

St. Mary's School, Dwarka
Holidays Homework
Class: XI
Subject: Chemistry
Week 1
Worksheet 1

Objective:

- Ø Revision of concepts
- Ø Application of the concepts to real life situations.
- Ø Skills to carry out research work and develop scientific aptitude

Instructions:

- *Neatly write all the answers in your science notebook.
- *Attempt the questions keeping in mind the weightage of each question.
- *Assignment 'Summer Holiday Homework' will be created on TEAMS. PDF of handwritten work should be uploaded on it.

Research Project

Observe the packed food item at your home. Find out the kind of packaging materials used. Categorised them into metal based and other materials. Deduce a suitable method to either decompose them at home or reuse in home. 3

Assignment 1

Assignment (Determination of pH)

1. Define pH of a solution. 1
2. Which one of the following solutions has the higher pH? 2
 - (a) 0.1M CH_3COOH
 - (b) 0.1M HNO_3
 - (c) 0.1M HCl
 - (d) 0.1M H_2SO_4
3. What is the pH of pure water at 25°C ? 2
4. What is the pH of 0.01 M HCl solution? 2
5. What is the pH of a 1×10^{-5} M NaOH solution? 2
6. Which one of the following is true about an acidic solution?
 $[\text{H}^+] > 10^{-7}$ or $\text{pH} > 7$ or $[\text{H}^+] = [\text{OH}^-] = 10^{-7}$ 2
7. What does the pH of a solution signify? 2
8. The pH of an alkaline solution is 10. What is its pOH? 3
9. pH of a solution of HNO_3 is 4. What is the concentration of hydrogen ions? 3
10. What is the relationship between pH and pOH of an aqueous solution? 3