

KLUEEE Previous Year's Question Paper for Chemistry

CHEMISTRY

SET - 1

41. In a nucleide one a.m.u. of mass dissipated into energy to bind its nucleons is equivalent of this mass
(a) 931.5 eV (b) 931.5×10^6 MeV (c) 931.5×10^6 eV (d) 931.5 Mv
42. Which of the following is Isotope of Ge_{32}^{76} ?
(a) ${}_{33}As^{77}$ (b) ${}_{32}Ge^{77}$ (c) ${}_{34}Se^{77}$ (d) ${}_{35}Br^{80}$
43. How many electrons are present in the M-shell of an atom of an element with atomic number – 24?
(a) 5 (b) 6 (c) 12 (d) 13
44. The four Quantum numbers of the valency of electron potassium are
(a) 4, 0, 1, $\frac{1}{2}$ (b) 4, 1, 0, $\frac{1}{2}$ (c) 4, 0, 0, $\frac{1}{2}$ (d) 4, 1, 1, $\frac{1}{2}$
45. What is the wave length of H_{β} line the Balmer series of hydrogen spectrum?
(R = Ryd bergs's constant)
(a) $\frac{36}{5R}$ (b) $\frac{5R}{36}$ (c) $\frac{3R}{16}$ (d) $\frac{16}{3R}$
46. Which of the following is the correct order of ionic radii?
(a) $Na^{+} < Mg^{+2} < Al^{+3} < Si^{+4}$ (b) $Al^{+3} < Si^{+4} < Na^{+} < Mg^{+2}$
(c) $Si^{+4} < Al^{+3} > Mg^{+2} > Na^{+}$ (d) $Na^{+} > Mg^{+2} > Al^{+3} > Si^{+4}$
47. Which of the following is a correct pair?
(a) $BeCl_2$, Linear (b) NH_3 , Linear (c) CO_2 , Tetra hedral (d) BF_3 , octa hedral
48. The correct order of Vanderwaals radius of F, Cl, and Br is
(a) $Cl > F > Br$ (b) $Br > Cl > F$ (c) $F > Cl > Br$ (d) $Br > F > Cl$
49. The kinetic energy of 4 moles of nitrogen at $127^{\circ}C$ is _____ cal
(a) 4400 (b) 3200 (c) 4800 (d) 1524
50. What are the oxidation numbers of 'N' in NH_4NO_3 ?
(a) +3, – 5 (b) – 3, +5 (c) +3, +6 (d) – 2, +2
51. 50 g of calcium carbonate was completely burnt in air. What is the weight (in gms) of the residue?
(a) 2.8 (b) 28 (c) 4.4 (d) 44
52. Sodium hexa meta phosphate is known as
(a) cal gon (b) permutit (c) Natalite (d) Nitrolim
53. At what temperature the density of heavy water will be maximum?
(a) $0^{\circ}C$ (b) $11.6^{\circ}C$ (c) $4^{\circ}C$ (d) $27^{\circ}C$
54. Composition of carnallite is
(a) Na_3AlF_6 (b) $KCl, MgCl_2 \cdot 6H_2O$ (c) $KNO_3, MgNO_3$ (d) None
55. $BCl_3 + H_2O \longrightarrow$ products formed are
(a) $H_3BO_3 + HCl$ (b) $B_2O_3 + HCl$ (c) $B_2H_6 + HCl$ (d) No Reaction

56. Percentage of lead in lead pencil is
 (a) 31 – 66 (b) 80 (c) 20 (d) 0
57. Which of the following has pyramidal shape?
 (a) XeF₄ (b) XeO₃ (c) XeF₂ (d) XeF₆
58. Which of the following is an organic compound?
 (a) CO (b) CO₂ (c) HCOOH (d) H₂CO₃
59. $CaC_2 \xrightarrow{H_2O} A \xrightarrow[\text{tube}]{\text{Hot}} B \xrightarrow[\text{CH}_3\text{Cl}]{\text{AlCl}_3} C$. C is
 (a) Toluene (b) Benzene (c) Acetylene (d) Chloro Benzene
60. Alkyl halide reaction with metallic sodium in dry ether solution is called
 (a) Friedal – Craft's reaction (b) Sand mayer's reaction
 (c) Wurtz reaction (d) Gabriel's reaction
61. Which one of the following is mainly responsible for depletion of ozone layer?
 (a) methane (b) carbon dioxide (c) water (d) chloro fluoro carbons
62. Which one of the following is diamagnetic ion?
 (a) Co⁺² (b) Cu⁺² (c) Mn⁺² (d) Sc⁺³
63. The Bond energies (in KJ mole⁻¹) of P-H, As-H and N-H are respectively
 (a) 247, 138 and 389 (b) 247, 389 and 318 (c) 318, 389 and 247 (d) 318, 247 and 389
64. What are products formed when ammonia reacts with excess of chlorine?
 (a) N₂ and NCl₃ (b) NCl₃ and HCl (c) N₂ and NH₄ Cl (d) N₂ and HCl
65. Iron sulphide is heated in air to form A, an oxide of sulphur. A is dissolved in water to give an acid. The basicity of the acid is
 (a) 2 (b) 3 (c) 1 (d) zero
66. Which one of the following is a lyophilic colloidal solution?
 (a) smoke (b) Gold solution (c) starch Aqueous solution (d) cloud
67. Which of the following is not correct?
 (a) chlorophyll is responsible for the synthesis of carbohydrates in plants
 (b) the compound formed with the addition of oxygen to haemoglobin is called oxyhaemoglobin
 (c) Acetyl salicylic acid is known as aspirin
 (d) The metal ion present in vitamin B₁₂ is Mg⁺²
68. The pH of aqueous KCl solution is 7.0. This solution was electrolysed for few seconds using Pt electrodes. Which of the following is correct?
 (a) The pH of solution decreases (b) The pH of solution increases
 (c) Cl₂ is liberated at cathode (d) The pH of solution remains same
69. The heat of formations CO(g) and CO₂(g) are $\Delta H = -110$ and $\Delta H = -393$ KJ mole⁻¹ respectively. What is the heat of reaction (ΔH) (in KJ/mole) for the following reaction
- $$CO + \frac{1}{2} O_2 \longrightarrow CO_2$$
- (g) (g) (g)
- (a) – 507 (b) – 142.5 (c) -283 (d) 504

