

Practice Worksheet on Acids, Bases, and Salts

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Subject: Chemistry

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Long Answer Questions

1. Explain the difference between strong and weak acids, providing examples of each.
2. Distinguish between monoprotic and diprotic acids, providing clear examples.
3. Differentiate between organic and mineral acids, giving examples for each category.
4. Explain the difference between alkalis and bases, providing examples and discussing their properties.
5. Describe various indicators, classifying them as natural or synthetic, and explaining how they work.

Multiple Choice Questions

1. What color change does blue litmus paper undergo in the presence of an acid?

- a) It turns blue in acidic solutions.
- b) It turns red in acidic solutions.
- c) It turns green in acidic solutions.
- d) It remains purple in acidic solutions.

2. What gas is usually produced when an acid reacts with a reactive metal?

- a) Hydrogen gas
- b) Oxygen gas
- c) Carbon dioxide
- d) Nitrogen gas

3. Which of the following best describes the properties of bases?

- a) They are sour and turn red litmus blue.
- b) They are bitter and turn blue litmus red.
- c) They are bitter and turn red litmus blue.
- d) They are sour and turn blue litmus red.

4. What type of reaction occurs when an acid and a base react?

- a) Neutralization
- b) Neutralization
- c) Hydrolysis
- d) Oxidation

5. What is the pH range of basic solutions?

- a) Below 7
- b) Above 7
- c) Equal to 7
- d) Equal to 14

Answer Key

Long Answer Questions – Expected Responses

1. Explain the difference between strong and weak acids, providing examples of each.

Expected Answer: Strong acids completely dissociate in water, releasing all their hydrogen ions. Weak acids only partially dissociate.

2. Distinguish between monoprotic and diprotic acids, providing clear examples.

Expected Answer: A diprotic acid releases two moles of hydrogen ions per mole of acid during complete dissociation; a monoprotic acid releases only one.

3. Differentiate between organic and mineral acids, giving examples for each category.

Expected Answer: Organic acids originate from plants or animals, while mineral acids are derived from minerals.

4. Explain the difference between alkalis and bases, providing examples and discussing their properties.

Expected Answer: Alkalis are bases that are soluble in water, while not all bases are alkalis. Alkalis are corrosive.

5. Describe various indicators, classifying them as natural or synthetic, and explaining how they work.

Expected Answer: Indicators change color depending on the pH of the solution; some are natural (litmus, turmeric), while others are synthetic (phenolphthalein, methyl orange).

Multiple Choice Questions – Correct Answers

1. What color change does blue litmus paper undergo in the presence of an acid?

Correct Answer: It turns red in acidic solutions.

2. What gas is usually produced when an acid reacts with a reactive metal?

Correct Answer: Hydrogen gas

3. Which of the following best describes the properties of bases?

Correct Answer: They are bitter and turn red litmus blue.

4. What type of reaction occurs when an acid and a base react?

Correct Answer: Neutralization

5. What is the pH range of basic solutions?

Correct Answer: Above 7