



INDIAN SCHOOL AL WADI AL KABIR

CLASS: VII	DEPARTMENT: SCIENCE 2020 -2021	DATE: 31.08.2020
WORKSHEET NO:8 WITH ANSWERS	TOPIC: WATER AND WASTE WATER MANAGEMENT	NOTE: A4 FILE FORMAT
NAME OF THE STUDENT:	CLASS & SEC:	ROLL NO:

I. OBJECTIVE TYPE QUESTIONS:

1. Which of the following are not the liquid forms of water?

- (a) Snow (b) Lake water (c) River water (d) Water vapour (e) Ice

Choose the correct combination from the options below-

- (i) (a), (d) and (e) (ii) (a) and (b) (iii) (b) and (c) (iv) (d) only

2. Waste water released by houses is called-

- (i) dirty water (ii) domestic sewage (iii) garbage (iv) pollution

3. The dissolved and suspended impurities in water are called-

- (i) contaminants (ii) dirt (iii) germs (iv) sludge

4. The process of seeping water into the ground is called-

- (i) seeping (ii) infiltration (iii) soaking (iv) absorbing

5. The process in which rain water is collected and used to recharge ground water is called-

- (i) recharging (ii) rain water harvesting (iii) vermicomposting (iv) collecting water

6. Pick from the following one chemical which is used to disinfect water.

- (i) Chlorine (ii) Washing soda (iii) Silica (iv) Coal

7. Which of the following inhibits the seepage of rainwater into ground?

- (i) A cemented floor (ii) Playground (iii) Grass lawn (iv) Forest land

For question numbers 8-10, two statements are given- one labeled Assertion (A) and the other labeled Reason (R). Select the correct answer to these questions from the codes (i), (ii), (iii) and (iv) as given below -

- i) Both A and R are true and R is correct explanation of the assertion.**
- ii) Both A and R are true but R is not the correct explanation of the assertion.**
- iii) A is true but R is false.**
- iv) A is false but R is true**

8. Assertion: A. Water is essential for all living things.

Reason: R. Water exists in three states-solid, liquid and gas.

(ii) Both A and R are true but R is not the correct explanation of the assertion.

9. Assertion: A. Waste water is treated in sewage treatment plant.

Reason: R. Waste water is treated to remove harmful components and make it reusable.

(i) Both A and R are true and R is correct explanation of the assertion.

10. Assertion: A. The water table may be deep or shallow.

Reason: R. The lower layer of an aquifer is called as water table.

(iii) A is true but R is false.

II. BASIC CONCEPTS LEVEL QUESTIONS:

1. Define the following terms:

- (i) Wastewater- **(The water mixed with impurities like soap, germs, dirt, oil etc.)**
 - (ii) Infiltration- **(The process of seeping of water into the ground is called infiltration.)**
 - (iii) Biogas- **(Biogas is the mixture of gases produced by the breakdown of organic matter in the absence of oxygen, primarily consisting of methane and carbon dioxide.)**
 - (iv) Sewage- **(Sewage is waste water released by homes, industries, hospitals, offices and other users. It also includes rain water that has run down.)**
2. What is an aquifer? **(The water reservoir formed above the impervious layer of rock.)**
3. Suggest any two methods to conserve water. **(Rain water harvesting, constructing dams and reservoirs)**
4. Name the steps involved in waste water treatment. **(Screening, Grit removal, Sedimentation)**
5. Mention any four sources of fresh water. **(river, lake, pond, well)**
6. Name any two chemicals used to disinfect water. **(Chlorine and ozone.)**

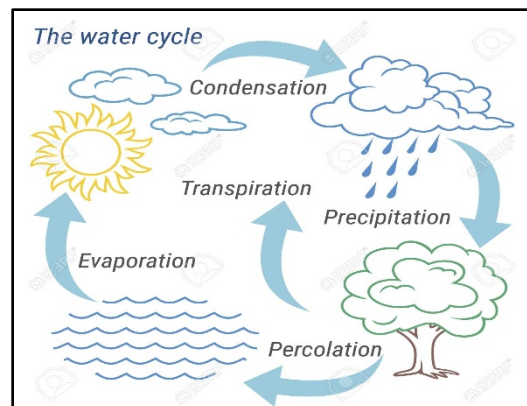
7. What is water pollution? (Discharge of undesirable substances into water leads to water pollution.)
8. Write some simple steps to conserve water. (1. Turn off taps while brushing teeth. 2. Mop the floor instead of washing. 3. Take shorter showers-5 minutes or less. 4. Leaking taps or water pipes should be repaired immediately.)

