

# Chapter: Waste Water story

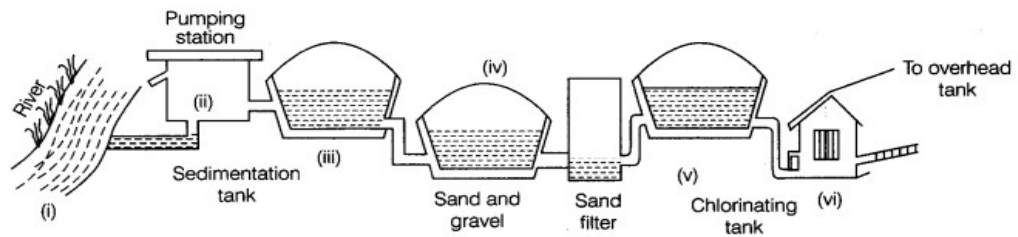
Subtopic: Treatment of polluted water, waste water treatment plant

## Section 1:

1. Fill in the blank and complete the sentences.

- (i) The full form of WWTP is \_\_\_\_\_.
- (ii) The wastewater is first passed through \_\_\_\_\_ which remove big objects from the water like plastic bottles, napkins, rags, cans and sticks.

2. Observe the given figure and answer the following



a. What does this figure show?

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b. State the functions of each part of the figure in very brief?

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3. Mark 'T' if the statement is true and 'F' if it is false:

- (i) Aerobic bacteria produces biogas sludge in the digester tank. [    ]
- (ii) The sludge is separated from the water with the help of a Scrapper. [    ]

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4. Multiple choice questions:

a. Which of the following organisms produce biogas from sludge in the digester tank of a wastewater treatment plant?

- |       |                    |   |                          |
|-------|--------------------|---|--------------------------|
| (i)   | Anaerobic bacteria | - | <input type="checkbox"/> |
| (ii)  | Fungi              | - | <input type="checkbox"/> |
| (iii) | Aerobic bacteria   | - | <input type="checkbox"/> |
| (iv)  | Protozoa           | - | <input type="checkbox"/> |

b. Chlorine is used in municipal water treatment plant to

- |       |                                  |   |                          |
|-------|----------------------------------|---|--------------------------|
| (i)   | change the taste of water        | - | <input type="checkbox"/> |
| (ii)  | prevent evaporation              | - | <input type="checkbox"/> |
| (iii) | kill the harmful micro-organisms | - | <input type="checkbox"/> |
| (iv)  | prevent sedimentation            | - | <input type="checkbox"/> |

## Section 2:

5. Answer the following question in brief.

a. Name two chemicals used to disinfect water

- (i) \_\_\_\_\_
- (ii) \_\_\_\_\_

b. Which trees are planted along sewage ponds. Give reason.

\_\_\_\_\_

\_\_\_\_\_

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6 Given below is a jumbled sequence of the processes involved in a wastewater treatment plant. Arrange them in their correct sequence?

- a) Sludge is scraped out and skimmer removes the floating grease.
- b) Water is made to settle in a large tank with a slope in the middle.
- c) Large objects like plastic bags are removed by passing wastewater through bar screens.
- d) Sand, grit and pebbles are made to settle by decreasing the speed of incoming wastewater.
- e) Wastewater enters a grit and sand removal tank.



7 What is sludge? Explain how it is treated.

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8 Describe the steps involved in getting clarified water from wastewater.

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## Section 3:

9. Name two things that can be made from sludge extracted during treatment of sewage.

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10. Mention the various processes involved in the wastewater treatment plant shown in the below pictures? Describe each of them.

a.



Name the Process :

Describe:

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b.



Name the Process :

Describe:

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c.



Name the Process :

Describe:

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d.



Name the Process :

Describe:

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