Class: 6th

Subject: Chemistry

Chapter: 4 (water)

Choose the correct option:

1. The Process by which rain water changes into snow is called: Freezing
2. Some water in a plate is placed near a window, after some time, the water disappears. this is because water has turn into: vapour
3. The loss of water from the leaves of plants as water vapour through the stomata is called : transpiration
4. The highly salty water of an ocean is converted into pure water in nature by: water cycle
5. When rainwater is made to percolate into the ground more efficiently by constructing percolation pits is called : Rainwater harvesting
6. Which of the following diseases not be caused by drinking of contaminated water : Tuberculosis
7. Drinking water can be made absolutely safe by adding some: chlorine tablets
8. Which of the following is usually not a water pollutant: chlorofluorocarbon
9. Which of the following are used in electric water filters to kill all the harmful microorganism present in tap water and make it absolutely safe for drinking :ultraviolet radiation
10. The place where underground water comes out on the surface of earth on its own is called :spring
11. Which of the following statement is correct about water cycle: all these statements are correct
12. Check-dams are built on River mainly to: recharge ground water
13. Which of the following act as filter in filteration tank :both A&B
14. Which of the following is correctly matched for salt solution : salt-solute

Fill in the blanks:

1. Three forms of water are ice ,water and steam.
2. About 70% of the earth's surface is covered with water.
3. Leaking tap is a source of huge water wastage.
4. Chlorine is added to water to kill the germs present in it.
5. Solution of any substance in water is called : aqueous solution.
6. A solution that contains more dissolved substance than could be dissolved at a specific temperature is called: Supersaturated solution.
7. Fertilizers are toxic chemical used by farmers to increase the crop yield.
8. Sewage should be treated properly before discharging it into the rivers.
9. The unwanted and harmful substances which make the water impure is called water pollutants.
10. Solute on dissolving in a solvent forms a solution.

Write true and false:

1. Tomato contains about 90% water: true.
2. Water is used in the radiators of vehicles to keep their engine cool: true.
3. Lake and ponds get their water from the ground water: false.
4. Water in the oceans and seas have large amount of salt dissolve in it: true.
5. The tiny droplets of water on condensation forms cloud in the Sky: true.
6. The water that looks transparent and is odourless is fit for drinking: false.
7. We should not use more chlorine tablets then specified: true.
8. Alcohol is also used as solvent in some solutions: true.
9. Water can dissolve any amount of a substance in it: true.
10. Water of rivers and lakes polluted with pesticides and fertilizers can kill aquatic animals: true.
11. Fertilizers and pesticides should not be used in excessive amount: true.
12. Leaving the tap running while brushing the teeth may waste several liters of water: true.

Match the following:

1. Purest form of water : rainwater.
2. change of water into water vapour : Evaporation.
3. Keep amount of water on the earth's surface constant : water cycle.
4. Water fit for drinking : potable water.
5. purification of water : water treatment plant.

Give two examples of each of the following:

1. Water pollutants: fertilizers and pesticides.
2. Methods of purification of water filtration and boiling.
3. Waterborne disease : typhoid and Cholera.
4. Sources of water : rain and Oceans.

Answer the following questions in short:

1. State one advantage of rainwater harvesting?
   Ans. Rainwater harvesting is important for the storage of water.
2. Why is water is used in car radiators?
   Ans. water is used in the car radiators to keep their engine cool.
3. Name any five sources of water?
   Ans. Rain, lakes,underground water, ocean and rivers are the five sources of water.
4. Name any two process which transfer water present on the earth into water vapour continuously?

Ans. Evaporation and transpiration.

5. Name the state of water(a)which is present in the air (b) which is taken out from the freezer of the refrigerator and (c)which flows from the tap?
   Ans. A. water vapour (gas)
   b. ice (solid)
   c. water (liquid).

6. What is the importance of water cycle in the nature?

Ans. It keeps the seawater clean and also maintain the level of underground water.

7. What is the source of ground water. explain your answer .state any 5 uses of water.
   Ans. Rainwater is the source of groundwater because rainwater is stopped by some hard rocks and collect in the ground.
   5 uses of water:
   1. Water is used to generate electricity.
   2. Water is used for drinking.
   3. Water is used for cooking.
   4. Water is used in agriculture for growing food.
   5. Water is also used in industries for producing almost all the things that we use.
8. How are clouds formed?
   Ans. The air containing water vapour is heated by the sun. Hot air rises high in the Sky and it is cooled at high altitudes in the Sky. The cold water vapour condense to form tiny droplets of water. These tiny droplets of water forms cloud in the Sky.
9. What are the various ways in which you can minimize the wastage of water at home?
   Ans. We can follow the following ways:
   1. Turn off the tap immediately after use.
   2. Brush your teeth. By filling water into a mug.
   3. Wash your utensils by filling water in a basin.
   4. Plant more and more trees.
   5. We can also do rainwater harvesting.
10. Name any two type of chemicals used in agriculture which cause water pollution?
    Ans.. Fertilizers and pesticides are two types of chemicals used in agriculture which cause water pollution.
11. How do industries cause water pollution?
    Ans.Almost all the industries produce industrial waste and this untreated industrial waste is are discharged by the industries into the nearby rivers or lakes in this way the river water or lake water .
12. Explain why, even clean, transparent and odourless water may not always be safe for drinking?
    Ans. The water that looks transparent, clean an odourless may also contain various impurities and harmful microoganism in it. so it is not safe for drinking.
13. What is potable water? Name any two methods to make water safe for drinking.
    Ans.Water that is fit for drinking is called potable water. Boiling and chlorination are two methods to make water safe for drinking.
14. Name some waterborne disease caused by drinking contaminated water.

