Delhi Public School Guwahati

"Under the aegis of the Delhi Public School Society, Delhi"

CYCLE 2

Class VII **Date:** 26th April to 17th May'21

No. of Working Days: 15

Subject: Chemistry

Name of Chapter: Acids, Bases and Salts (Test)

Water: A Precious Resource

WEEK 1 (1st & 2nd Period)	
1st Period: Short Test on Chapter 5	
Step – I	• Revise the bullet points of the chapter.
Step – II	Answer the following questions: **Q1. Products of a neutralisation reaction are always** (a) an acid and a base. (b) an acid and a salt. (c) a salt and water. (d) a salt and a base. **Q2. Phenolphthalein is a synthetic indicator and its colours in acidic and basic solutions, respectively are** (a) red and blue. (b) blue and red. (c) pink and colourless. (d) colourless and pink **Q3. When the soil is too basic, plants do not grow well in it. To improve its quality what must be added to the soil?** (a) Organic matter (b) Quick lime (c) Slaked lime (d) Calamine solution

Q4. Neutralization reaction is a

(a) physical and reversible change.

(b) physical change that cannot be reversed.

(c) chemical and reversible change.

(d) chemical change that cannot be reversed.

Q5. On adding phenolphthalein indicator to a colourless solution, no change is observed. What is the nature of this solution?

(a) Basic

(b) Either acidic or basic

(c) Either acidic or neutral

(d) Either basic or neutral

Q6. State whether the following statements are true or false. Correct the false statements.

(a) All substances are either acidic or basic.

(b) A compound if acidic will turn all indicators red.

(c) Lime water turns red litmus blue.

(d) Common salt dissolved in water turns blue litmus red.

(e) Phenolphthalein is a natural indicator.

(f) Calamine can be used to treat ant's sting.

(g) Lemon water is basic in nature.

Q7. Paheli is suffering from indigestion due to acidity. Is it advisable to give her orange juice in this situation and why?

Q8. While playing in a park, a child was stung by a wasp. Some elders suggested applying paste of baking soda and others lemon juice as remedy. Which remedy do you think is appropriate and why?

Q9. Match the substances in Column I with those in Column II.

Column I	Column II
(a) Tartaric acid	(i) Soap
(b) Calcium hydroxide	(ii) Curd
(c) Formic acid	(iii) unripe mangoes
(d) Sodium hydroxide	(iv) ant's sting
(e) Lactic acid	(v) lime water

	Q10. Fill the blanks in the following sentences **(a) Lemon juice and vinegar taste _____ because they contain _____.** **(b) Turmeric and litmus are _____ acid-base indicators.** **(c) Phenolphthalein gives _____ colour with lime water.** **(d) When an acidic solution is mixed with a basic solution, they _____ each other forming _____ and water.**
2nd Period: Answer to be discussed with the teacher	
End of Week 1	
2nd WEEK (3rd & 4th Period)	
Page: 51 – 54	
Step – I	Study the following topic from textbook: • Chapter introduction • 16.1 How much water is available ➢ Activity 16.1 ➢ Activity 16.2
Step – II	Study the same topic in the following part of Extramark app: Chapter 16: Water: A Precious Resource → Learn → Concept Learning → How much water is available (1st video)
Step – III	Clear your doubts (if any) from the subject teacher.
Step – IV	Revise using following Bullet points: • 22nd March is celebrated as the World Water Day. We celebrate Water Day every year to attract the attention of everybody towards the importance of conserving water. • Year 2003 was observed as the International Year of Freshwater to make people aware of this dwindling natural resource. • The amount of water recommended by the United Nations for drinking, washing, cooking and maintaining proper hygiene is a minimum of 50 litres per person per day. • In some places there is an acute shortage of water. Taps running dry, long queues for water, fights, marches and protests for demand of water have become a common sight, especially during summers. • Water shortage has become a matter of concern throughout the world. • It is estimated that in a few years from now more than one third of the people in the world could face water scarcity. • About 71% of the earth's surface is covered with water.

	• Almost all the water on the earth is contained in the seas and oceans, rivers, lakes, ice caps, as groundwater and in the atmosphere. However, most of this water is not fit for human consumption directly. The water that is fit for use is freshwater. • The amount of water available for our use is roughly 0.006% of all water found on the earth.
Step – V	Solve the questions as below: Write the following Questions/Answers in Chemistry Class Work Copy ➢ **Write the answer (along with the question) to Question No. 1 (Page 203) and Question No. 8 (Page 204) given in the NCERT textbook.** **Answer 1:** **(a) True** **(b) False** **(c) False** **(d) True** **Answer 8:** (iv) of the world remains constant.

Practice Questions: To be written in fair copy.

Q1. Which of the following does not show water shortage?
(a) Taps running dry.
(b) Long queues for getting water.
(c) Marches and protests for demand of water.
(d) A family gets three buckets of water per person per day.

Q2. Seas and oceans are full of water on earth. However, a very small percentage of water present on earth is available for us. This percentage is roughly
(a) 0.006%.
(b) 0.06%.
(c) 0.6%.
(d) 6%.

Q3. On which of the following day is World Water Day observed?
(a) 22 March
(b) 14 November
(c) 2 October
(d) 21 December

Q4. The amount of water recommended by the United Nations for drinking, washing, cooking and maintaining proper hygiene per person per day is a minimum of
(a) 5 litres
(b) 15 litres
(c) 30 litres
(d) 50 litres

Q5. State whether the following statements are True or False. If false, write the correct statement.
(a) 51% of the earth's surface is covered with water.
(b) Year 2003 was observed as the International Year of Freshwater.
(c) Ocean water cannot be used for domestic purposes.

