Important Questions for Class 7 Science Chapter 4: Chapter 4 of Class 7 Science, Acids, Bases, and Salts, introduces students to the properties and characteristics of acids, bases, and salts. It explores common examples of acids (like vinegar and citrus fruits) and bases (such as soap and baking soda), highlighting their taste, feel, and reactions with indicators like litmus paper.

The chapter also covers the process of neutralization, where an acid reacts with a base to form water and salt. Students learn about the importance of acids, bases, and salts in daily life and their uses in various chemical processes.

Important Questions for Class 7 Science Chapter 4 Overview

Chapter 4 of Class 7 Science, Acids, Bases, and Salts, is crucial for understanding fundamental chemical concepts that are applicable in everyday life. It explains the properties of acids and bases, such as their taste, reactivity, and role in neutralization reactions.

The chapter emphasizes the importance of acids and bases in various natural processes, like digestion and plant growth, and their widespread use in industries, cleaning, and food preservation. By learning about salts, students recognize their significance in areas such as medicine (antacids), agriculture (fertilizers), and cooking (sodium chloride). The chapter also highlights the role of indicators in testing acidity and alkalinity, fostering a deeper understanding of chemical reactions.

Important Questions for Class 7 Science Chapter 4 Acids, Bases and Salts

Below we have provided Important Questions for Class 7 Science Chapter 4 Acids, Bases and Salts -

Very Short Answer Questions (1 mark)

Fill in the blanks:

1. _____are sour in taste.
   Ans: Acids
2. 2. Bases are _____in taste.
   Ans: Bitter
3. _____ are soapy to touch.
   Ans: Bases

4. _____ are used to determine if a solution is acid or base.
   Ans: Indicators
5. Ant bite contains _____.
   Ans: Formic acid.
6. Vinegar contains _____.
   Ans: Acetic acid.
7. Lactic acid is present in _____.
   Ans: Curd.
8. Solution which does not change colour in presence of any indicator is considered to be _____.
   Ans: Neutral.
9. Oxalic acid is present in _____.
   Ans: Spinach.
10. Phenolphthalein turns pink in _____.

Ans: Bases.

3 Mark Questions

Short Answer Questions (3 marks)

1. What is litmus? Explain its action.

Ans: One kind of indicator that comes from lichens is litmus. In distilled water, it appears purple. Consequently, under neutral conditions, it is purple. When combined with acids, it turns crimson. When combined with bases, it turns blue. It is available as solutions and strips of red and blue litmus paper.

2. Explain the action of turmeric as an indicator.

Ans: One sign that can be seen in nature is turmeric. In a neutral environment, it is yellow. When exposed to acid, it becomes a deeper shade of yellow. When subjected to simple conditions, it turns scarlet. Turmeric stains on fabrics turn scarlet when they come into touch with soap since it is a basic substance.

3. Explain the use of China rose as an indicator.

Ans: An excellent illustration of a natural indication is the growth of China. In neutral circumstances, it has an orange colour. When exposed to acid, it turns from dark pink to magenta. In simple conditions, it turns green.

4. Explain the use of phenolphthalein as an indicator.

Ans: The marker phenolphthalein is artificial. In neutral conditions it is colourless. Basic conditions cause it to turn pink, while acidic conditions cause it to turn colourless.

5. What is neutralization?

Ans: Neutralisation is the process by which an acid and a base react to form salt and water. In order to reverse the effects of an acid, a base must react with it, and vice versa. The neutralisation process results in the formation of salt and water.

Acid + Base → Salt + water.

3 for 5 Mark Questions

Long Answer Questions (5 marks)

1. Explain the uses of neutralization in daily life.

Ans: In our daily lives, acids and bases are important. Therefore, the other is employed to offset the effect of the first. Examples of common neutralising reactions that we see in daily life include the following:

1. Antacid use: Acidity in the stomach is a result of indigestion. The stomach produces more acid than is necessary in this circumstance. It can be neutralised with basic salts or weak bases. You will feel better after the base neutralises the acid.
2. Ant bite treatment: Ant bites contain formic acid, which causes skin irritation, swelling, and rashes. Basic chemicals such as calamine or baking soda can be used to neutralise the acid in the sting and provide comfort.
3. Soil Treatment: Plants that are growing in an environment with a balanced pH. This condition changes according to the plant. Conversely, plants cannot thrive in extremely acidic or alkaline conditions. Adding acidic organic matter, such compost and manure, can help restore overly alkaline soil. Slaked lime can be used to balance out excessively acidic soil.
4. Treatment of industrial wastes: Acidic chemicals found in industrial wastes are highly concentrated and will destroy aquatic life if they are dumped into water bodies. Therefore, before being released, they need to be neutralised with basic chemicals.
5. Toothpaste: When bacteria in our mouth break down food lodged between our teeth, acidic compounds are formed. Tooth decay is caused by these acids. Toothpaste is so basic in nature in order to neutralise acids in the mouth.

2. What is acid rain?

Ans: Rain or precipitation with an excess of acids is referred to as acid rain. This is brought on by an increase in air pollutants. Rainwater reacts with polluting gases like sulphur, nitrogen oxides, carbon dioxide, and carbon monoxide.

In this downpour, acids predominate. Because acids are corrosive, acid rain is also hazardous. Acid rain corrodes and damages buildings. It damages the skin, which leads to skin issues. Additionally, it causes soil and water bodies to become more acidic, which harms aquatic and plant life.

3. There are few solutions given. Compare the reactions to the use of litmus, turmeric and phenolphthalein as an indicator. Lemon juice, Lime water, Milk of magnesia, Milk, Toothpaste

Ans

Solution	Litmus	Turmeric	Phenolphthalein
Lemon juice	Red	Yellow	Colourless
Lime water	Blue	Red	Pink
Milk of magnesia	Blue	Red	Pink
Milk	Red	Yellow	Colourless
Toothpaste	Blue	Red	Pink

Benefits of Using Important Questions for Class 7 Science Chapter 4

Using important questions for Class 7 Science Chapter 4, Acids, Bases, and Salts, offers several benefits:

Concept Clarity: These questions help reinforce key concepts such as properties, reactions, and uses of acids, bases, and salts.

Focused Revision: By practicing relevant questions, students can focus on critical areas of the chapter, improving retention.

Better Understanding: Answering these questions helps students grasp complex ideas like neutralization and the role of indicators.

Exam Preparation: Regular practice of important questions boosts confidence and prepares students for assessments.

Application in Daily Life: These questions highlight the real-life applications of acids, bases, and salts, making learning more relatable and practical.