

Chapter 10

MULTIPLE CHOICE QUESTIONS

1. (d)
2. (c)
3. (a)
4. (c)
5. (b)
6. (d)

VERY SHORT ANSWER QUESTIONS

7. (a) False : Oxygen breaks down glucose inside the cells of organisms.
(b) True
(c) False : Insects have spiracles on the sides of the body.
(d) True
8. (a) air, soil (b) floor (c) stomata (d) tracheae

SHORT ANSWER QUESTIONS

9. (a) Snail, as it does not breathe by means of trachea.
(b) Earthworm, because it breathes through its skin and it does not have lungs.
(c) Fish, as most fish breathe through their gills and do not have lungs.
(d) Tadpole, as it breathes through gills and does not have lungs.
10. Oxygen present in air is responsible for respiration. The oxygen breaks down food and releases energy.
11. sleeping > watching T.V. > brisk walk > cycling

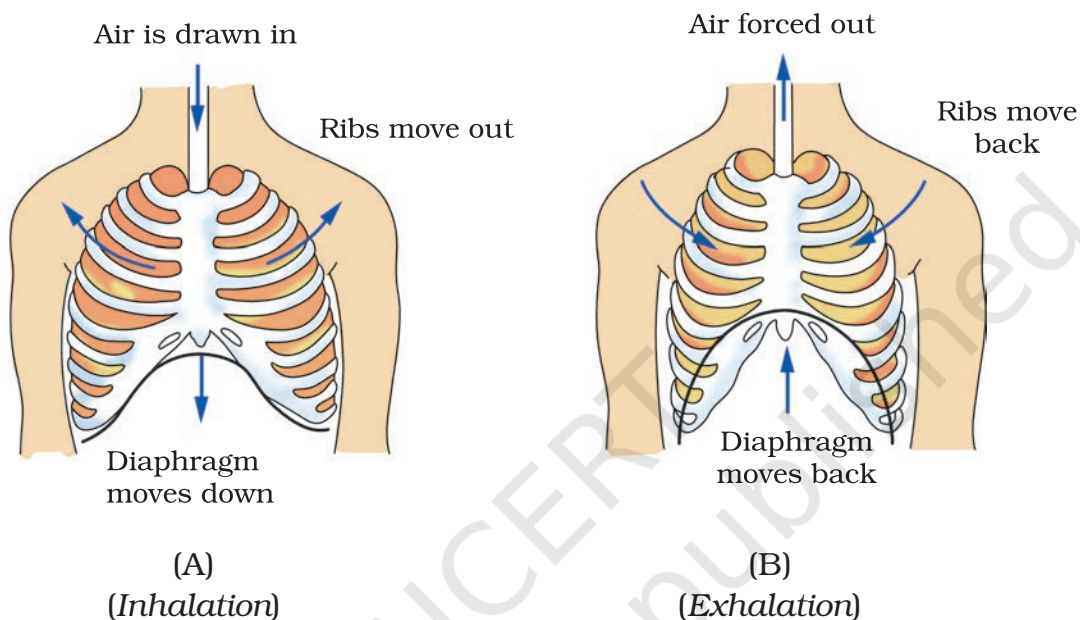
Whenever a person does an activity, the breathing rate becomes faster. It further increases with strenuous work to provide more oxygen to the cells to get more energy.
12. On a cold day, the warm and moist air exhaled by us condenses into mist when it comes in contact with the cold air of the atmosphere. This looks like white smoke.

13. During drowsiness, our breathing rate slows down. The lungs do not get enough oxygen from the air resulting in yawning. Yawning brings extra oxygen into the lungs and helps us to keep awake.
14. (i) Spiracles are present on the sides of insects' body while stomata are present on the lower surface of leaves.
(ii) Spiracles are fewer in number as compared to stomata.
(iii) Spiracles lead to an extensive network of tracheal system which is absent in the leaves.
(you can add more)

LONG ANSWER QUESTIONS

15. (a) The pain in her legs could be because of the accumulation of lactic acid in the muscles. During heavy exercise or running, etc., the muscle cells respire anaerobically and produce lactic acid.
(b) The massage gave her relief because it improves the circulation of blood leading to increased supply of oxygen to the muscle cells which helps in complete breakdown of lactic acid into CO_2 and water.
16. (a) 'C'. The mice kept under the jar will breathe out CO_2 continuously increasing its amount in the bell jar.
(b) 'A' jar in which the CO_2 released during respiration is used by the plants during photosynthesis.
17. (a) Exhalation process during respiration.
(b) The lime water in test tube 'B' turns milky but water in tube 'A' remains unchanged. Because CO_2 is present in the exhaled air, it mixes with lime water in 'B' and turns it milky.
18. (a) The CO_2 released during respiration by the yeast results in the rise of dough.
(b) During anaerobic respiration, yeast produces alcohol resulting in sour smell.
(c) Sugar acts as food for yeast.

- (d) At low temperatures, yeasts will not multiply and respire because of which the dough will not rise or become sour.
19. (a) Fig. (A) indicates inhalation, and Fig. (B) indicates exhalation.
- (b)



20. (a) iii; (b) iv; (c) i; (d) ii