11) Solubility of Agcl is maximum in
A)0.1M Hcl
B) 0.1M Nacl
C) Water
D) 0.1M NH_4OH
Due to the complex formation $[Ag(NH_3)_2]cl$

12) Ks of a sparingly soluble salt AB is $1+10^{-8}$. In a solution $[A^+]$ is 10^{-4} M. AB will precipate when $[B^-]$ is
A)10^{-3}M   B)10^{-4}M
C)10^{-5}M   D)all the above.

13) To a solution containing equal concentration of cl^-,Br^-,I^-. Dilute $AgNo_3$ solution is added. Which is precipitated first.
A) Agcl   B)AgBr
C)AgI   D)all are precipitated
together. Solubility of AgI is the least

14) Ka for a weak acid is 10^{-5}.pk_b for its conjugate base is
A)10^{-9} B)5
C)9   D)7
pk_a=5, pk_b= 14-5 = 9

15) In a solution containing mixture of NH_4cl and NH_4OH, the ratio $[NH_4cl]:[NH_4OH]$ decreases by 10 times, than the pH
A) Increases by 1 unit
B) Increases by 10 unit
C)Decreases by 1 unit
D) Decreases by 10 unit

16) pH of a sodium hydroxide solution is 10. Then mass of $NaoH/dm^3$ is
A)2×10^{-3}g   B)4×10^{-3}g
C)10^{-10}g   D)4×10^{-9}g
$poH = 4$ [NaoH]=10^{-4} mass/dm^3 =$10^{-4} \times 40$ = 4×10^{-3}g

17) pH of 0.5 N H_2SO_4 is
A) 0   B)0.3010
C) 1   D) 0.5
$[H^+]$=0.5 pH= -log 5×10^{-1}=1-0.6990 = 0.3010

18)Difference between 0.1 N NaoH and 0.1 NH4OH is

A) One is a conductor of electricity and other is not
B) One is corrosion and other is not
C) One contains undissociated molecules and other does not
D) One reacts with Hcl and other does not

19) When more and more water is added to the solution of a weak electrolyte, the value of the degree of dissociation approaches to..
A)0   B) 1
C)100   D)∞

20)In the electrolysis of the fused Nacl, the product obtained at the cathode is
A)02   B)cl2
C)H2   D) none of the above

21)The solubility of a salt AB_2 IS 1.0×10^{-5} mol dm^{-3} .the value of solubility product is
A)4×10^{-15} B)10^{-10}
C)10^{-15} D)4×10^{-10} K_s=$4(1.0\times 10^{-5})^3$

22)ECE of a divalent metal is 2×10^{-4}. Atomic mass of the metal is
A) 19.3   B)38.6
C)77.2   D)9.65
Eq. mass = $2\times 10^{-4} \times 96500$
AT. Mass = $(2\times 10^{-4} \times 96500) \times 2 = 38.6$

23) pH of a NaoH solution is 10. 10 dm^3 of this solution contains.
A)0.1g NaoH   B)4g of NaoH
C)0.4g of NaoH   D)0.04g NaoH
$poH = 4$ $[OH^-]$= 10^{-4} Mass/10 dm^3=$10^{-4} \times 40 \times 10$ =4×10^{-2}

24)Common salt is added to a saturated solution of soap. Soap is precipitated. This is because of
A) Common ion effect   C)Coagulation
B)Peptisation   D)None of these

25)A buffer solution containing equal volumes 0.02M NH_4OH and 0.2M NH_4cl has a pH=x $pk_b$of NH_4OH=5, the value of x is
A) 4   B) 6
C) 8   D) 10

$poH = 5 + \log\frac{0.2}{0.02} = 6$
$\therefore pH = 14 - 6 = 8$

Answer

11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.
D	D	C	C	A	B	B	C	D	D	A	B	D	A	C