70. What is the quantity of electricity (in coulombs) required to deposit all the silver from 250 ml of 1Mole AgNO_3 solution?
 (a) 2412.5 (b) 24125 (c) 4825.0 (d) 48250
71. Assertion (A): Molarity of a solution decreases with an increase of temperature
 Reason (R): As temperature increases volume of solution increases
 (a) Both A and R are true, R is correct explanation of A
 (b) Both A and R are true, R is not correct explanation of A
 (c) A is true, R is false (d) A is false, R is true
72. Assertion (A): The aqueous solution of CH_3COONa is alkaline in nature
 Reason (R): Acetate Ion under goes Anionic hydrolysis.
 (a) Both A and R are true, R is correct explanation of A
 (b) Both A and R are true, R is not correct explanation of A
 (c) A is true, R is false (d) A is false, R is true
73. The rate constant of a first order reaction is 0.693 min^{-1} . What is the time (in min) required for reducing an initial concentration of 30 moles lit^{-1} to 7.5 mole lit^{-1}
 (a) 4 (b) 1 (c) 2 (d) 3
74. For the following reaction $\text{NH}_{4(s)}\text{HS} \longrightarrow \text{NH}_{3(g)} + \text{H}_2\text{S}_{(g)}$ the total pressure at equilibrium is 30 atm. The value of K_p is
 (a) 15 atm^2 (b) 225 atm^2 (c) 30 atm^2 (d) 45 atm^2
75. In the reaction $\text{C}_2\text{H}_5\text{OH} \xrightarrow[300^\circ\text{C}]{\text{Cu}} \text{X}$ the molecular formula of X is:
 (a) $\text{C}_4\text{H}_6\text{O}$ (b) $\text{C}_4\text{H}_{10}\text{O}$ (c) $\text{C}_2\text{H}_4\text{O}$ (d) C_2H_6
76. In which of the following reaction the product is Ether?
 (a) $\text{C}_6\text{H}_6 + \text{CH}_3\text{COCl} / \text{Anhydrous AlCl}_3$ (b) $\text{C}_2\text{H}_5\text{Cl} + \text{aq KOH}$
 (c) $\text{C}_2\text{H}_5\text{Cl} + \text{C}_2\text{H}_5\text{ONa}$ (d) $\text{C}_6\text{H}_6 + \text{C}_6\text{H}_5\text{COCl} / \text{Anhydrous AlCl}_3$
77. Which of the following pair is functional isomers?
 (a) $\text{CH}_3\text{COCH}_3, \text{CH}_3\text{CHO}$ (b) $\text{C}_2\text{H}_5\text{CO}_2\text{H}, \text{CH}_3\text{CO}_2\text{CH}_3$
 (c) $\text{C}_2\text{H}_5\text{CO}_2\text{H}, \text{CH}_3\text{CO}_2\text{C}_2\text{H}_5$ (d) $\text{CH}_3\text{CHO}, \text{CH}_3\text{CO}_2\text{H}$
78. The product formed in the aldol condensation of Acetaldehyde is
 (a) $\text{CH}_3\text{CH}_2\text{CH}(\text{OH})\text{CHO}$ (b) $\text{CH}_3 - \text{CH}(\text{OH})\text{CH}_2\text{CHO}$
 (c) $\text{CH}_3\text{CH}(\text{OH})\text{COCH}_3$ (d) $\text{CH}_3\text{CH}_2\text{CH}_2\text{CHO}$
79. In the following reactions x and y are respectively
 $\text{CH}_3\text{COOH} + \text{NH}_3 \longrightarrow \text{x} \xrightarrow{\Delta} \text{y} + \text{H}_2\text{O}$
 (a) $\text{CH}_3\text{CONH}_2, \text{CH}_4$ (b) $\text{CH}_3\text{COONH}_4, \text{CH}_3\text{CONH}_2$
 (c) $\text{CH}_3\text{CONH}_2, \text{CH}_3\text{COOH}$ (d) $\text{CH}_3\text{NH}_2, \text{CH}_3\text{CONH}_2$
80. Which of the following is the molecular formula of tertiary amine?
 (a) $\text{C}_2\text{H}_7\text{N}$ (b) $\text{C}_3\text{H}_9\text{N}$ (c) $\text{C}_2\text{H}_5\text{N}$ (d) CH_3N