Ans. Diarrhea, typhoid, cholera and jaundice Are some waterborne disease caused by drinking contaminated water.

15. Why does water called an universal solvent?
    Ans.Water dissolve various substance in it, due to which reason it is called a universal solvent.
16. write some ways to control water pollution?
    Ans.The various ways of controlling water pollution are follows:
    1. sewage should be treated properly at sewage treatment plant before discharging in to nearby River.
    2. Farmers should use correct amount of fertilizers and pesticide in the fields.
    3. All the industry should treat the toxic waste product by them suitably to make them harmless before discharging them into rivers.
    4. We should follow water pollution prohibition laws.
    5. Garbage should not be thrown into open rivers lakes and ponds.

Answer the following questions in detail:

1. why is it essential to conserve water? What are the various ways in which you can conserve water at home?
   Ans.We should conserve water by using it carefully because there is shortage of fresh water in our country.
   The various ways to conserve water at home are as follows:
   1. Turn off the tap immediately after use.
   2. Brush your teeth by filling water in a mug.
   3. Wash the utensils by filling water in a basin.
   4. We should plant more and more tree.
   5. Rainwater should be harvested.
2. A. what is meant by water pollution? what are the different ways in which water gets polluted?
   Ans. The contamination of water of rivers, Lake and ponds with unwanted and harmful substances is called water pollution.
   The major sources of water pollution are given below:
   1. At many places, untreated sewage from homes is dumped into rivers which pollutes the River water.
   2. The farmer used toxic chemicals like pesticides and fertilizers dissolve in rainwater and run into rivers, lakes and ponds which can pollute the water of River.
   3. The untreated industrial the untreated industrial waste are discharged by the industries into the nearby river which is also responsible for water pollution.

b. State the harmful effects of water pollution?

Ans. There are many harmful effects of water pollution:

1. Polluted water cannot be used for drinking.If we're going to drink polluted water we will fall ill.
2. Polluted water can't use for the production of electricity.

3. There are no use of polluted water in the agriculture.
4. Water is used in homes for cooking food, brushing teeth, washing clothes and so many other works .we all need fresh water for the these works. We cannot use polluted water for these works.

ques3. write the use of water in:

1. Agriculture: water is used in agriculture for growing food. water is needed to grow all kinds of crop plant which provide us food. in fact, the largest amount of water is used for irrigation of crops in agriculture. this is because the water requirements of food producing plants are very high.
2. Industries: Water is used in industries for producing almost all the things that we use. the making of paper, clothes, medicines, chemicals, biscuits and many other things in industries require a lot of water.
3. Generating electricity:Water is used to generate electricity. at a hydroelectric power plant water stored in a high dam is allowed to fall gradually from a great height. this fast moving water turns the turbines. the rotating turbines then run the generators which produce electricity.

ques4. Explain the process of water cycle in nature?

Ans. Heat from the sun evaporates water from River, Lake, ponds, and ocean into water vapour. this water vapour also goes into air. the air containing water vapour is heated by sun. hot air, being lighter, rise high in the Sky. it is cooled at high altitude in the Sky. so when the air containing water vapour rise to the high altitude, the water vapour present in it get cold And the cold tiny droplets of water turn into the clouds in the Sky.the tiny droplets of Water in the cloud join together to form bigger drops of water. these drops of water fall down on earth in the form of rain. in very cold reason ,the water drops in the Sky freeze to form snow .again, this snow malts and flows into River and finally goes into ocean.Now the process of evaporation is again repeated by the sun.

(fig no 4.6 from pg no 72).

ques5. Explain the various methods used for purification of water at home?

Ans. There are Some ways to purify the water at home:

1. Boiling: What are can be made absolutely safe for drinking by boiling. When water is heated, it boils are the temperature of 100 degrees Celsius. At this high temperature all the harmful microorganisms present in the water are killed.
2. Chlorination: chlorination is done by adding chlorine tablets to water. Chlorine kills all the harmful microorganism present in the water and makes it absolutely safe for drinking.
3. Electric water filter:The electric water filter are used to remove solid particles present in tap water, and ultraviolet radiations are used to kill all the harmful microorganisms present in tap water.

ques6. Differentiate the following:

ans. A. 1. **Saturated solution**: A solution in which no more substance can be dissolved at that temperature is called saturated solution. 2.**unsaturated solution** :A type of solution in which more substance can be added at the specific temperature is called unsaturated solution. 3.**supersaturated**

solution: A solution that contains more dissolved substance that could be dissolved at a specific temperature is called supersaturated solution.

b. 1.**Salute**: A substance that dissolves in a solvent is called solute. 2.**Solvent:** A solvent is a substance in which another substance is dissolved.

c. 1.**freshwater :** Which is fit for drinking and do not have any dissolved impurity is called fresh water. 2. **saline water:** Which is having dissolved impurity like ions and other harmful chemicals and not fit for drinking is called Saline water.

END.