III. INTERMEDIATE LEVEL QUESTIONS:

1. What is groundwater? What are the sources of water which are fed by groundwater? (Water below the water table where water is found between particles of soil and between rocks is called groundwater. Water table is the upper level of water under the ground which occupies all the spaces in the soil and rocks. The ground water provide water to wells, bawris, tube wells, hand pumps.)
2. Explain how the increase in population and industries are responsible for depletion of water table. (Increasing population causes demand for constructions, parks, pavements, etc; which needs lots of water. We consume more ground water and do not allow water to seep into the ground, thus causing water table depletion. Water is consumed in large quantities by industries to manufacture its products.)
3. Explain the importance of bacteria in waste water treatment. (To break down the organic wastes and to produce bio gas.)
4. What is rain water harvesting? (The process of collecting rain water from roof tops in a trench below in tanks and can be used for washing, watering plants and to recharge wells.)
5. Explain some causes of water pollution. (Some causes of water pollution are-1. Industrial wastes: Industries release their toxic wastes like lead, copper, mercury etc. into water bodies causing severe calamities. 2. Domestic wastes: Wastes generated in homes, food, plastics, soaps, human excreta, detergents etc. 3. Agricultural wastes: Chemical fertilisers, insecticides etc. pollutes ground water. They get swept away by rains into rivers and lakes. It leads to **eutrophication** that leads to depletion of oxygen in water bodies.)
6. Write down any four steps to prevent water pollution. (a) Garbage should be recycled and not thrown into water bodies. (b) Excessive use of chemicals should be replaced by bio fertilisers or biopesticides. (c) Organic wastes can be converted into bio gas. (d) Industrial wastes should be treated before releasing it into water bodies.)

V. ADVANCED LEVEL QUESTIONS-

1. Explain the water cycle with a diagram. (It is a continuous cycle where water on the earth's surface evaporates due to the heat of the sun. The evaporated water travels and becomes a part of the clouds. It falls down as rain water or snow or hail due to precipitation and then evaporates again.The process repeats again and is called water cycle.)



2. Describe various steps of cleaning wastewater in a wastewater treatment plant. (The various steps are: (a) Wastewater is passed through bar screens. Large objects like rags, sticks, cans, plastic packets, napkins are removed. (b) Water then goes to a grit and sand removal tank. The speed of the incoming wastewater is decreased to allow sand, grit and pebbles to settle down. (c) The water is then allowed to settle in a large tank which is sloped towards the middle. Solids like faeces settle at the bottom and are removed with a scraper. The skimmer removes the floatable solids like oil and grease. Water so cleared is called clarified water. (d) Air is pumped into the clarified water to help aerobic bacteria to grow. Bacteria consume human waste, food waste, soaps and other unwanted matter still remaining in clarified water.)

V. EXEMPLAR QUESTIONS:

1. How can you observe the three forms of water (a) in nature and (b) at home?

(The three forms of water

(a) in nature are snow (solid), water (liquid) and water vapour (gas).

(b) at home are ice (solid), water (liquid) and steam (gas).)

2. Why open drains is a concern?

(Open drain is a big concern for the society because they create unhygienic conditions. Flies, mosquitoes and other insects breed over there and can spread a number of diseases.)

3. Why should we not throw- (a) used tea leaves into sink? (b) cooking oil and fats down the drain?

(a) We should not throw used tea leaves into sink because it may choke the drain-pipe of the sink and do not allow the free fall of waste water through them.

(b) We should not throw cooking oil and fats down the drain because it can harden and block the drainage pipes. In an open drain, the fats clog the soil pores reducing its effectiveness in filtering water.)

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