

B.Sc (H) MICROBIOLOGY: SEMESTER-4
CC9: UNIT-4: QUESTIONS
BY DR. PRIYADARSHINI MALLICK

1. Rewrite the paragraph below using terms from the list provided below to fill the gaps (18 marks)

biochemical oxygen demand, biodegradation, blackwater, chemical oxygen demand, effluent, greywater, hazardous, heavy metals, inorganic, liquid waste, oxygen demand, pathogenic, polluting potential, sewage, sewers, sullage, suspended solids, wastewater

When we use water for any purpose and it becomes unclean after we used it, we refer to it as or In our homes we generate two types of The type from toilets which contains excreta is called, while other wastewaters (e.g. from clothes washing) that are not contaminated by excreta are referred to as Another word for the latter type of wastewater is Domestic wastewater is sometimes referred to as In many towns and cities around the world domestic wastewater goes into underground pipes called that take the wastewater to treatment works.

The solids in wastewater that are carried along in flowing water are called Organic matter in water may cause odours due to It also creates, which can be measured by its or If faecal matter is in the water, there may be micro-organisms present. chemicals in wastewaters are likely to include nitrates and phosphates. Industrial wastewaters may have significant for example, tannery waste frequently contains persistent pollutants that contain

2. Suggest two ways in which wastewater from residential areas may differ from wastewater from:

a. commercial areas

b. industrial areas

(4 marks)

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3. (a). Suparna is a laboratory technician. She is analysing a sample of wastewater collected from a pipe that discharges effluent into a river. Name two tests she could perform to assess the physical characteristics of the effluent. (2 marks)

(b). As part of the analysis she also does a BOD test on the sample and gets an unusually high result. What does the high BOD tell her about the wastewater? What effect could it have on the river? (6 marks)

4. Which of the following statements are *false*? In each case explain why it is incorrect. (10 marks)

(a). Effluent from food processing factories is safe to discharge to rivers without treatment.

(b). The manufacturers of clothing material often uses coloured dyes that may be discharged in effluent from the factory.

(c). Tannery waste is highly polluting because it contains large quantities of suspended solids.

(d). Wastewater from slaughterhouses contains blood, animal excreta and washing water.