

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^+

