

53. If water samples are taken from sea, rivers or lake, they will be found to contain hydrogen and oxygen in the approximate ratio of 1 : 8. This indicates the law of
- 1) Multiple proportion
 - 2) Definite proportion
 - 3) Reciprocal proportions
 - 4) All of these
54. Which of the following is a metallic hydride?
- 1) $\text{LaH}_{2.5}$
 - 2) CaH_2
 - 3) SnH_4
 - 4) LiBH_4
55. An electron in an atom jumps in such a way that its kinetic energy changes from x to $x/4$. The change in potential energy will be
- 1) $+\frac{3}{2}x$
 - 2) $-\frac{3}{8}x$
 - 3) $+\frac{3}{4}x$
 - 4) $-\frac{3}{4}x$
56. The Li^+ ion, though smallest in size is the poorest conductor of electricity as compared to other alkali metal ions in aqueous solution. This is due to
- 1) Its smaller ionic radius
 - 2) Its low electropositive character
 - 3) Its larger degree of hydration
 - 4) Its high melting and boiling points
57. Beryllium chloride can be prepared by passing chlorine vapours over heated mixture of
- 1) BeO and CO_2
 - 2) BeCO_3 and C
 - 3) BeO and C
 - 4) Be(OH)_2 and C
58. 1 mole of Ba(OH)_2 will exactly neutralize
- 1) 2 mole H_3PO_2
 - 2) 1 mole of H_2SO_4
 - 3) 1 mole of H_3PO_3
 - 4) All
59. Photochemical oxidants such as PAN is formed
- A) By the action of nitrogen oxides on hydrocarbons in the presence of sunlight
 - B) By the action of carbondioxide on hydrocarbons in the presence of sunlight
 - C) By the action of hydrogen sulphide on hydrocarbons in the presence of sunlight
- 1) A
 - 2) B
 - 3) B & C
 - 4) A & C
60. The metal liberated into the environment through exhaust fumes of motor vehicles is
- 1) Hg
 - 2) As
 - 3) Pb
 - 4) NO_2
61. The irritant red haze in the traffic and congested places is due to
- 1) Oxides of S
 - 2) Oxides of N
 - 3) Oxides of C
 - 4) Oxides of P
62. The strength of 20 volume of H_2O_2 is
- 1) 13.6 g/litre
 - 2) 60 g/litre
 - 3) 160 g/litre
 - 4) 20 g/litre
63. The gas which is causes yellowing of Tajmahal
- 1) H_2S
 - 2) SO_2
 - 3) CO_2
 - 4) NO_2
64. In Calgon process of softening hard water, the Ca^{2+} and Mg^{2+} ions present in hard water are rendered ineffective by
- 1) Sodium silicates
 - 2) Sodium polyphosphate
 - 3) Mixture of silica and ammonia
 - 4) Aquaregia
65. If a_0 be the radius of first Bohr's orbit H-atom, the de-Broglie's wavelength of an electron revolving in the second Bohr's orbit will be
- 1) $6\pi a_0$
 - 2) $4\pi a_0$
 - 3) $2\pi a_0$
 - 4) πa_0

66. 44 g of a sample on complete combustion gives 88 gm CO_2 and 36 gm of H_2O . the molecular formula of the compound may be
1) C_4H_6 2) $\text{C}_2\text{H}_5\text{O}$ 3) $\text{C}_2\text{H}_4\text{O}$ 4) $\text{C}_3\text{H}_5\text{O}$
67. The pair of chemicals that maintain heat balance in troposphere are
1) N_2, O_2 2) $\text{H}_2\text{O}, \text{NO}^+$ 3) $\text{CO}_2, \text{O}_2^+$ 4) O_3, O^+
68. The formula of exhausted permutit is
1) $\text{CaAl}_2\text{Si}_2\text{O}_8 \cdot x\text{H}_2\text{O}$ 2) $\text{Na}_2\text{Al}_2\text{Si}_2\text{O}_8 \cdot x\text{H}_2\text{O}$
3) $\text{CaB}_2\text{Si}_2\text{O}_8 \cdot x\text{H}_2\text{O}$ 4) $\text{K}_2\text{Al}_2\text{Si}_2\text{O}_8 \cdot x\text{H}_2\text{O}$
69. Gases responsible for acid rain are
1) NO, CO_2 2) NO_2, SO_2 3) CO, CO_2 4) CO, SO_2
70. The total spin resulting from a d^7 configuration is
1) $3/2$ 2) $1/2$ 3) 2 4) 1
71. The COD value of a water samples is 40 ppm. Calculate the amount of $\text{K}_2\text{Cr}_2\text{O}_7$ (M.W=294) required to oxidize the organic matter present in 500 ml of that water sample
72. If the number of values of m is seven, the value of azimuthal quantum number should be
73. 0.2 mole of HCl and 0.2 mole of barium chloride were dissolved in water to produce a 500 mL solution. The molarity of the Cl^- ions is
74. If the value of $(n + l)$ is more than 3 and less than 6, what will be the possible number of orbitals
75. When 10ml of 5M H_2O_2 aqueous solution is decomposed at STP. Volume of oxygen obtained is

THE END

