Class–VII (CHAPTER-18) WASTEWATER STORY

Questions

1. Fill in the blanks:
   (a) Cleaning of water is process of removing ----------.
   (b) Wastewater released by houses is called ----------.
   (c) Dried ---------- is used as manure.
   (d) Drains get blocked by ---------- and ----------.
2. What is sewage? Explain why it is harmful to discharge untreated sewage into rivers or seas.
3. Why should oils and fats be not released in the drain? Explain.
4. Describe the steps involved in getting clarified water from wastewater.
5. What is sludge? Explain how it is treated.
6. Untreated human excreta is a health hazard. Explain.
7. Name two chemicals used to disinfect water.
8. Explain the function of bar screens in a wastewater treatment plant.
9. Explain the relationship between sanitation and disease.
10. Outline your role as an active citizen in relation to sanitation.
11. Here is a crossword puzzle: Good luck!

    Across

    3. Liquid waste products.
    4. Solid waste extracted in sewage treatment.
    6. A word related to hygiene
    8. Waste matter discharged from human body.

    Down

    1. Used water.
    2. A pipe carrying sewage.
    3. Micro-organisms which causes cholera.
    7. A chemical to disinfect water.

					1.W						
					A					2.S	
					3.S	E	W	A	G	E	
					T					W	
4.S	L	U	D	G	E		5.B			E	
					W		A			R	
					A		C				
	6.S	A	N	I	T	A	T	I	7.O	N	
					E		E		Z		
					R		R		O		
							I		N		
	8.E	X	C	R	E	T	A		E		

12. Study the following statements about ozone:

(a) It is essential for breathing of living organisms.

(b) It is used to disinfect water.

(c) It absorbs ultraviolet rays.

(d) Its proportion in air is about 3%.

Which of these statements are correct?

(i) (a), (b) and (c)

(ii) (b) and (c)

(iii) (a) and (d)

(iv) All four.

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Answers

1. Fill in the blanks:
   (a) Cleaning of water is process of removing **contaminants**.
   (b) Wastewater released by houses is called **sewage**.
   (c) Dried **dung** is used as manure.
   (d) Drains get blocked by **plastic** and **sludge**.

2. Sewage is wastewater released by homes, industries, hospitals, offices and other users. It includes rainwater that has run down the street during a storm or heavy rain. The untreated sewage may contain harmful chemicals that may kills the organisms growing in water. The sewage also contains nutrients that cause growth of algae and leads to scarcity of oxygen. That is why it is harmful to discharge untreated sewage into rivers or seas.

3. Oil does not mix with water. Being lighter, oil floats on water. This prevents mixing of water and air. These reduce oxygen supply for aquatic plants and animals.

4. Treatment of wastewater involves physical, chemical and biological processes.
   (a) Waste water is passed through bar screens to remove large objects like rags, sticks, cans, plastic packets, napkins etc.
   (b) Water is passed to a grit and sand removal tank to allow sand, grit and pebbles to settle down.
   (c) The water is then allowed to large settling tank to permit settling of solid faeces called sludge, which is removed using scarper.
   (d) Air is pumped into the clarified water to help aerobic bacteria to grow and consume the wastes.
   (e) This type of water is discharged into rivers or ponds.
5. Solid wastes faeces settle at the bottom and are removed with scrapper. This is sludge. A skimmer removes the floatable solids like oil and grease. Water so cleared is called clarified water.
   Sludge is transferred to a seperte tank where it is decomposed by the anaerobic bacteria. The biomass produced in the process can be used as fuel or can be used to produce electricity.

6. Untreated human excreta is a health hazard. It may cause water pollution and soil pollution. Both the surface water and ground water get polluted. Ground water is a source of water for wells, tube wells, springs etc. thus, it becomes the most common route for water borne disease. This includes cholera, typhoid, polio etc.

7. Ozone, chlorine.

8. Waste water is passed through bar screens. Large objects like rags, sticks, cans, plastics and napkins are removed.

9. Sanitation and disease are related to each other. To remain disease fee, we must observe sanitation. Clean environment is essential for preventing the growth of disease causing microbes. Dirty water around the living areas provides breeding ground for mosquito that are vectors of a number of disease. Sanitation prevents the growth of pathogens that cause disease.

10. We all have a role to play in keeping our environment clean and healthy. We must realize our responsibility in maintaining the water sources in the healthy state. Adopting good sanitation practices should be our way of life. As an agent of change our individual initiative will make a great difference. We can influence others with our energy, ideas and optimism. A lot can be done if people work together. There is great power in collective action.

11.

					1.W						
					A					2.S	
					3.S	E	W	A	G	E	
					T					W	
4.S	L	U	D	G	E		5.B			E	
					W		A			R	
					A		C				
	6.S	A	N	I	T	A	T	I	7.O	N	
					E		E		Z		
					R		R		O		
							I		N		
	8.E	X	C	R	E	T	A		E		

12. (ii) (b) and (c).