*HQ* is 3. The value

f the ionization constant, *Ka* of the acid is [AlEEE 2012)

(b) 1x10-3

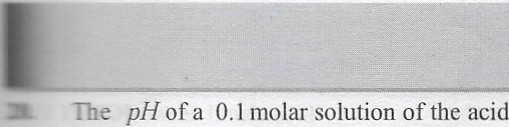
(d) l x10-7

'.nich is generally true about ionic compounds !Pb. PMT 20021

al Have low boiling point

(b) Have low melting point

**Ionic Equilibrium 411 UNIVERSAL**



**BOOK DEPOT 1960**

1. The addition of a polar solvent to a solid electrolyte results in
   1. Polarization (b) Association

(c) Ionization (d) Electron transfer

1. Inweak electrolytic solution, degree of ionization
   1. Will be proportional to dilution
   2. Will be proportional to concentration of electrolyte
   3. Will be proportional to the square root of dilution
   4. Will be reciprocal to the dilution

(c) Soluble in non polar solvents

d) Conduct electricity in the fused state

"\liich one of the following is the correct quadratic form of the Ostwald's dilution law equation IJ& K CET 2009)

a) *a2 C+aK -K =O* (b) *a2 C-aK - K =O*

33.

The best conductor of electricity is a 1.0 *M* solution of

(a) Boric acid (b) Acetic acid

1. Sulphuric acid (d) Phosphoric acid

Acids **and** Bases

c) *a2 C-aK +K =O* (d) *a2 C+aK + K =O*

.\nexample for a strong electrolyte is IKCET 2002]

a) Urea (b) Atmuonium hydroxide

' c) Sugar (d) Sodium acetate

* 1. The degree of dissociation in a weak electrolyte increases

[CBSE PMT 1989; MP PMT 19971

* + 1. On increasing dilution (b) On increasing pressure

(c) On decreasing dilution (d) None of these

A 0.010 *M* solution of maleic acid, amonoprotic organic acid, is 2.

14% ionized. What is *Ka* for maleic acid [DUMET 2010)

Which of the following is not a Lewis acid [CBSE PMT 1996)

(a) *BF;,* (b) *Feq*

1a) 2.3x10-3

(c) 2.0x l0-4

(b) 2.3x l0-4

(d) 2.0x lO

(c) *SiF°.i *

3. Boron halides behave as Lewis acids, because of their

The following equilibrium exists in aqueous solution,

*CH3 COOHCH3COO-* + *H+* if dil. *HCI* is added, without change in temperature, the iUPSEAT 2000, 021 4.

(a) Concentration of *CH3 COCT* will increase

[CBSE PMT 1996; BHU 20041

(a) Ionic nature (b) Acidic nature

1. Covalent nature (d) Electron deficient nature Which of the following is the strongest conjugate base

[MADI Bihar 1983; CBSE PMT 1999;

KCET 2001; DUMET 2009)

* 1. Concentration of CH3 *COCT* will decrease
  2. The equilibrium constant will increase

1. *er*

(c) *504-*

1. *CH3COCT*

(d) *NOz-*

-··

·­

* 1. The equilibrium constant will decrease

A monoprotic acid in 1.00 *M* solution is 0.01% ionized. The dissociation constant of this acid is [BVP 20031

(a) lxl0-8 (b) J xl 0-4

(c) J x J O (d) J O *5*

Accumulation of lactic acid *( HC3H5q),* a monobasic acid in tissues leads to pain and a feeling of fatigue. In a 0.10 *M*

aqueous solution, lactic acid is 3.7% dissociates. The value of dissociation constant *Ka,* for this acid will be

JNEET (Karnataka) 2013)

1. The most acidic compound in water is [CBSE PMT 2001]
   1. *AJCJ3* (b) *BeCI2*

(c) *FeCJ3* (d) None of these

1. Which of the following molecules acts as a Lewis acid

[CBSE PMT 20091

(a) .(CH3 )3 B (b) (CH3)z 0

1. Which of the following is least likely to behave is Lewis base

(JIPMER 2000; CBSE PMT (Pre.) 2011; NEET 2013]

* 1. J.4xlo-s

(c) 3.7x10-4

* 1. l.4x l 0-4

(d) 2.8x l0-4

* + 1. *OW* (b) H2 0.

(c) *NH3* (d) *BF;,*

!8. Vant hoff factor of *BaCJ2* of cone. 0.0 *IM* is 1.98. Percentage

dissociation of *BaC12* on this cone. Will be [Kerala CET 2005)

(a) 49 (b) 69

(c) 89 (d) 98

1. In which of the following arrangements the given sequence is not strictly according to the property indicated against it

[CBSE PMT (Mains) 20121

* 1. *HF < HCI* < *HBr* < *HI ;* increasing acidic strength

(e) 100

1. An ionizing solvent has
   1. H2 0< *H2S* < *H2 Se< H2 Te;* increasing *pK 8*

values

* + 1. Low value of dielectric constant
    2. High value of dielectric constant
    3. *NH3* < *PH3* < *AsH3* < *SbH3 ;* increasing acidic character
    4. C0 < *SiOz* < *Sn0* < *PbDz* ; increasing oxidizing power

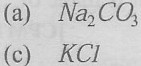
1. A dielectric constant equal to I 2 *2*
2. Has a high melting point 9.
3. For a weak acid *HA,* Ostwald's dilution law is represented by the equation

*2*

Which of the following salts will give highest pH in water

(CBSE PMT 2014]

(b) *Cu504*



(d) *NaCl*

(a)

*K =* {b)

*a c*

*K =-* 10.

*NaOH* is a strong base because IAllMS 20011

*a l -a2 a* 1- a

*K.c a2c*

(c) *a=--* (d) *K* = -

1-c *a* l- a2

(a) It gives *OH* ion (b) Itcan be oxidized

(c) It can be easily ionized (d) Both (a) and (c)

,/'.