Biology - FSC Part 1 Biology English Medium Chapter 13 Preparation

Q1. Name the structure involved in gaseous exchange in frog.

Ans 1: Nostrils,trachea,bronchi,alveoli,skin and buccal cavity.

Q2. Write at least two different states of CO_2transportation in blood.

Ans 1:

1. Some of the carbon dioxide about 20% is carried as carboxyhemoglobin.
2. Other plasma proteins also carry about 5% carbon dioxide from the body fluids to the capillaries of lungs.

Q3. How in earthworm respiration takes place?

Ans 1: Respiration in earthworm take place through moist or wet skin,which is kept moist due to secretion of the skin,Oxygen from air is directly diffused into thin epithelium and into blood,where it combine with oxygen to all body parts.$CO_2$is removed from the body by same path but in reverse order.

Q4. 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 bu coelomic fluid.

Q5. What is rubisco? Give its function.

Ans 1: Rubisco is an enzyme which is the most abundant protein in the chloroplast and probably in the world.
In calvin cycle when a molecule of carbon dioxide reacts with RuBP this reaction is catalyst by the enzyme called rubisco.But in PHotorespiration rubisco can act as both carboxylase as well as oxygenase.

Q6. Write down the properties of respiratory surface in animals.

Ans 1: Respiratory surface in most animals exhibit the following characteristics.

1. The surface should be very large.
2. Thin epithelium for fast diffusion and short distance.
3. Ventilation for steep diffusion gradient.
4. Capillary network for blood flow.

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. Give % age of CO_2in venous and arterial blood.

Ans 1: The percentage of CO_2in venous blood is 54 ml per 100 ml of blood while percentage of CO_2 in arterial blood is 50 ml per 100 ml of blood.

Q9. What is normal rate of breathing at rest in human?

Ans 1: Normally a men during the rest take 15-20 breaths per minute.

Q10. Name the most common fuel used by the cell to provide energy by cellular respiration.

Ans 1: The name of the most common fuel used by the cell to provide energy by cellular respiration is glucose.
