DPP
DAILY PRACTICE PROBLEMS

Class : XIth **Subject : BIOLOGY**
Date : **DPP No. : 2**

Topic :- Breatjing and Exchange of Gases

1. Site of aerobic respiration in higher organisms is/are
   a) Golgi apparatus b) Mitochondria c) Both (a) and (b) d) Lungs

2. The total thickness of the diffusion membrane of alveolus capillary is
   a) Less than 1 cm b) Less than 2 cm c) Less than 1 mm d) More than 1 mm

3. During expiration, the diaphragm becomes
   a) Dome-shaped b) Oblique c) Normal d) Flattened

4. Which fact suggests that most oxygen is transported from lungs to the tissues combined with haemoglobin rather than dissolved in blood plasma?
   a) Oxygen carrying capacity of whole blood is much higher than that of plasma and oxygen content of blood leaving the lungs is greater than that of blood entering the lungs
   b) Haemoglobin can combine with oxygen
   c) Oxyhaemoglobin can dissociate into haemoglobin and oxygen
   d) Increase in carbon dioxide concentration decreases the oxygen affinity of haemoglobin

5. A large proportion of oxygen is left unused in the human blood even after its uptake by the body tissues. This O_2
   a) Raises the p_{CO_2} of blood to 75 mm of Hg
   b) Is enough to keep oxyhaemoglobin
   c) Helps in releasing more O_2 to the epithelial tissues
   d) Acts as a reserve during muscular exercises

6. Which of the following statement is true regarding the human respiratory system?
   a) Tracheal rings are of hyaline cartilage
   b) Dorsal side of the thoracic chamber is formed by sternum
   c) Expiration occurs when there is negative pressure in the lungs
   d) Inspiration occurs when there is positive pressure in the lungs

7. When the nutrients are oxidised without using molecular O_2 called ...A... in yearst glucose formed ...B... and CO_2. Endoparasite also respire ...C... . It gives low energy.
Choose the correct option for A, B and C
a) A-fermentation, R-ethyl alcohol, C-anaerobically
b) A-fermentation, B-methyl alcohol, C-anaerobically
c) A-fermentation, B-alcohol, C-aerobically
d) A-fermentation, B-ethyl alcohol, C-aerobically

8. The ventilation movements of the lungs in mammals is governed by
a) Diaphragm b) Coastal muscles c) Both (a) and (b) d) None of these

9. CO_2 diffuses into ...A... and forms HCO_3^- and H^+. At the ...B... site where pCO_2 is low, the reaction proceeds in the opposite direction.
Thus, CO_2 is trapped as ...C... at the tissue level and transported to alveoli is released out as ...D...
Select the right choice for A, B, C and D to complete the given NCERT statement
a) A-WBC, B-diffusion, C-carbonate, D-O_2 b) A-RBC, B-alveolar, C-bicarbonate, D-CO_2
c) A-RBC, B-alveolar, C-bicarbonate, D-O_2 d) A-RBC, B-alveolar, C-carbonate, D-CO_2

10. Lungs have a large number of narrow tubes called
a) Alveoli b) Bronchi c) Bronchioles d) Tracheae

11. Conducting part of the respiratory system comprises
a) External nostrils upto the terminal bronchioles b) Internal nostrils upto trachea
c) Epiglottis upto trachea d) Larynx upto bronchi

12. Arrange the given steps of respiration mechanism in the order, they occur in the human body
I. Breathing or pulmonary ventilation
II. Diffusion across the alveolar membrane
III. Transport of gases by blood
IV. Utilisation of O_2 by cells
V. Diffusion of O_2 and CO_2 between blood and tissues
Choose the correct option
a) I → II → III → IV → V b) I → II → III → V → IV c) I → III → II → V → IV d) I → III → II → IV → V

13. How many layers are present in the diffusion membrane of alveolus capillary?
a) 5 b) 3 c) 2 d) 4

14. 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) Carbon disulphide the patient has been inhaling polluted air containing usually high content of
    b) Chloroform the patient has been inhaling polluted air containing usually high content of
    c) Carbon dioxide the patient has been inhaling polluted air containing usually high content of
    d) Carbon monoxide the patient has been inhaling polluted air containing usually high content of
15. What happens in Hamburger shift?
    a) HCO_3^- ions move out from plasma and Cl^- ions enters into RBC
    b) CO_3^- ions move out from plasma and Cl^- ions enters into RBC
    c) H^+ ions move out from plasma and Cl^- ions enters into RBC
    d) HCO_3 ions move out from plasma and H^+ ions enters into RBC
16. Correct sequence of the air passage in humans is
    a) Nose → Larynx → Pharynx → Bronchioles → Alveoli
    b) Nose → Pharynx → Larynx → Bronchioles → Bronchi
    c) Nose → Pharynx → Larynx → Bronchioles → Trachea
    External nostril → Nasal passage → Internal nostril → Pharynx → Larynx → Trachea →
    d) Bronchi Bronchiole → Alveoli
17. By which mechanism, oxygen is transported from lungs to cells?
    a) Diffusion b) Facilitated diffusion c) Transpiration d) Osmosis
18. $CO_2 + H_2O \overset{A}{\rightleftharpoons} H_2CO_3 \overset{B}{\rightleftharpoons} HCO_3^- + H^+$
    Name the enzymes A and B in the above equation
    a) A-Carbonic anhydrase, B-Carbonic hydratase
    b) A-Carbonic hydratase, B-Carbonic anhydrase
    c) A-Carbonic anhydrase, B-Carbonic anhydrase
    d) A-Carbonic hydratase, B-Carbonic hydratase
19. The movement of chloride ions into erythrocytes from the plasma to maintain osmotic balance during transport of gases is known as
    a) Chlorination b) Hamburger phenomenon
    c) Bicarbonate shift d) Carbon dioxide transport
20. Actual site of exchange of gases in the lungs is
    a) Alveoli b) Pleura c) Bronchioles d) Tracheoles