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**TARGET : NEET (UG) 2024**

**Course : SARANSH (Youtube Live CRASH COURSE)**

**BIOLOGY**

**DPP**

**DAILY PRACTICE PROBLEMS**

**DPP NO. 1**

**ZOOLOGY: BREATHING AND EXCHANGE OF GASES**

**DPP No. : 1**

- Select the **correct** statement w.r.t. regulation of respiration
  - Role of oxygen in regulation of respiratory rhythm is insignificant
  - Chemosensitive area is highly sensitive to  $O_2$  and hydrogen ions
  - Medulla region of the brain has Pneumotaxic centre
  - Respiratory rhythm centre is the pons varolli region of brain can reduce duration of inspiration
- Respiratory organs in scorpions are
  - gills
  - book lungs
  - skin
  - book gills
- In which of the following gaseous exchange between  $O_2$  and  $CO_2$  occurs through general body surface?
  - sponges
  - coelentrates
  - flatworms
  - All
- Emphysema is characterized by
  - destruction of alveolar wall
  - pulmonary haemorrhage
  - Increased number of air sacs
  - Infection of *Mycobacterium trabeculae*
- Trachea divides into right and left primary bronchi at \_\_\_ thoracic vertebra.
  - 4
  - 5
  - 6
  - 9
- The trachea is prevented from collapsing by the presence of the \_\_\_\_\_ rings
  - Striated muscles
  - cartilage
  - bony
  - sinus
- Additional muscles for forceful breathing are
  - Diaphragm and external intercostal muscles
  - Abdominal muscles and internal intercostal muscles
  - Diaphragm and abdominal muscles
  - External and internal intercostal muscles
- During inspiration, the muscles of diaphragm
  - Contract to make the diaphragm dome shaped
  - Contract to make the diaphragm flat
  - Relax to make the diaphragm dome shaped
  - Relax to make the diaphragm flat
- Identify the **incorrect** statement w.r.t. mechanism of breathing
  - Inspiration in mammals is an active process
  - Inspiration can occur if intra-pulmonary pressure is more than the atmospheric pressure
  - Expiration can occur if intra-pulmonary pressure is higher than the atmospheric pressure
  - Inspiration is initiated by the contraction of diaphragm



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10. Volume / capacity of air remaining in lungs after maximum respiratory effect is  
 (1) Vital capacity (2) residual volume (3) Total lung capacity (4) tidal volume
11. Total volume of air a person can inspire after a normal expiration is  
 (1) Expiratory capacity (2) Inspiratory capacity  
 (3) Functional residual capacity (4) Expiratory reserve volume
12. Exchange of gases  
 (1) Occurs between the alveoli and pulmonary blood capillary  
 (2) Occurs between blood and tissues  
 (3) By diffusion  
 (4) All
13. O<sub>2</sub> – Hb dissociation curve may shift to right, when  
 (1) PCO<sub>2</sub> is low, temperature is high and pH is lower than normal  
 (2) PCO<sub>2</sub> and temperature are high and pH is lower than normal  
 (3) PCO<sub>2</sub> and temperature are low and pH is higher than normal  
 (4) PCO<sub>2</sub>, temperature and pH are changed and show higher than normal
14. During oxygen transport the oxyhaemoglobin, at the tissue level liberates oxygen to the cells because in tissue  
 (1) O<sub>2</sub> concentration is high and CO<sub>2</sub> is low  
 (2) O<sub>2</sub> concentration is low and CO<sub>2</sub> is not high  
 (3) O<sub>2</sub> tension is high and CO<sub>2</sub> tension is low  
 (4) O<sub>2</sub> tension is low and CO<sub>2</sub> tension is high
15. What would happen if human blood becomes acidic (low pH)?  
 (1) Oxygen carrying capacity of haemoglobin increases  
 (2) Oxygen carrying capacity of haemoglobin decreases  
 (3) RBCs count increases  
 (4) RBCs count decreases
16. Hb-Oxygen dissociation curve is  
 (1) J-shaped (2) S-shaped (3) L-shaped (4) Zig-zag
17. Besides RBC blood plasma also carries O<sub>2</sub> in solution. The percentage is  
 (1) 3% (2) 97% (3) 49% (4) 25%
18. Amount of O<sub>2</sub> normally carried by 100 ml of oxygenated blood:  
 (1) 10 ml (2) 20 ml (3) 30 ml (4) 40 ml
19. The partial pressure of oxygen in alveolar air and oxygenated blood respectively.  
 (1) 40 mm Hg, 45 mm Hg (2) 104 mm Hg, 95 mm Hg  
 (3) 159 mm Hg, 104 mm Hg (4) 104 mm Hg, 40 mm Hg
20. Expiration takes place when the Intrapulmonary pressure is  
 (1) Greater than the atmospheric pressure (2) Lesser than the atmospheric pressure  
 (3) Equal to atmospheric pressure (4) Equal to intrapleural pressure