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Q No: 1 What is waste water engineering? Briefly describe its application in safeguarding the environment

Ans:- Waste water is the combination of liquid and water-transported wastes from homes, commercial buildings, industrial facilities and along with any ground water infiltration and surface water and storm water in flow that may enter the sewer system.

APPLICATION

(1) By depositing depositing of treated waste water in order to reduce ground water contamination and protect aquatic life.

(2) waste water w.

Engineering deal with the management of waste water and its treatment to reuse to it for various purpose.

(3) The recovery of sewage is an effective means of saving water resource and promoting the reuse of water resource. It is important measure

to reduced the population of sewage protect the environment

(ii) Primary objective of waste water engineering is to provide a good sanitary environmental condition in a city

Q.No:2 Briefly described the relationship of waste water generation with water supply of a locality?

Ans: The relationship of waste water generation with water supply to a locality is that:

In Situation:-

in situation where waste water flow rate data are limit or available waste water flow rate estimate have to be developed from water consumption record in other information

About:-

About 60-85% of supplied water per capita become waste water.

Simply:-

Simply waste water generated is dependent on supplied water. As increase the

waste water will be more

QNO:3 What is the importance of Waste Water Characterization?

Ans: A characterization of waste water provide a wide variety of information regarding the type and concentration of contamination present with characterization of waste water we determine the nature of contaminants physical, chemical and the design waste water treatment plant according to the nature of contaminants

QNO:4 List of physical, chemical and biological characteristic of waste water

Ans: Physical characteristic
Turbidity, color, total solid and temperature
2) Chemical characteristic

(COD) total organic carbon (TOC) Chemical oxygen

Nitrogen phosphorous, Chlorides, Sulphates
 Alkalinity, PH Heavy metals, Priority
 pollutants.

Q.No.5 What are the advantages and disadvantages of combine and separate sewerage system? Which sewerage system will you recommended for a new purpose township support your answers with justification

Ans : Combine Sewerage System

Advantages :

- ① Both domestic sewerage and storm water are carried in a single sewer, so construction cost is less.
- ② The strength of domestic sewage is reduced b/c of dilution of storm water
- ③ The sewers are of large size and therefore the charges

of their cracking are rare. It is easily to clean them.

(iv) in towns with narrow streets this system is preferred.

Disadvantage

- (1) initial cost is high b/c of large dimension of sewers.
- (2) B/c of large size of sewers their handling and transportation is difficult.
- (3) Due to the inclusion of storm water the load on the treatment plant increase and treatment cost.
- (iv) During heavy rain the sewer may be overflow and may thus create unhygienic condition.
- (5) If the whole sewage is to be disposed off by pumping it is uneconomical.

Separate Sewerage System

Advantage:

- (1) size is generally less

2) Since the Sanitary Sewage water flows in a separate pipe the quantity of Sewage to be treated is less

3) As the Sewer are smaller in section they can be easily ventilated.

Rain water can be discharged ~~into~~

4) the Storms can be reused / recycled with ~~into~~ out any treatment

Disadvantages

1) Since the Sewers are of smaller size it is difficult to clean them

2) initial cost is high. When two separate sets are used

3) they are likely to get choked / blocked

4) maintenance cost of system is also high

Justification:

① will propose combined Sewerage System for a new township b/c both domestic Sewage and sewage water carried a single sewer so ~~conform~~ construction cost is less and sewer are of large size so they are easy to clean
