MERITSTORE

NEET-Chemistry

46. The solid like conducting state of gases with free electrons is called
    a) Sol state
    b) Gel state
    c) Plasma state
    d) All of these

47. The molecular weight of air will be
    (the components of air given as $N_2 - 78\%, O_2 - 21\%, Ar - 09\%$ and $CO_2 - 0.1\%$)
    a) 18.64
    b) 24.968
    c) 28.964
    d) 29.864

48. The orbital angular momentum of an electron in $2s$ orbital is
    a) $+\frac{1}{2}.\frac{h}{2\pi}$
    b) Zero
    c) $\frac{h}{2\pi}$
    d) $\sqrt{2}\frac{h}{2\pi}$

49. If the kinetic energy of an electron is increased four times, the wavelength of the de-Broglie wave associated with it would becomes
    a) Half times
    b) $\frac{1}{4}$ times
    c) Four times
    d) Two times

50. Which of the following statements is wrong?
    a) The stability of hydrides increases from NH_3 to BiH_3 in group 15 of the Periodic Table.
    b) Nitrogen cannot from $d\pi - p\pi$ bond.
    c) Single $N - N$ bond is weaker than the single $P - P$ bond.
    d) N_2O_4 has two resonance structure.

51. The pair of molecules forming strongest hydrogen bonds are
    a) SiH_4 and SiF_6
    b) $CH_3 - \underset{\underset{O}{||}}{C} - CH_3$ and $CHCl_3$
    c) $H - \underset{\underset{O}{||}}{C} - OH$ and $CH_3 - \underset{\underset{O}{||}}{C} - OH$
    d) H_2O and H_2

52. The d-orbital involed in sp^3d hybridization is
    a) $d_{x^2-y^2}$
    b) d_{xy}
    c) d_{z^2}
    d) d_{zx}

53. If two molecules of $A$and B having mass 100 kg and 64 kg and rate of diffusion of $A$is 12×10^{-3}, then what will be the rate of diffusion of B?

a) 15×10^{-3} b) 64×10^{-3}

c) 5×10^{-3} d) 46×10^{-3}

54. When 500 J heat is given to the gas X in an isobaric process its work done comes out as 142.8 J. The gas X is

a) O_2 b) NH_3 c) He d) SO_2

55. $\Delta H_{vap} = 30$ kJ/mol and $\Delta S_{vap} = 75$ Jmol^{-1}K^{-1}. Find temperature of vopour, at 1 atm

a) 400 K b) 350 K c) 298 K d) 250 K

56. $$2HI(g) \rightleftharpoons H_2(g) + I_2(g)$$

The equilibrium constant of the above reaction is 6.4 at 300 K. If 0.25 mole each of H_2 and I_2 are added to the system, the equilibrium constant will be

a) 6.4 b) 0.8 c) 3.2 d) 1.6

57. The oxidation state of two sulphur atoms in $H_2S_2O_8$

a) -6 b) -2 c) $+6$ d) -4

58. What is the oxidation number of chlorine in ClO_3^-?

a) $+5$ b) $+3$ c) $+4$ d) $+2$

59. In which of the following reactions, H_2O_2 is acting as a reducing agent?

a) $SO_2 + H_2O_2 \rightarrow H_2SO_4$

b) $2KI + H_2O_2 \rightarrow 2KOH + I_2$

c) $PbS + 4H_2O_2 \rightarrow PbSO_4 + 4H_2O$

d) $AgO_2 + H_2O_2 \rightarrow 2Ag + H_2O + O_2$

60. Which one of the following statements is true for all the alkali metals?

a) Their nitrates decompose on heating to give NO_2 and O_2.

b) Their carbonates decompose on heating to give CO_2 and the metal oxide.

c) They react with oxygen to give mainly the oxide M_2O.

d) They react with halogens to give the halides MX.

