



Acids and Bases

61. A solution of sodium acetate in water will
 (a) Turn red litmus blue
 (b) Turn blue litmus red
 (c) Not effect litmus
 (d) Decolourises litmus
62. Cl^- is the conjugate base of
 (a) $HClO_4$ (b) 1×10^{-5} ,
 (c) CH_3COONa (d) $HClO_3$
63. Which of the following behaves as both Lewis and Bronsted base
 (a) BF_3
 (b) Cl^-
 (c) CO
 (d) None of these
64. The conjugate acid of a strong base is a
 (a) Strong acid
 (b) Weak acid
 (c) Strong base
 (d) Weak base
65. Which one is the weakest acid
 (a) HNO_3 (b) $HClO_4$
 (c) H_2SO_4 (d) HBr
66. Conjugate base of HPO_4^{2-} is
 (a) PO_4^{3-} (b) $H_2PO_4^-$
 (c) H_3PO_4 (d) H_4PO_3
67. Which of the following is not Lewis acid
 (a) $FeCl_3$ (b) $AlCl_3$
 (c) BCl_3 (d) NH_3
68. (i) A strong acid has a weak conjugate base
 (ii) An acid is an electron pair acceptor
 The above statements (i) and (ii)
 (a) Correct
 (b) Wrong
 (c) (i) Correct and (ii) Wrong
 (d) (i) Wrong and (ii) Correct
69. The pH is less than 7, of the solution of
 (a) $FeCl_3$ (b) $NaCN$
 (c) $NaOH$ (d) $NaCl$
70. In the reaction $I_2 + I^- \rightarrow I_3^-$, the Lewis base is
 (a) I_2
 (b) I^-
 (c) I_3^-
 (d) None of these
71. The strength of an acid depends on its tendency to
 (a) Accept protons
 (b) Donate protons
 (c) Accept electrons
 (d) Donate electrons



72. In Lewis acid-base theory, neutralization reaction may be considered as
- Formation of salt and water
 - Competition for protons by acid and base
 - Oxidation reduction
 - Coordinate covalent bond formation
73. The salt that forms neutral solution in water is
- NH_4Cl
 - $NaCl$
 - Na_2CO_3
 - K_3BO_3
74. Which of the following cannot act as a Lewis or Bronsted acid
- BF_3
 - $AlCl_3$
 - $SnCl_4$
 - CCl_4
75. Which one of the following salts gives an acidic solution in water
- CH_3COONa
 - NH_4Cl
 - $NaCl$
 - CH_3COONH_4
76. Which of the anhydrous salts when come in contact with water turns blue
- Ferrous sulphate
 - Copper sulphate
 - Zinc sulphate
 - Cobalt sulphate
77. The species among the following, which can act as an acid and a base is
- HSO_4^-
 - SO_4^{2-}
 - H_3O^+
 - Cl^-
78. The strongest base from the following species is
- NH^{2-}
 - OH^-
 - O^{2-}
 - S^{2-}
79. Which one is Lewis acid
- Cl^-
 - Ag^+
 - C_2H_5OH
 - S^{2-}
80. The conjugate acid of $H_2PO_4^-$ is
- H_3PO_4
 - $H_2PO_4^-$
 - PO_4^{3-}
 - H_3O^+

