Breathing and Exchange Of Gases

CHAPTER-17

Exercises

1. Define vital capacity. What is its significance?
2. State the volume of air remaining in the lungs after a normal breathing.
3. Diffusion of gases occurs in the alveolar region only and not in the other parts of respiratory system. Why?
4. What are the major transport mechanisms for CO_2? Explain.
5. What will be the pO_2 and pCO_2 in the atmospheric air compared to those in the alveolar air ?
   (i) pO_2 lesser, pCO_2 higher
   (ii) pO_2 higher, pCO_2 lesser
   (iii) pO_2 higher, pCO_2 higher
   (iv) pO_2 lesser, pCO_2 lesser
6. Explain the process of inspiration under normal conditions.
7. How is respiration regulated?
8. What is the effect of pCO_2 on oxygen transport?
9. What happens to the respiratory process in a man going up a hill?
10. What is the site of gaseous exchange in an insect?
11. Define oxygen dissociation curve. Can you suggest any reason for its sigmoidal pattern?
12. Have you heard about hypoxia? Try to gather information about it, and discuss with your friends.
13. Distinguish between
    (a) IRV and ERV
    (b) Inspiratory capacity and Expiratory capacity.
    (c) Vital capacity and Total lung capacity.
14. What is Tidal volume? Find out the Tidal volume (approximate value) for a healthy human in an hour.