

Acids, Bases & Salts

Quick Study Guide

HOW TO USE THIS GUIDE

HIGHLIGHTED TEXT SHOWS IMPORTANT POINTS

- ★ MARKS HIGH-FOCUS TOPICS
- 📝 INDICATES EXAM TIPS
- ⚠️ SHOWS COMMON ERRORS
- 💡 GIVES QUICK TIPS

PROPERTIES OF ACIDS & BASES

Mnemonic: "NIMBU PAANT"

- N Neela litmus red karta hai (Acid)
- I Indicator color change
- M Metal se reaction
- B Bitter bases, sour acids
- U Universal indicator use
- P pH less than 7 (Acid)
- A Atmosphere mein H⁺ dete
- A Alkali dissolve in water
- N Neutralization reaction
- I Ions H⁺ and OH⁻

Remember As

- Acids: Nimbu, dahi, vinegar
- Bases: Soap, toothpaste, antacids
- Neutral: Pure water, salt solution



Do's

Common errors

- pH scale ulta yaad karna
- Forgetting indicators
- Missing observations

PH SCALE MASTERY

Mnemonic: "SAAT SAMUNDR"

- S Seven is neutral point
- A Acid niche rehte (Below 7)
- A Alkali upar rehte (Above 7)
- T Test with universal indicator

Key Indicators:

- Strong acid: 1-3
- Weak acid: 4-6
- Neutral: 7
- Weak base: 8-10
- Strong base: 11-14

- S Strong acid (1-3)
- M Moderate pH (5-9)
- U Universal indicator colors
- N Neutral at seven
- D Dekho color change
- R Range 0-14

- 2. Other Goals
- Education
- Health
- Security
- Equal rights

IMPORTANT REACTIONS

Mnemonic: "PARTY KARLE"

- P Products bante hai
- A Acid + Base → Salt + Water
- R Reactants important
- T Temperature change
- Y Yield check

- K. $\text{KOH} + \text{HCl} \rightarrow \text{KCl} + \text{H}_2\text{O}$
- A Acid reactions
- R. Rate of reaction
- L. Look for bubbles
- E. Effervescence

Key Reactions :-

- $\text{NaOH} + \text{HCl} \rightarrow \text{NaCl} + \text{H}_2\text{O}$
- $\text{CaO} + \text{H}_2\text{O} \rightarrow \text{Ca(OH)}_2$
- $\text{Na}_2\text{CO}_3 + \text{HCl} \rightarrow \text{NaCl} + \text{H}_2\text{O} + \text{CO}_2$

SALTS FORMATION & TYPES

Mnemonic: "NAMAK SHAMAK"

- N. Normal salts (NaCl)
- A. Acid salts (NaHCO_3)
- M. Metal + Acid → Salt
- A. Acidic salts pH < 7
- K. K⁺ salts basic

- S. Strong acid + base
- H. H replacement
- A. Acidic/Basic/Normal
- M. Metal hydroxide
- A. Anion important
- K. Keep pH mind

Important Salts:

- NaCl - Neutral salt
- Na_2CO_3 - Basic salt
- NH_4Cl - Acidic salt
- CH_3COONa - Basic salt

PRACTICAL REACTIONS

Mnemonic: "TEST KARO"

- T. Turn litmus paper
- E. Effect on indicators
- S. Smell check (vinegar)
- T. Touch not allowed

Lab Tests:

- Red litmus → Blue (Base)
- Blue litmus → Red (Acid)
- Phenolphthalein → Pink (Base)
- Methyl orange → Red (Acid)

- K. Keep observing
- A. Add solutions slowly
- R. Record color change
- O. Observe fizzing

CHEMICAL PROPERTIES

Mnemonic: "REACTION HERO"

- R. Reactions with metals
- E. Evolution of H₂ gas
- A. Action with carbonates
- C. CO₂ gas forms
- T. Test with indicators
- I. Ion formation
- O. Oxide reactions
- N. Neutralization

- H. H ions in water
- E. Electrical conductivity
- R. Reaction with bases
- O. OH⁻ ions in water

Must do activities

- $\text{Zn} + \text{HCl} \rightarrow \text{ZnCl}_2 + \text{H}_2$
- $\text{Na}_2\text{CO}_3 + \text{HCl} \rightarrow \text{NaCl} + \text{H}_2\text{O} + \text{CO}_2$
- $\text{NaOH} + \text{HCl} \rightarrow \text{NaCl} + \text{H}_2\text{O}$



QUICK REVISION CHECKLIST

Before Exam:

- ✓ pH values of common substances
- ✓ Color changes with indicators
- ✓ Important salt formations
- ✓ Neutralization reactions
- ✓ Chemical properties
- ✓ Real-life examples

Scoring Tips:

1. Write balanced equations
2. Include observations
3. Mention color changes
4. Write proper pH values
5. Add state symbols

100%

HIGH FOCUS AREAS

1. pH scale and indicators (3 marks)
2. Salt formation (3-4 marks)
3. Chemical properties (5 marks)
4. Practical based (4 marks)

GOOD LUCK!

