CHRIST KING HR. SEC SCHOOL, KOHIMA
CLASS -
Subject: SCIENCE Chapter - 12

A. 1. Choose the correct answer.

1) c 2) c 3) a 4) c 5) c

2. **Fill in the blanks.**

1. Excretion.
2. Nephridia.
3. Oxidation of food in cells.
4. Nephrones.
5. Bowman's capsule.

B. Short type questions.

1. What is excretion?

Ans: The process of getting rid of metabolic wastes from the body is called excretion.

2. Mention two sources of waste materials in our body.

Ans: Respiration and other metabolic processes going on within our body are the two sources of waste materials in our body.

3. How is waste excreted in amoeba and in man?

Ans: Waste is excreted in amoeba by means of diffusion through the cell membrane, whereas in man through the different organs, like skin, lungs, nose and large intestine.

4. In which disease in glucose detected in urine?

Ans: He disease in which glucose is detected in urine is called diabetics.

5. On which method do artificial kidneys work?

Ans: The artificial kidneys work on the method of dialysis.

6. How do plants remove their waste materials?

Ans: Plants remove their waste materials through stomata and lenticles.

7. Name two useful waste materials of plants.

Ans: Two useful waste materials of plants are gums and latex.

C. Short type questions.

1. The different excretory products in man.

Ans: The different excretory products in man are gaseous waste, like carbondioxide and water vapour containing ommonia, liquid, waste like excess water and sweat containing urea, and solid waste materials which are the undigested food particles that contains uric acid.

2. How are CO2 and water vapour removed from a human body?

Ans: CO_2 and water vapour are respiratory waste formed during oxidation of food in cells. After these wastes are carried by blood, they are removed from the body through lungs and nose during respiration.

3. Write the different components of excretory system in man.

Ans: The different components of excretory system in man are kidneys, ureter, urinary bladder and urethra.

4. How are nitrogenous wastes, like urea removed from our body?

And: Nitrogenous wastes, like urea are removed from our body through urine with the help of urinary system.

5. How do plants remove their body wastes?

Ans: Plants remove their body wastes through the stomata and linticles. Some waste materials are also collected in the leaves and the bark of the plants.

6. What role does liver plays in excretion in the human body?

Ans: The liver helps in the removal of excess glucose, which is stored in the body for future use in time of excessive or scarce energy requirement, the liver also helps in the breakdown of extra protein in the body, this is how liver plays an important role in excretion in the human body.

D. Long type questions.

1. How do kidneys produce urine from the blood? Explain the role of a nephron in urine formation.

Ans: The kidneys are made up of millions of coiled tubes called nephrons. Each of these nephrons is a small filtering unit that cleans the blood of its waste products. The wastes are thrown out of the body from the urethra and the clean blood circulates back to the body. These waste are collected in the form of a liquid called urine. Nephrons are a kind of coiled tubes out of which the kidney is made up. A nephron looks like a small cup of funnel with a long tubes attached to it. Each nephron acts as a small filtering unit that the blood of its waste products.

2. Write a short note on excretion in plants.

Ans: Plants do not have any special organ for excretion of waste products, they remove these waste in different ways. During respiration, carbondioxide and water vapour are produced which are released through the stomata and lenticles. Again during photosynthesis, oxygen is released into the atmosphere through stomata. Moreover, some waste materials are also collected in the leaves and bark of the plants.

3. Give a brief description of the various non-nitrogenous waste and their removal from the body.

Ans: The various non-nitrogenous waste in our body are carbondioxide, water vapour, excess water and undigested food particles. These wastes are removed from the body with the help of different organs, like skin, lungs, nose and large intestine. Respiratory waste like carbondioxide and water vapour are carried by blood and removed by lungs and the nose during respiration, when we sweat, excess water salt and urea are removed from our body by skin and as urine by the urinary system. The undigested and unabsorbed food materials are removed from the body by the large intestine.

4. Differentiate between nephridia and malpighian tubules. Describe their functioning as excretory organs.

Ans: Nephridia is a kind of special tubular structure found among earthworms and leeches, while malpighian tubules are special excretory organs found in insects. Nephridia acts as a network of capillaries which is closely associated with each tubule. Here materials move from the body fluids into the nephridium through the open nephrostome while some materials are also picked up by the coiled tubule directly from the blood in the capillaries. But, malpighiam tubules are organs that move freely in the body cavity and collect all waste materials. These tubules are attached to the alimentary canal at one end.

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