<table>
<tr><td colspan="2"><u>End of Week 2</u></td></tr>
<tr><td colspan="2">3rd WEEK (4th & 5th Period)</td></tr>
<tr><td colspan="2"><u>Page: 54 – 55</u></td></tr>
<tr><td>Step – I</td><td>Study the following topic from textbook:

• 16.2 Forms of Water
➢ Activity 16.3
• 16.3 Groundwater as an important source of Water
• 16.4 Depletion of Water Table
➢ Increasing Population
➢ Increasing Industries (Activity 16.4)
➢ Agricultural Activities</td></tr>
<tr><td>Step – II</td><td>Study the same topic in the following part of Extramark app:

Chapter 16: Water: A Precious Resource → Learn → Concept Learning → Water Cycle (2nd video) and Water – Basis of Life (3rd video)</td></tr>
<tr><td>Step – III</td><td>Clear your doubts (if any) from the subject teacher.</td></tr>
<tr><td>Step – IV</td><td>Revise using following Bullet points:
• Water on the earth has been maintained for millions of years by various processes which make the water cycle. When water circulates through the water cycle it can be found in all the three forms, i.e., solid, liquid and gas.
a) Solid: Water is present in solid form as snow and ice as ice caps at the poles of the earth, snow-covered mountains and glaciers.
b) Liquids: Liquid water is present in oceans, lakes, rivers, and even underground.
c) Gaseous: The gaseous form is the water vapour present in the air around us.
• The continuous cycling of water among its three forms keeps the total amount of water on the earth constant even when the whole world is using it.
• Most towns and cities have water supply system maintained by the civic bodies. The water is drawn from nearby lakes, rivers, ponds or wells. The water is supplied through a network of pipes. Many villages do not have such a water supply system. There people fetch water directly from the sources.
• Often people and even children have to walk several kilometres to fetch water. The children suffer a lot. They cannot attend school regularly since they spend hours in fetching water.
• A large number of people draw water from wells, tube wells or hand pumps.
• If we dig deeper and deeper into the moist soil, we would reach a level where all the space between particles of soil and gaps between rocks are filled with water. The upper level of this layer is called the water table.</td></tr>
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	• The water table varies from place to place, and it may even change at a given place. The water table may be at a depth of less than a metre or may be several metres below the ground. • The water found below the water table is called **groundwater.** • The rainwater and water from other sources such as rivers and ponds seeps through the soil and fills the empty spaces and cracks deep below the ground. The process of seeping of water into the ground is called **infiltration.** The groundwater thus gets recharged by this process. • At places the groundwater is stored between layers of hard rock below the water table. This is known as an **aquifer. Aquifer is the water bearing layer of the earth.** • **Examples of Surface water:** Sea and oceans, Rivers, Springs, Lakes and Ponds. • **Ground water:** It is the water that sweeps into the ground through soil and collects over non-porous rocks (aquifer). The upper level of groundwater at any place is called water table. Groundwater gets recharged by seepage of water into the ground (infiltration). • **Water scarcity:** Depletion of water table. • Water drawn from under the ground gets restored by seepage of rainwater. • The water table does not get affected as long as we draw as much water as is replenished by natural processes. • However, water table may go down if the water is not sufficiently replenished. This may happen due to many reasons, such as, a) Increasing population. b) Growing irrigation requirements of agriculture. c) Rapid growth in number of industries. d) Scanty rainfall is another factor that may deplete the water table. e) Deforestation and decrease in the effective area for seepage of water. f) Uneven distribution of rainfall.
Step – V	Solve the questions as below: <u>Write the following Questions/Answers in Chemistry Class Work Copy</u> ➢ **Write the answer (along with the question) to Question No. 2, 5, 6, 7 and 9. (Page 203 and 204) given in the NCERT textbook.** **Answer 2:** The rainwater and water from other sources such as rivers and ponds seeps through the soil and fills the empty spaces and cracks deep below the ground. The process of seeping of water into the ground is called infiltration. The groundwater thus gets recharged by this process. **Answer 5:** The factors responsible for the depletion of water table are as follows: (i) Increasing population - Increasing population creates demand for construction of houses, shops, offices, roads and pavements. This decreases the open areas like parks, and playgrounds. This, in turn, decreases the seepage of rainwater into the ground which leads to depletion of water table. (ii) Industrialization - Most of the stages of manufacturing processes in industries require water. If the number of industries increases, then the water required by them will also increase. Since water used by most of the industries is drawn from the ground, therefore, increase of industries contributes to the depletion of water table.

	(iii) Agricultural activities - India is an agricultural country and agriculture is impossible without water. The water for agriculture is mainly utilized from ground water, rain water and canal water. As there is no rainfall in many places, agriculture cannot be entirely dependent on rain water. Also, canal water is available in a few places only. Therefore, ground water is the main source of water for agricultural activities and this causes depletion of water table. **Answer 6:** (a) Tube wells and hand pumps (b) Ice (solid), water (liquid) and water vapour (gaseous) (c) Aquifer (d) Infiltration **Answer 7:** (iii) Heavy rainfall **Answer 9:** Draw Fig 16.7 (Page 198)

Practice Questions: To be written in fair copy.

Q1: Name the available water resource on earth.
Q2: Water that is fit for human consumption is called_____.
Q3: The process of changing of water into its vapour is called---------.
Q4: The process of changing water vapour into water is called ---------.
Q5: No rainfall for a year or more may lead to ---------- in that region.
Q6: Excessive rains may cause ----------.
Q7: What are main sources of water?
a. Rainwater
b. Glaciers, ice
c. River water
d. sea and Ocean water
e. All of the above
Q8: Why ice floats on water?
Q9: Name the process responsible for maintenance of water on earth.
Q10: What is aquifer?

End of Week 3