

## Biology - FSC Part 1 Biology English Medium Chapter 13 Preparation

Q1. How carbon dioxide absorbed by the cell wall of the mesophyll cells?

**Ans 1:** The carbon dioxide reaches to the mesophyll cells by passing through the intercellular spaces and then absorbed by the moist cell surface or mesophyll cells.

Q2. Enlist properties of respiratory surface in animals.

**Ans 1:**

1. Large surface and moisture.
2. Ventilation
3. Thin epithelium
4. Capillary network

Q3. Give two symptoms of emphysema.

**Ans 1:** Weight loss.Shortness of breath.

Q4. What is external respiration?

**Ans 1:** The exchange of respiratory gasses between the organisms and its environment is called external respiration/organisms respiration.

Q5. Write gaseous exchange in plants?

**Ans 1:** Gaseous exchange in plants takes place by means of following method.

- By stomata
- By lenticels
- By roots

Q6. What is serine and who it is formed?

**Ans 1:** Serine is hydrophilic amino acid that is used in biosynthesis of proteins.In the pathway of photorespiration ,pyruvate is converted into serine when glycine is absorbed by the mitochondria,two glycine molecule are converted into serine and  $\text{CO}_2$ is formed.

Q7. How does inspiration differ from expiration?

**Ans 1:** Inspiration: Intercostal muscles contract and raise the chest cavity upwards and onwards. Diaphragm contracts and it becomes less dome shape. Volume of chest cavity increased.

**Ans 2:** Intercostal muscle relaxed and raise chest cavity downward and inward. Diaphragm relaxed and it becomes more dome shape. Volume of chest cavity decreased.

---

Q8. Write down the disadvantage of gas exchange in water environment ?

**Ans 1:** Water medium has less oxygen content than air. A liter of water can not contain even 10ml of oxygen whereas oxygen content of fresh air is about 200 ml per liter.  
In water oxygen diffuses 8000 times more dense than air.

---

Q9. What factors keep the skin of earthworm moist for gaseous exchange?

**Ans 1:** The skin is richly supplied with blood capillaries and remain moist with the secretion of the skin and by coelomic fluid.

---

Q10. Differentiate between cutaneous and pulmonary respiration in frog.

**Ans 1:** Pulmonary respiration: The gaseous exchange through the lungs is known as Pulmonary respiration.

**Ans 2:** Cutaneous respiration: The gaseous exchange through the skin is called cutaneous respiration

---