CHEMISTRY

61. XeF_2 reacts with SbF_5 to form

1) $[XeF]^+[SbF_6]^-$ 2) $[XeF_3]^-[SbF_4]^+$ 3) $XeSbF_6$ 4) XeF_4

62. Which of the following reactions of xenon compounds is not feasible.

1) $XeO_3 + HF \rightarrow XeF_6 + 3H_2O$ 2) $3XeF_4 + 6H_2O \rightarrow 2Xe + XeO_3 + 12HF + 1.5O_2$

3) $2XeF_2 + 2H_2O \rightarrow 2Xe + 4HF + O_2$ 4) $XeF_6 + RbF \rightarrow Rb[XeF_7]$

63. Xenon hexafluoride reacts with silica forms SiF_4 and another xenon compound(X). The oxidation state of Xe in X is

1) +2 2) +4 3) +6 4) 0

64. Among the following which one has the lowest boiling point

1) Ne 2) He 3) Ar 4) Xe

65. Extraction of zinc from zinc blende is achieved by

1) Electrolytic reduction
2) Roasting followed by reduction with carbon
3) Roasting followed by reduction with another metal
4) Roasting followed by self reduction

66. Magnetic separation is used for refining the ore

i) Magnesite ii) haematite iii) cassetarite iv) Azurite

1) i and ii 2) ii and iv 3) ii and iii 4) iii and iv

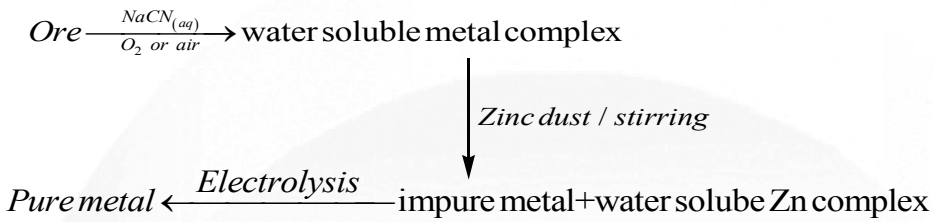
67. A substance which reacts with gangue to form fusible material is called as

1) slag 2) flux 3) ore 4) matte

68. The impure metal obtained is further purified using poling/ liquation/zone refining or electrolysis. Poling is used in the purification of

1) *Pb and Hg* 2) *Cu and Fe* 3) *Cu and Sn* 4) Tin and Iron

69.



The metal obtained this way is

1) Copper 2) Lead 3) Silver 4) Aluminimum

70. Which of the following metal is purified by Van-Arkel method

1) Au 2) Ni 3) Ti 4) Al

71. I_2O_4, I_2O_5 *and* I_2O_7 are insoluble solids, decompose on heating. Which oxide is used in the estimation of carbon monoxide

1) I_2O_4 2) I_2O_5 3) I_2O_7 4) None of these

72. In which of the following reactions chlorine is one of the products.

i) $KMnO_4 + conc.HCl \rightarrow$ ii) $NaCl + MnO_2 + Conc.H_2SO_4 \rightarrow$

iii) $MnO_2 + conc.HCl \rightarrow$ iv) $NaCl + Br_2 \rightarrow$

1) i and ii 2) ii, iii and iv 3) i, ii and iii 4) i, iii and iv

73. Uranium is fluorinated to UF_6 and is used in the enrichment of ^{235}U. The fluorinating agent used is

i) ClF_3 ii) BrF_3 iii) HF iv) NaF

1) i and iii 2) i and ii 3) iii and iv 4) None of them

74. Hot and $conc.NaOH$ reacts with chlorine and forms chlorate. The number of moles of chlorine used up in the reaction according to balanced equation is

1) One 2) Two 3) Three 4) Four

75. Excess ammonia gas on reaction with chlorine forms

i) NH_4Cl ii) NCl_3 iii) N_2 iv) NH_2Cl

1) i & ii 2) iii & iv 3) i & iii 4) ii & iii

76. The incorrect order is

1) $HF < HCl < HBr < HI$; Acidic strength

2) $HF > HCl > HBr > HI$; Thermal stability

3) $HF > HCl > HBr > HI$; Boiling point

4) $HF > HCl > HBr > HI$; Bond dissociation enthalpy.

77. Bleaching action of chlorine is due to

1) Reduction 2) Oxidation 3) Chlorination 4) Neutralization

78. Which of the following is an antichlor

1) Na_2SO_4 2) $Na_2S_2O_3$ 3) Alum 4) $CaOCl_2$

79. When dry chlorine is passed over silver chlorate at $460K$, the product obtained is

1) Cl_2O 2) ClO_2 3) ClO_3 4) ClO_4

80. Zone refining is used to purify

1) Germanium 2) Gallium 3) Silicon 4) All

81. Brass Contains

1) Cu and Zn 2) Cu, Zn and Ni

3) Cu and Sn 4) Pb, Sn and Cu

82. The xenon compounds that are isostructural with IBr_2^- & BrO_3^- respectively are

1) Bent XeF_2 and Pyramidal XeO_3 2) Linear XeF_2 and pyramidal XeO_3

3) Bent XeF_2 and planar XeO_3 4) linear XeF_2 and tetrahedral XeO_3

83. Which of the following ore is a sulphide ore

1) malachite 2) magnetite 3) horn silver 4) zinc blende

84. In the reverbaratory furnace copper is produced in the form of copper matte, which contains

1) FeO, Cu_2S 2) Cu_2S, Fe_2O_3 3) Cu_2O, FeS 4) Cu_2S, FeS

85. Inter halogen compounds are more reactive than halogens due to

1) strong $X - X'$ bonding 2) more electronegativity

3) weaker $X - X'$ bond 4) more electron gain enthalpy

86. When bleaching powder is treated with CO_2

1) Chlorine is evolved 2) Calcium chloride is formed

3) No reaction occurs 4) CO gas liberated

87. Which one is incorrect statement
1) Helium is used in gas cooled nuclear reactors
2) Helium is used as a cryogenic agent for carrying out experiments
3) Helium is used to produce and sustain powerful super conducting magnets
4) Helium is used to fill gas balloons instead of H_2 because helium is lighter and higly inflammable

88. Which of the following pairs of xenon compounds and their structure are correctly matched
i) XeF_4 - Tetrahedral ii) XeO_3 - Pyramidal
iii) $XeOF_4$ - Square Pyramidal iv) XeF_2 - Linear
Select the correct answer
1) i, ii, iii and iv 2) ii, iii and iv 3) i, and ii 4) i, ii and iv

89. By which process Pb and Sn are extracted respectively
1) Carbon reduction – self reduction
2) Self reduction – carbon reduction
3) Electrolytic reduction – cyanide process
4) Cyanide process – Electrolytic reduction

90. During the process of electro refining of copper some metals present as impurity settle as anode mud. These are
1) Sn and Ag 2) Pb and Cu 3) Ag and Au 4) Fe and Ni