61. Which of the following is known as inorganic benzene?

a) Borazine b) Phosphonitrilicacid

c) Boron nitride d) p- dichlorobenzene

62. Quartz is an example of

a) Chain silicate

b) Sheet silicate

c) Cyclic silicate

d) Three dimensional network silicate

63. Which among the following statements is correct with respect to the optical isomers?

a) Enantiomers are non-superimposable mirror images

b) Diastereomers are superimposable mirror images

c) Enantiomers are superimposable mirror images

d) *Meso* forms have no plane of symmetry

64. When propyne react with H_2O in presence of dil. H_2SO_4 and $HgSO_4$ product formed is

a) Acetone
b) Acetaldehyde
c) Acetic acid
d) Ethyl alcohol

65. The reaction of toluene with chlorine in the presence of ferric chloride gives predominantly

a) m-chlorotoluene
b) Benzyl chloride
c) Benzoyl chloride
d) o and p-chlorotoluene

66. Temperature of troposphere decreases with altitude. This is because of

a) High pressure of air
b) Gases present in air
c) Lower density of air
d) All of these

67. Graphite is a

a) Molecular solid
b) Covalent solid
c) Ionic solid
d) Metallic solid

68. Which of the following statement is true?

a) Some complex metal oxides behave as superconductor
b) Zinc oxide can act as superconductor
c) An impurity of tetravalent germanium in trivalent gallium creates electron deficiency
d) A Frenkel defect is formed when an ion is displaced from its lattice site to an interstitial site

69. Colligative properties are used for the determination of

a) Molar mass
b) Equivalent weigh
c) Arrangement of molecules
d) Melting and boiling points

70. The relationship between the values of osmotic pressure of 0.1 M solution of $KNO_3(p_1)$and $CH_3COOH(p_2)$ is

a) $\frac{p_1}{p_1+p_2}=\frac{p_2}{p_1+p_2}$
b) $p_1 > p_2$
c) $p_2 > p_1$
d) $p_1 = p_2$

71. Which of the following reactions cannot be Abase for electrochemical cell?

a) $H_2 + O_2 \longrightarrow H_2O$
b) $AgNO_3 + Zn \rightarrow Zn(NO_3)_2 + Ag$
c) $AgNO_3 + NaCl \rightarrow AgCl\downarrow + NaNO_2$
d) $KMnO_4 + FeSO_4 + H_2SO_4 \longrightarrow K_2SO_4 + Fe_2(SO_4)_3 + MnSO_4 + H_2O$

72. A drop of a solution (volume $= 0.05$ mL) contains 6×10^{-7}mol ofH^+. If the rate of disappearance of H^+ is 6.0×10^5mol/L $\times$ s, how long will it take for H^+ to disappear from the drop

a) 8.0×10^{-8} s b) 2.0×10^{-8} s c) 6.0×10^{-6} s d) 2.0×10^{-2} s

73. For a reaction, $A + 2B \rightarrow C$, rate is given by $+\frac{d[C]}{dt} = k[A][B]$,hence, the order of the reaction is

a) 3 b) 2 c) 1 d) 0

74. Milk is

a) Fat dispersed in water
b) Fat dispersed in milk
c) Fat dispersed in fat
d) Water dispersed in milk

75. Magnetic separation is used for increasing concentration of the following

a) Calcite b) Horn silver
c) Magnesite d) Haematite

76. Following method is not used for extraction of Al

a) Van Arkel b) Serpeck
c) Baeyer d) Hall-Heroult

77. Sulphuric acid has great affinity for water because

a) Acid decomposes water
b) It hydrolyses the acid
c) It decomposes the acid
d) Acid forms hydrates with water

78. Consider the following statements.

(I)$La(OH)_3$ is the least basic among hydroxides of lanthanides
(II) Zr^{4+} and Hf^{4+} possess almost the same ionic radii
(III) Ce^{4+} can act as an oxidizing agent
Which of the above is/are true?

a) (I) and (III) b) (II) and (III)
c) (II) only d) (I) and (II)

79. Which of the following pair will have effective magnetic moment equal?

a) Ti^{2+} and V^{2+} b) Cr^{2+} and Fe^{2+}
c) Cr^{3+} and Mn^{2+} d) V^{2+} and Sc^{3+}

80. The ionisation isomer of $[Cr(H_2O)_4Cl(NO_2)C]$is

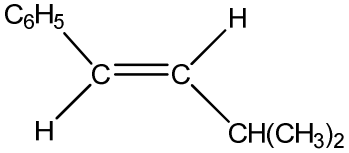
a) $[Cr(H_2O)_4(O_2N)]Cl_2$
b) $[Cr(H_2O)_4Cl_2](NO_2)$
c) $[Cr(H_2O)_4Cl\ (ONO)]\ Cl$
d) $[Cr(H_2O)_4Cl_2(NO_2)].H_2O$

