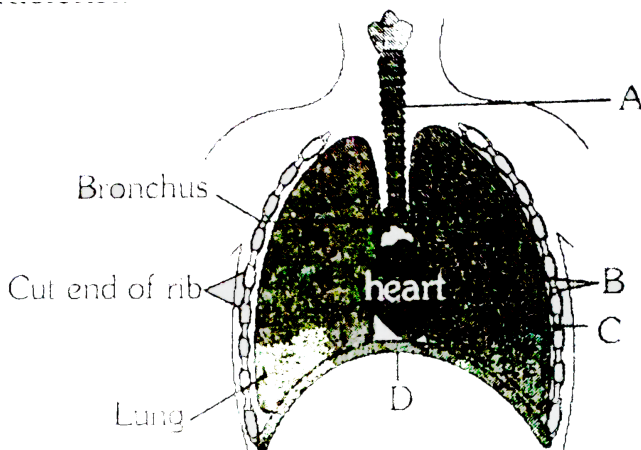
- A. as bicarbonate ions
- B. in the form of dissolved gas molecules
- C. by binding to RBC
- D. as carbaminohaemoglobin

Answer: A



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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. A trachea long tube supported by complete cartilaginous rings for conducting inspired air
- B. B-pleural membrane surround ribs on both sides to provide cushion against rubbing
- C. C-alveoli thin walled vascular bag like structures for exchange of gases
- D. D-lower end of lungs diaphragm pulls it down during inspiration

Answer: C



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

A. Cigarette smoking may lead to inflammation of bronchi

B. Neural signals from pneumotoxic centre in pons region of brain can increase the duration of inspiration

C. Workers in grinding and stone breaking industries may suffer from lung fibrosis

D. About 90% of carbon dioxide (CO_2) is carried by haemoglobin as carbamino haemoglobin

Answer: C



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

- A. have more RBCs and their haemoglobin has a lower binding affinity to O_2
- B. are not [hyusically fit to play games like football]
- C. suffer form altitude suckness with symptoms like nausea fatigue etc.

D. I have the usual RBC count but their haemoglobin has very high binding affinity to CO_2

Answer: A



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11. Two friends are eating together on a dinning table. One of them suddenly starts coughing while swallowing some food. This coughing would have been due to improper movement of

A. diaphragm

B. neck

C. tongue

D. epiglottis

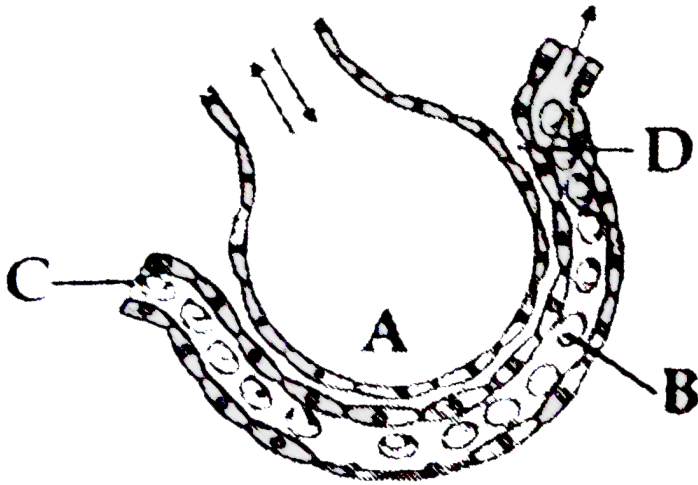
Answer: D



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12. 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. A-alveolar cavity-main site of exchange of respiratory gases

B. D-capillary wall - exchange of gases takes place here

C. B- Red blood cell - transport of mainly haemoglobin

D. C- Artrial capillary- passes oxygen to tissues

Answer: A



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13. 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. (2)2500 mL.(3) 4500 mL

B. (3) 1200 mL.(4)2500 mL

C. (4) 3500 mL, (1) 1200 mL

D. (1) 4500 mL, (2) 3500 mL

Answer: C



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14. Which two of the following changes ususally tend to occur in the plain dwellers when they move to high altitudes (3500 m or more)?

