Acids and Bases are Solutions

Solution:

-homogeneous, one phase

-impure

-not a constant composition

-made of solute + solvent (example: salt and water)

Solute:

-dissolved substance

-lesser amount (example: salt)

Solvent:

-dissolving substance

-greater amount (example: water)

Review

- ✓ acids and bases must be **dissolved** in water to act like an acid or base
- ✓ dissolving in water **dissociates** the acid or base into its ions
- ✓ we denote dissolved chemicals in water by **(aq)**
- ✓ acidic solutions contain $\mathbf{H^+}$ (protons)
- ✓ basic solutions contain $\mathbf{OH^-}$ (hydroxide ions)
- ✓ to receive full marks on evaluations, acid and base **dissociation equations** must include :
  - balanced equation
  - charges on ions
  - (aq) subscript behind each ion
  - proper per notation of coefficient, symbole, charge and state $2OH^-_{(aq)}$
  - EXAMPLE: $Mg(OH)_2 \rightarrow Mg^{2+}_{(aq)} + 2OH^-_{(aq)}$

Write the dissociation equations for the following:

1. **HBr ->**

2. **HI ->**

3. **HNO_3 ->**

4. **KOH ->**

5. **$Mg(OH)_2$ ->**

6. **H_2SO_4 ->**

7. **$Al(OH)_3$ ->**

8. **H_3PO_4 ->**

9. **$Mg(ClO_3)_2$ ->**

10. **$NaOH$ ->**

11. **$RbOH$ ->**

12. **$Ba(OH)_2$ ->**

13. **$Ba_3(PO_4)_2$ ->**