

JSTSE : PREVIOUS YEARS

CHEMISTRY (2011)

51. Chemical Symbol of Metal tin is :

- | | |
|--------|--------|
| (1) Tl | (2) Ag |
| (3) Sn | (4) Pb |

52. Latin name of Metal Sodium is :

- | | |
|-------------|-------------|
| (1) Kelium | (2) Natrium |
| (3) Uranium | (4) Radon |

53. The element discovered by Madam Curie is :

- | | |
|-------------|---------------|
| (1) Radium | (2) Plutonium |
| (3) Uranium | (4) Argentum |

Ans. (1)

54. Rate of rusting (Corrosion) is higher in :

- | | |
|----------------|--------------------|
| (1) Pure water | (2) Alkaline water |
| (3) Dry air | (4) Saline water |

Ans. (4)

55. Neutron was discovered by:

- | | |
|--------------------|-------------------|
| (1) James Chadwick | (2) J. J. Thomson |
| (3) Goldstein | (4) Rutherford |

Ans. (1)

56. The substance which is used as moderator in a nuclear reactor is

- | | |
|---------------|------------------|
| (1) Water | (2) Cadmium rods |
| (3) Zinc rods | (4) Molten NaOH |

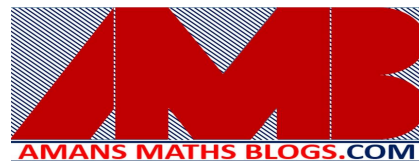
Ans. (1)

57. Fuel used in a nuclear reactor to generate nuclear energy is:

- (1) ${}_{93}^{239}\text{Np}$ (2) ${}_{90}^{232}\text{Th}$
(3) ${}_{92}^{235}\text{U}$ (4) ${}_{88}^{227}\text{Ra}$

58. Hydrogen ${}^1_1\text{H}$, ${}^2_1\text{H}$ and ${}^3_1\text{H}$ are

- (1) Isobars (2) Isomers
(3) Isotones (4) Isotopes



59. No. of elements in the first period of periodic table is :

- (1) 2 (2) 8
(3) 18 (4) 32

60. In long form of Periodic table the group 16 elements (oxygen, sulphur, selenium and tellurium) are known as :

- (1) Halogen (2) Transition elements
(3) Noble gases (4) Chalcogens

61. The chemical formula of white vitriol is

- (1) $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ (2) $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$
(3) $\text{ZnSO}_4 \cdot 7\text{H}_2\text{O}$ (4) $\text{Na}_2\text{SO}_4 \cdot 10\text{H}_2\text{O}$

62. Bell Metal is an alloy of:

- (1) Copper & Tin (2) Copper & Zinc
(3) Tin & Lead (4) Iron & Copper

Ans. (1)

63. Zinc Blende, an ore of Zinc is

- (1) ZnSO_4 (2) ZnS
(3) ZnCO_3 (4) ZnO

Ans. (2)

64. Water glass is :

- (1) A specific form of glass to store water only
(2) Hydrated form of glass
(3) Another name of sodium silicate
(4) Hydrated Silica

Ans. (3)

65. Reaction occurring at Cathode is :

- (1) Hydrolysis (2) Neutralisation
(3) Oxidation (4) Reduction

Ans. (4)

66. A galvanic cell converts.

- (1) Chemical energy into electrical energy
(2) Chemical energy into light energy
(3) Electrical energy into heat energy
(4) Electrical energy into chemical energy

Ans. (1)

67. pH of pure water at 25°C is :

- (1) Zero (2) 7
(3) 2 (4) 9

68. The equilibrium constant in a reversible chemical reaction at a given temperature depends upon

- (1) The initial concentration of the reactant
(2) The concentration of one of the products at equilibrium
(3) Does not depend on initial concentration of reactant
(4) Is not characteristic of reaction

69. A Thermos flask contain some ice cubes. This is an example of a :

- (1) Closed system (2) Open system
(3) Isolated system (4) Non Thermodynamic system

70. Heat of transition, is the heat evolved or absorbed when a substance is converted from

- (1) Solid to liquid
(2) Solid to Vapour
(3) Liquid to Vapour
(4) One allotropic form to another allotropic form

Ans. (4)

71. When concentrated H_2SO_4 is added to cold water. The solution become very hot because dilution of conc. H_2SO_4 is :

- (1) An exothermic reaction (2) An endothermic reaction
(3) Photochemical reaction (4) Combustion reaction

Ans. (1)

72. Sugar is soluble in water due to :

- | | |
|---------------------------|--|
| (1) High solvation energy | (2) Ionic character of sugar |
| (3) High dipole of sugar | (4) Hydrogen bond formation with water |

Ans. (4)

73. The compound which contain both ionic and covalent bond is:

- | | |
|---------------------|--------------------|
| (1) CH ₄ | (2) H ₂ |
| (3) KCN | (4) KCl |

74. The element among the following exist in liquid state is:

- | | |
|------------|--------------|
| (1) Sodium | (2) Hydrogen |
| (3) Zinc | (4) Mercury |

75. The linear molecule among the following is :

- | | |
|----------------------|----------------------|
| (1) CO ₂ | (2) SO ₂ |
| (3) ClO ₂ | (4) SiO ₂ |

