

# Life Processes Practice Paper 2 QnA

**1. The inner lining of the stomach is protected from hydrochloric acid by which of the following.**

- a. Salivary amylase
- b. Pepsin
- c. Mucus**
- d. Bile

**2. In which medium Pepsin is active**

- a. basic
- b. acidic**
- c. neutral
- d. sometimes acidic and sometimes basic

**3. Enzyme pepsin helps in the digestion of**

- a. starch in mouth
- b. protein in stomach**
- c. fat in stomach
- d. protein in pancreas

**4. The small intestine receives the digestive enzymes from**

- a. Mouth and Stomach
- b. Stomach and liver
- c. Liver and Pancreas**
- d. All the above

**5. Assertion (A):** Digestion breaks down large complex molecules into easily absorbable simple smaller molecules.

**Reason (R):** Digestion is necessary for the absorption of molecules.

- a. (A) and (R) are correct and (R) is the correct explanation of (A)**
- b. (A) and (R) are correct but (R) is not the correct explanation of (A)
- c. (A) is true but (R) is false
- d. (A) is false but (R) is true

**6. What will happen if we kill all the organisms of one trophic level?**

If all organisms of one trophic level are killed then the food chain would end and ecological balance would be affected-

- (a) If the herbivores are killed, then the carnivores would not be able to get food and would die.
- (b) If carnivores are killed, then the population of herbivores would increase to an unsustainable level.
- (c) If producers are killed, then the nutrient cycle in the area will not be completed.

**7. What happens if the system of blood vessels develops a leak?**

It leads to a loss of pressure which would reduce the efficiency of the pumping system. To avoid this, the blood has platelet cells which circulate around the body and plug these leaks by helping to clot the blood at these points of injury.

**8. Name the blood vessel that brings oxygenated blood to the human heart. Which chamber receives oxygenated blood?**

The pulmonary veins bring oxygenated blood to the human heart.

The left atrium receives the oxygenated blood.

**9. Answer the following.**

**a. Name the basic filtration unit of kidneys.**

**b. Name the substances that are reabsorbed from the initial filtrate in the tubular part of this filtration unit**

**c. Under what conditions are hemodialysis (artificial kidney) carried out in a person?**

- a. Nephrons
- b. Two substances that are selectively reabsorbed are amino acids and glucose.
- c. When the kidneys fail, wastes begin to accumulate in the blood, they usually have to undergo dialysis. It helps in removing the nitrogenous wastes from the blood.

**10. During respiration pyruvic acid is formed from glucose. State the end products formed from it on the further breakdown in each of the following cases.**

**i) In the absence of oxygen in yeast.**

**ii) Lack of oxygen in muscles**

**iii) In the presence of oxygen in mitochondria**

- i) In the absence of oxygen in yeast- Ethanol, Carbon dioxide, and Energy.
- ii) Lack of oxygen in muscles –Lactic acid and Energy.
- iii) In the presence of oxygen in mitochondria- carbon dioxide, Water, and Energy.

**11. List three characteristics of the lungs that make it an efficient respiratory surface.**

**Ans.**

- i. It has a large surface area and branched
- ii. Contain an extensive network of blood vessels
- iii. It is thin, delicate, and fine.

**12. Discuss the mechanism of respiration in humans.**

Mechanism of Respiration - It occurs in the following steps

a) Breathing - Taking in oxygen and expelling carbon dioxide out is called breathing. It involves the following steps:-

- (i) Inhalation - It is taking in oxygen. It occurs due to the contraction of muscles attached to ribs. This lifts ribs and flattens the diaphragm, which increases the volume of the thoracic cavity. Hence the pressure inside the thoracic cavity decreases and air rushes inside the lungs.

- (ii) Exhalation - It is the expulsion of carbon dioxide. It occurs due to the relaxation of muscles attached to ribs and the diaphragm is dome-shaped. This decreases the volume of the thoracic cavity decreases air pressure and expels CO<sub>2</sub> out of the lung.
- b) Exchange of gases - It takes place between the alveoli of the lungs and surrounding blood capillaries.
- c) Transport of gases in blood - Haemoglobin present in the blood transports O<sub>2</sub> and CO<sub>2</sub> in blood. Oxygen is transported from the lungs to the body cells by hemoglobin in the form of oxyhemoglobin.
- d) Oxidation of food means the breakdown of glucose molecules to produce energy. It occurs in mitochondria.

### **13. How is the structure of leaves suited to its function?**

Answer.

Leaves have the following structural features especially suited for the function of photosynthesis

- a) Leaf lamina is flat and wide to provide a large surface area for the absorption of light
- b) Leaves have tiny pores called stomata for gaseous exchange
- c) Mesophyll tissue contains a large number of chloroplasts to perform photosynthesis
- d) It has vascular tissues (veins) to transport water and minerals to the mesophyll tissue. They help transport the raw materials for photosynthesis to the leaves and transfer food from the leaf to other tissues.
- e) Large intercellular spaces are present between photosynthetic cells for easy exchange of gases.

