DELHI PUBLIC SCHOOL JAMMU

SESSION 2024-25

MONTH : DECEMBER

ASSIGNMENT V

CLASS : VII **SUBJECT: SCIENCE**

TOPIC : WASTEWATER STOREY

Q1. Name the gas produced in the digester tank.

a) Chlorine gas b) Methane gas c) Biogas d) Hydrogen sulphide gas

Q2. Assertion (A): water is treated with ozone and chlorine during tertiary treatment.

Reason (R) : ozone and chlorine are the contaminants of water.

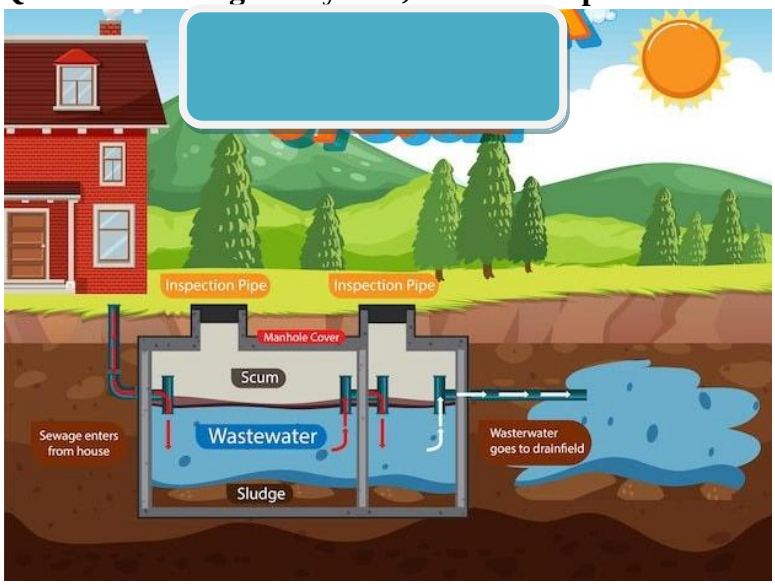
a) Both A and R are true, and R is the correct explanation of A.
b) Both A and R are true, but R is not the correct explanation of A.
c) A is true, but R is false.
d) A is false, but R is true.

Q3. Why are open drains called reservoirs of harmful germs causing health diseases?

Q4. How does the discharge of wastewater pose a potential threat to aquatic life?

Q5. Draw a neat and labelled diagram of the wastewater treatment plant.

Q6. Observe the given system, label and explain its working:



Q7. Read the following paragraph and answer the questions that follows:

A village near a large lake has recently seen an increase in the growth of algae on the lake's surface. The villagers have noticed that the lake water has turned green, and many fish are dying. Upon investigation, it is found that untreated wastewater containing detergents, fertilizers, and sewage is being discharged into the lake. This has led to excessive nutrients like nitrogen and phosphorus in the water, resulting in a process called eutrophication. The algae growth blocks sunlight from reaching underwater plants, while the decay of algae reduces oxygen levels, making it difficult for aquatic animals to survive. To solve this problem, the local authorities are planning to build a wastewater treatment plant and educate people about the harmful effects of dumping untreated waste into water bodies.

(a) How does eutrophication affect aquatic life?

i) It increases oxygen levels, helping aquatic life to grow.

ii) It blocks sunlight and reduces oxygen, leading to the death of aquatic animals.

iii) It makes water cleaner and improves biodiversity.

iv) It has no effect on aquatic life.

(b) Define eutrophication.

(c) Suggest two measures to prevent eutrophication in water bodies.

Q8. Why is the discharge of untreated sawage into water bodies not desirable?