

41. The significant figures in 1.0024, 1.240 and 0.0020 are respectively :
(a) 5, 4, 2 (b) 3, 3, 1
(c) 5, 3, 4 (d) 5, 3, 2
42. Bauxite is an ore of :
(a) boron (b) barium
(c) aluminium (d) bismuth
43. A golf-ball weigh 40.0g. If it is moving with a velocity of 20.0 ms^{-1} , its de-Broglie wavelength is :
(a) $1.66 \times 10^{-34} \text{ nm}$
(b) $8.28 \times 10^{-32} \text{ nm}$
(c) $8.28 \times 10^{-25} \text{ nm}$
(d) $1.66 \times 10^{-24} \text{ nm}$
44. Which of the following elements, is a component of a compound essential for photosynthesis ?
(a) Iron (b) Calcium
(c) Barium (d) Magnesium
45. Which of the following, is a mordant dye?
(a) Aniline black (b) Congo-red
(c) Alizarin (d) Indigo
46. Which is the shortest wavelength line in the Lyman series of the hydrogen spectrum ?
($R = 1.097 \times 10^{-2} \text{ nm}^{-1}$)
(a) 94.21 nm (b) 91.16 nm
(c) 911.6 nm (d) 933.6 nm
47. Which of the following order of ionisation energy is correct ?
(a) $B < Be < N < C$
(b) $Be > B > C > N$
(c) $B < Be < C < N$
(d) $Be < B < C < N$
48. Which of the following turns potassium dichromate paper green ?
(a) NO_2 (b) HCl
(c) NH_3 (d) SO_2
49. The correct order of stability of carbocations, is :
(a) $1^\circ < 2^\circ < 3^\circ < \overset{+}{\text{C}}\text{H}_3$
(b) $\overset{+}{\text{C}}\text{H}_3 < 1^\circ < 2^\circ < 3^\circ$

68. Which of the following statement is not correct ?
 (a) Adsorption energy for chemical adsorption is generally greater than that of physical adsorption
 (b) Physical adsorption is due to van der Waal forces
 (c) Physical adsorption decreases at high temperature and low pressure
 (d) Physical adsorption is irreversible
69. An element 'Y' emits one α - and two β -particles to give 'X'. X and Y are :
 (a) isotones (b) isobars
 (c) isotopes (d) isoelectronics
70. For a reaction, the half-life is independent of initial concentration. What is the order of that reaction ?
 (a) Zero (b) One
 (c) Two (d) Three
71. Addition of a non-volatile solute causes lowering in vapour pressure of a solvent from 0.8 atm. to 0.2 atm. What is the mole fraction of solvent ?
 (a) 0.25 (b) 0.75
 (c) 0.50 (d) Cannot be predicted
72. Which of the following has sp^3 -hybridisation ?
 (a) BCl_3 (b) PCl_3
 (c) $BeCl_2$ (d) None of these
73. The pH of 10^{-8} M NaOH is :
 (a) 8.0 (b) 6.0
 (c) 6.96 (d) 7.04
74. For the reaction,
 $2NO_2 \rightleftharpoons 2NO + O_2$, the value of K_p is equal to K . What will the value of K_p for reaction,
 $NO + \frac{1}{2}O_2 \rightleftharpoons NO_2$
 (a) \sqrt{K} (b) $\frac{1}{K}$ (c) $\sqrt{\frac{1}{K}}$ (d) $\frac{1}{K^2}$
75. Two metals 'A' and 'B' have E°_{red} value equal to 0.36 V and 1.23 V. What will be the correct cell equation ?
 (a) $A + B^{2+} \longrightarrow A^{2+} + B$
 (b) $A^{2+} + B \longrightarrow A + B^{2+}$
 (c) Both (a) and (b)
 (d) None of these
76. Lunar caustic is :
 (a) AgCl
 (b) $AgNO_3$
 (c) NaOH
 (d) KNO_3
77. Which of the following forms molecular solid ?
 (a) SO_2
 (b) SiO_2
 (c) SiC
 (d) Diamond
78. $CH_3COOH \xrightarrow{P/Br_2/M} CH_2BrCOOH$
 This reaction is called :
 (a) Schotten-Bauman reaction
 (b) Finkelstin reaction
 (c) Hell-Volhard-Zelinsky reaction
 (d) none of these
79. What is 'X' in the following sequence ?
 $Ar.N_2Cl \xrightarrow{CuCN/KCN} Z \xrightarrow{H.OH} Y \xrightarrow[\Delta]{soda-lime} X$
 (a) Benzoic acid
 (b) Sodium benzoate
 (c) Benzaldehyde
 (d) Benzene
80. Solvent loving colloids are known as :
 (a) hydrophobic
 (b) lyophilic
 (c) hydrophillic
 (d) none of these

Answer – Key

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41. a	42. c	43. c	44. d	45. c	46. b	47. c	48. d	49. b	50. d
51. c	52. b	53. b	54. c	55. a	56. a	57. b	58. a	59. b	60. c
61. a	62. c	63. b	64. a	65. a	66. b	67. c	68. d	69. c	70. b
71. a	72. b	73. d	74. c	75. a	76. b	77. a	78. c	79. d	80. b