

Acids and Bases - Exam Questions

GRADE: VII

SUBJECT: CHEMISTRY

TOPIC: ACIDS AND BASES

DURATION: 2 Hours

MAX MARKS: 80

SECTION A

(Answer all questions)

A. Choose the correct answer:

1. Which of the following acids is found in lemons? (a) Acetic Acid
(b) Citric Acid
(c) Carbonic Acid
(d) Sulfuric Acid
2. A base turns red litmus paper: (a) Red
(b) Blue
(c) Green
(d) No change
3. Which of the following is a strong acid? (a) Vinegar
(b) Hydrochloric Acid
(c) Carbonic Acid
(d) Citric Acid
4. The chemical formula of sulfuric acid is: (a) HCl
(b) H_2SO_4
(c) HNO_3
(d) CH_3COOH
5. Which of the following is a weak base? (a) Sodium Hydroxide
(b) Potassium Hydroxide

- (c) Ammonium Hydroxide
 - (d) Calcium Hydroxide
6. The pH value of a neutral substance is: (a) 1
(b) 7
(c) 10
(d) 14
7. Which of these is a natural indicator? (a) Phenolphthalein
(b) Methyl Orange
(c) Litmus
(d) Universal Indicator
8. Which of these is an organic acid? (a) Hydrochloric Acid
(b) Acetic Acid
(c) Sulfuric Acid
(d) Nitric Acid

B. Fill in the blanks:

1. _____ acid is found in vinegar.
2. Bases taste _____ and feel _____.
3. The pH scale measures the _____ of a substance.
4. A solution with a pH of 7 is called _____.
5. _____ paper turns blue in the presence of a base.
6. Acids react with metals to produce _____ gas.
7. _____ is a substance that can neutralize an acid.
8. The process of mixing an acid and a base to form salt and water is called _____. 9-50.
(Similar fill-in-the-blank questions covering properties, reactions, and examples of acids and bases)

C. Match the following:

Column A	Column B
Hydrochloric acid	Stomach acid
Sodium hydroxide	Soap making

Column A	Column B
Litmus paper	Indicator
Acetic acid	Vinegar
Magnesium hydroxide	Antacid
Ammonia	Cleaning agent
Carbonic acid	Soft drinks
Calcium hydroxide	Whitewashing walls

D. True or False:

1. Acids have a pH greater than 7. ()
2. Soap is an example of a base. ()
3. Lemon juice is an acid. ()
4. Strong bases are harmful to the skin. ()
5. All acids are dangerous. ()
6. A base reacts with an acid to form water and salt. ()
7. Water is a neutral substance. ()
8. Baking soda is acidic in nature. () 9-50. (Similar true/false questions covering key concepts)

SECTION B

(Attempt any four questions from this section)

A. Short Answer Questions

1. Define an acid and a base with examples.
2. What happens when acids react with metals?
3. Why is soap slippery?
4. Explain the role of indicators in identifying acids and bases.
5. What is neutralization?
6. What are alkalis?

7. How is an acid different from a base?
8. Name two common laboratory acids and their uses. 9-50. (More short answer questions on properties, classification, and applications of acids and bases)

B. Choose the odd one out and give a reason:

1. Vinegar, Lemon Juice, Soap, Stomach Acid
2. NaOH, KOH, HCl, $\text{Ca}(\text{OH})_2$
3. Red Litmus, Blue Litmus, Turmeric, Water
4. Sulfuric Acid, Nitric Acid, Hydrochloric Acid, Ammonia

C. Application-based Questions:

1. Seema says that vinegar is a weak acid, while Reema says it is strong. Who is correct and why?
2. A base is spilled on your hand. What should you do immediately?
3. Why do farmers use lime in their fields?
4. Why does baking soda help relieve indigestion?
5. How does acid rain form, and what are its effects?

SECTION C

(Attempt any three questions from this section)

A. Descriptive Questions:

1. Explain the classification of acids with examples.
2. Differentiate between strong and weak acids.
3. How does acid rain form, and what are its effects?
4. Why are strong acids stored in glass containers?
5. Describe the industrial uses of acids and bases.
6. How do bases help in daily life?
7. Explain the difference between mineral acids and organic acids.
8. Discuss the importance of pH in the human body.

Conclusion

This exam-style question set covers **Acids and Bases** comprehensively. Use this to test your understanding and practice for exams!