

61. (a) Because of  $CH_3COONa$  is a salt of weak acid and strong base.

62. (b) Acid  $\xrightarrow{-H^+}$ conjugate base.  
Base  $\xrightarrow{+H^+}$ conjugate acid.

63. (b)  $HCl \xrightarrow{\text{Acid}} Cl^- \xrightarrow{\text{Base}}$

65. (a)  $HClO_4 > H_2SO_4 > HCl > HNO_3$ .  
Acidic character decreases

66. (a) Those substances which accept the  $H^+$ are called conjugate base.

67. (d)  $NH_3$  is a Lewis base, which donate a lone pair of electron.

68. (c) (i) Correct and (ii) Wrong

Explanation (Simple & Clear):

Statement (i):

"A strong acid has a weak conjugate base." →Correct

Strong acid dissociates completely  
→ its conjugate base is very weak.

Example:

$HCl$  (strong acid)  $\rightarrow Cl^-$  (very weak conjugate base)

Statement (ii):

"An acid is an electron pair acceptor." →Wrong

This is definition of a Lewis acid.

Acid (Bronsted-Lowry) = proton donor ( $H^+$  donor)

Lewis acid = electron pair acceptor

69. (a)  $FeCl_3 + 3H_2O \rightleftharpoons Fe(OH)_3 + 3HCl$ .

Strong acid have less than 7 pH.

70. (b) It donates their  $e^-$  pair.

71. (b) The strength of the acid will depend upon the proton donation.

72. (d) Coordinate covalent bond formation

Explanation:

In Lewis acid-base theory:

Lewis acid = electron pair acceptor

Lewis base = electron pair donor

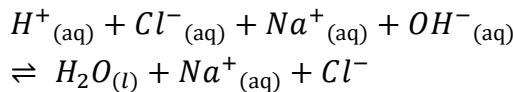
When they react, a coordinate covalent bond is formed between them.

This is considered neutralization in Lewis theory.



73. (b) Because it is a salt of strong acid

and strong base.



74. (d)  $CCL_4$  is not a Lewis or bronsted

acid. It does not contain  $H^+$ .

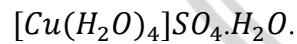
75. (b)  $NH_4Cl + H_2O \rightleftharpoons NH_4OH +$

$HCl$ . So it is acidic in nature.  
Strongacid Weakbase

76. (b) Cu(II) complexes are blue. The

four water molecules are attached with secondary

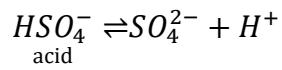
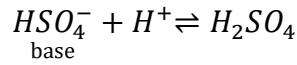
valencies of the metal atom e.g.



77. (a) The species which can accept as

well as donate  $H^+$  can act both

as an acid and a base.



78. (a)  $NH_4^+$  is the weakest acid. So its

conjugate base is strongest.

79. (b)  $Ag^+$  is an electron deficient

compound and hence is a Lewis

acid.

80. (a)  $H_3PO_4 \rightleftharpoons H^+ + H_2PO_4^-$

Conjugate acid

