

Q1) Distinguish between the concept of knowing acids and bases on the basis of Arrhenious Theory and Lewis Theory.

Arrhenious Theory

(i) In Arrhenious theory, it states that acids ~~are~~ produce H^+ ions when dissociate with water and bases produce OH^- ions when dissociate with water.

(ii) It was introduced by a Swedish scientist, Svante Arrhenius in 1887.

Lewis Theory

(i) In Lewis theory, it states that acids react with bases and share a pair of electrons with no change ⁱⁿ of their oxidation number of an atom and hence can be classified.

(ii) It was introduced by an American chemist, N. Lewis in 1925.

Q2) Although NH_3 doesn't contain any OH^- ions still it behaves as a base. Why?

NH_3 or Ammonia ~~doesn't~~ doesn't have OH^- ions when dissociates with water but still it behaves like a base, because though ammonia doesn't contain OH^- ions but when it dissociates with water, it produces OH^- ions ~~then~~ because of the hydrogen ions present in water.

Q3) What is the oxidation state of K-atom in potassium permanganate?

The oxidation state of K-atom in ~~K₂H~~ KMnO₄ is +1.