76. A neutral atom (Atomic No. > 1) has :

- | | |
|----------------------------------|--------------------------|
| (1) Electron and Proton | (2) Neutron and Electron |
| (3) Electron, Proton and Neutron | (4) Neutron and Protons |

77. The number of electrons and neutrons of an element is 18 and 20 respectively. Its mass number is :

- | | |
|--------|--------|
| (1) 2 | (2) 17 |
| (3) 37 | (4) 38 |

Ans. (4)

78. Radiographer (a person working on X-ray machine) use to wear apron to protect himself from radiation:

- | | |
|----------------------------|-----------------------|
| (1) A mercury coated apron | (2) Lead coated apron |
| (3) Copper apron | (4) Aluminium apron |

Ans. (2)

79. A calalyst alter the rate of reaction. The term catalyst was given by :

- | | |
|----------------|----------------|
| (1) Rutherford | (2) Berzillius |
| (3) Wohler | (4) Kolbe |

Ans. (2)

80. In a chemical reaction, a catalyst
- (1) After the amount of products
 - (2) Lowers the activation energy
 - (3) Decreases heat change (ΔH) of forward reaction
 - (4) Increases heat change (ΔH) of backward reaction

Ans. (2)

81. The basis of modern periodic law is
- (1) Atomic number
 - (2) Atomic size
 - (3) Atomic volume
 - (4) Atomic mass

82. All elements in a group in the periodic table have the same :
- (1) Atomic weight
 - (2) Atomic number
 - (3) No of electrons for bonding
 - (4) Neutrons

83. Sodium metal cannot be stored under
- (1) Benzene
 - (2) Kerosene
 - (3) Alcohol
 - (4) Petrol

84. Blanc Fire used in paints is
- (1) Finely divided BaSO_4
 - (2) Paste of Mg(OH)_2
 - (3) Suspension of slaked lime
 - (4) $\text{MgCl}_2 \cdot 5\text{MgO} \cdot 5\text{H}_2\text{O}$

Ans. (1)

85. Slaked lime is
- (1) CaO
 - (2) Ca(OH)_2
 - (3) Ca(OCl)_2
 - (4) CaCl_2

Ans. (1)

86. Lead Pencil contains
- (1) Pb
 - (2) FeS
 - (3) Graphite
 - (4) Sn

Ans. (3)

87. Mixture used for the tips of match stick is
- (1) Sulphur + Potassium
 - (2) Antimony oxide
 - (3) Potassium dichromate + sulphur + white phosphorous
 - (4) Potassium dichromate + Potassium + Sulphur

Ans. (3)

88. 'Laughing gas' is

- (1) Nitrous oxide N_2O (2) Nitric oxide NO
(3) Nitrogen tri oxide N_2O_3 (4) Nitrogen penta oxide N_2O_5

Ans. (1)

89. Lightest gas among the following is :

- (1) Nitrogen (2) Helium
(3) Oxygen (4) Hydrogen

90. The substance, added to remove impurities from ore is known as

- (1) Slag (2) Flux
(3) Gangue (4) Mineral

91. Baking Powder is:

- (1) Na_2CO_3 (2) Na_2SO_4
(3) $NaHCO_3$ (4) K_2CO_3

92. An example of alum is :

- (1) $Al_2(SO_4)_3 \cdot Na_2SO_4 \cdot 12H_2O$ (2) $FeSO_4(NH_4)_2SO_4 \cdot 6H_2O$
(3) $K_2SO_4 \cdot Al_2(SO_4)_3 \cdot 24H_2O$ (4) $FeSO_4 \cdot Al_2(SO_4)_3 \cdot 24H_2O$

93. $C_2H_5OH \leftrightarrow CH_3OCH_3$ is an example of:

- (1) Functional isomerism (2) Chain isomerism
(3) Position isomerism (4) Tautomerism

Ans. (1)

94. Gammexane is:

- (1) Chlorobenzene (2) Benzoyl Chloride
(3) Bromobenzene (4) Benzenehexachloride

Ans. (4)

95. Glycerol is :

- (1) Monohydric alcohol (one-OH) (2) Dihydric alcohol(2-OH)
(3) Trihydric alcohol(3-OH) (4) Polyhydric alcohol (All - OH)

Ans. (3)

96. Grignard reagent is:

- (1) $R-Mg-X$ (2) $ZnCl_2 : HCl$
(3) $[Ag(NH_3)_2]$ (4) Tartarate of Sodium and Potassium

Ans. (1)

97. Vineger is :

- | | |
|------------------|-----------------|
| (1) Acetic acid | (2) Formic acid |
| (3) Benzoic acid | (4) Ethanol |

Ans. (1)

98. The chemical responsible for maintaining blood sugar level in human body is :

- | | |
|----------------|-------------|
| (1) Riboflavin | (2) Insulin |
| (3) Fat | (4) Vitamin |

99. Water soluble vitamin among the following is

- | | |
|------------|------------|
| (1) Vit. A | (2) Vit. D |
| (3) Vit. E | (4) Vit. B |

100. Metal present in blood is :

- | | |
|---------------|-------------|
| (1) Aluminium | (2) Mercury |
| (3) Iron | (4) Copper |

Ans. (3)