

# Class 11 Breathing And Exchange of Gases: Assignment Questions

1. Define oxygen dissociation curve. Can you suggest any reason for its sigmoidal pattern?
2. Have you heard about hypoxia? Try to gather information about it, and discuss it with your friends.
3. Distinguish between
  - IRV and ERV
  - Inspiratory capacity and expiratory capacity.
  - Vital capacity and total lung capacity.
4. What is tidal volume? Find out the tidal volume (approximate value) for a healthy human in an hour.
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. Write the name and important function of the fluid-filled double membranous layer surrounding the lungs.
7. Why does smoking cigarettes cause emphysema?
8. Mention the main parts involved in initiating a pressure gradient between the lungs and the atmosphere during normal respiration.
9. Name the organs of respiration in cockroaches, earthworms, and birds?
10. Describe the role of the neural system in controlling respiration.
11. Write a note on the mechanism of breathing.
12. What is a Respiratory Quotient?
13. What are the formulae of Respiratory Quotient (RQ)?
14. Explain why the diffusion of carbon dioxide by the diffusion membrane per unit difference in partial pressure is much greater compared to oxygen.
15. Organize the following in ascending order
  - a) Tidal volume
  - b) Residual volume
  - c) Inspiratory reserve volume
  - d) Expiratory capacity