A. 2 and 3

B. 3 and 4

C. 1 and 4

D. 1 and 2

Answer: A



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15. the haemoglobin of a human foetus

A. has a lower affinity for oxygen than that of the
adult

- B. its affinity for oxygen is the same as that of an adult
- C. has only 2 protein sub units instead of 4
- D. has a higher affinity for oxygen than that of an adult

Answer: D



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16. what is vital capacity of our lungs

- A. inspiratory reserve volume plus tidal volume

B. Total lung capacity minus expiratory reserve volume

C. Inspiratory reserve volume plus expiratory reserve volume

D. Total lung capacity minus residual volume

Answer: D



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17. People living at sea level have around 5 million RBC per cubic millimetre of their blood whereas those

living at an altitude of 5400 metres have around 8 million. This is because at high altitude.

A. atmospheric O_2 level is less and hence more RBC are needed to absorb the required amount of O_2 to survive

B. there is more UV radiation which enhances RBC production

C. people eat more nutritive food therefore more RBC are formed

D. people get pollution free air to breathe and more oxygen is available

Answer: A



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18. Blood analysis of a patient reveals an unusually high quantity of carboxyhaemoglobin content which of the following conclusions is most likely to be correct

A. The patient has been inhaling polluted air containing unusually high content of carbon disulphide

B. The patient has been inhaling polluted air containing unusually high content of chloroform

C. The patient has been inhaling polluted air containing unusually high content of carbon dioxide

D. The patient has been inhaling polluted air containing unusually high content of carbon monoxide

Answer: D



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19. When CO_2 concentration in blood increases breathing becomes

- A. shallower and slow
- B. there is no effect on breathing
- C. slow and deep
- D. faster and deeper

Answer: D



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20. The process of migration of chloride ions from plasma to RBC and of carbonate ions from RBC to plasma is

- A. chloride shift

B. ionic shift

C. atomic shift

D. Na^+ pump

Answer: A



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21. Which one of the following organs in the human body is most affected due to shortage of oxygen?

A. intestine

B. skin

C. kidney

D. Brain

Answer: D



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

A. simple diffusion

B. osmosis

C. active transport

D. passive transport

Answer: A



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23. In alveoli of the lungs the air at the site of gas exchange is separated from the blood by

- A. alveolar epithelium only
- B. alveolar epithelium and capillary endothelium
- C. alveolar epithelium capillary endothelium and tunica adventitia
- D. alveolar epithelium capillary endothelium a thin layer of tunica media and tunica adventitia

Answer: B



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24. Which one of the following statement about blood constituents and transport of respiratory gases is most accurate?

A. RBCs transport oxygen whereas WBCs transport

CO_2

B. RBCs transport oxygen whereas plasma

transports only CO_2

C. RBCs as well as WBC transport both oxygen and

CO_2

D. RBCs as well as plasma transport both oxygen

and CO_2

Answer: D



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25. The quantity 1500 mL in the respiratory volumes of a normal human adult refers to

A. maximum air that can be breathed in and
breathed out

B. residual volume

C. expiratory reserve volume

D. Total lung capacity minus residual volume

Answer: B



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26. At high altitude the RBCs in the human blood will

A. increase in size

B. decrease in size

C. increase in number

D. decrease in number

Answer: C



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27. The carbon dioxide is transported via blood to lungs mostly

- A. dissolved in blood plasma
- B. in the form of carbonic acid only
- C. in combination with haemoglobin only
- D. carbaminohaemoglobin and as carbonic acid

Answer: D



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

A. it is absorbed by the leucocytes

B. blood buffers play an important role in CO_2 transport

C. it combines with water to form H_2CO_3 which is neutralised by Na_2CO_3

D. it is continuously diffused through tissues and is not allowed to accumulate

Answer: B



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29. Air is breathed through

A. trachea-lungs-larynx -pharynx-alveoli

B. nose-larynx -pharynx -bronchus-alveoli-
bronchioles

C. nostrils-pharynx-larynx-trachea-bronchi-

bronchioles -alveoli

D. nose-mouth-lungs

Answer: C



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30. Oxygen dissociation curve of haemoglobin is

A. sigmoid

B. hyperbolic

C. linear

D. hypobolic

Answer: A



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31. Carbon dioxide is transported from tissues to respiratory surface by only

A. plasma and erythrocytes

B. plasma

C. erythrocytes

D. erythrocytes and leucocytes

Answer: A



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32. Carbonic anhydrase is mostly active in

- A. lymphocytes
- B. blood plasma
- C. RBC
- D. leucocytes

Answer: C



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33. Skin is an accessory organ of respiration in

A. human

B. frog

C. rabbit

D. lizard

Answer: B



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34. The alveolar epithelium in the lung is

A. non ciliated columnar

B. non cillated squamous

C. cillated columnar

D. cillated squamous

Answer: B



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