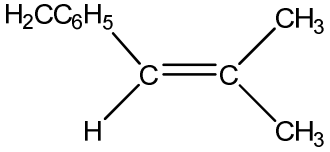
81. Grignard reagent is not prepared in aqueous medium but prepared in either medium, because

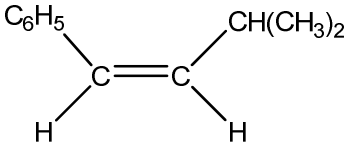
a) the reagent is highly reactive in ether
b) the reagent does not react with water
c) the reagent becomes inactive in water
d) the reagent reacts with water

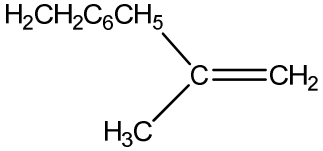
82. The main product of the following reaction is

$C_6H_5CH_2CH(OH)CH(CH_3)_2 \xrightarrow{Conc.H_2SO_4} ?$

a) 

b) 

c) 

d) 

83. Ethyl chloride reacts with sodium ethoxide to form a compound *A*. Which of the following reactions also yields *A*?

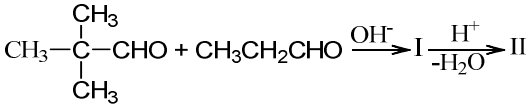
a) $C_2H_5Cl, KOH\ (alc.), \Delta$

b) $2C_2H_5OH, conc.\ H_2SO_4, 140°C$

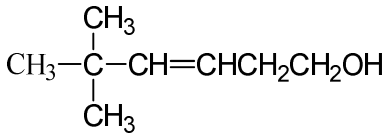
c) $C_2H_5Cl, Mg(dry\ ether)$

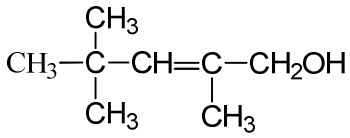
d) $C_2H_2, dil\ H_2SO_4, HgSO_4$

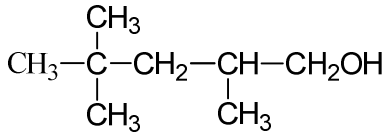
84. The final product (III) obtained in the reaction

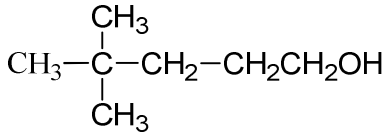


$\xrightarrow{NaBH_4}$ III is

a) 

b) 

c) 

d) 

85. Nitration of aniline also gives *m*-nitro aniline in strong acidic medium because
   a) In electrophilic substitution reaction amino group is *meta* directive
   b) Inspite of substituents nitro group always goes to *m*-position
   c) In strong acidic medium aniline aniline present as anilinium ion
   d) None of the above

86. *m*-fluoronitrobenzene is best synthesized by using the reaction
   a) Nitrobenzene $\xrightarrow[H_2SO_4,heat]{Fuming\ HNO_3}$ [ ] $\xrightarrow{NH_3/H_2S}$ [ ] $\xrightarrow[2.HBF_4,\Delta]{1.HONO}$
   b) Aniline $\xrightarrow[heat]{F_2}$
   c) Fluorobenzene $\xrightarrow[H_2SO_4,heat]{HNO_3}$
   d) *m*-$C_6H_4(NH_2)_2$ $\xrightarrow[2.CuNO_2,3.HBF_4]{1.HONO}$

87. The two forms of D-glucopyranose obtained from the solution of D-glucose are called
   a) Isomer
   b) Anomer
   c) Epimer
   d) Enantiomer

88. The polymer which has conducting power is
   a) Polyethylene
   b) Polybutadiene
   c) Polystyrene
   d) Polyacetylene

89. Dacron is polymer is
   a) Glycol and formaldehyde
   b) Glycol and phenol
   c) Glycol and phthalic acid
   d) Glycol and terephthalic acid

90. Aspirin is
   a) Acetylsalicylic acid
   b) 2-methyoxybenzoic acid
   c) Acetyloxalic acid
   d) Methylbenzoic acid