ISC Class 12 Exam 2024

Chemistry

Fill in the Blanks Question

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1. _____ and _____ are intensive properties.

2. Molality of the solution is number of moles of the solute in _____ kg of _____ .

3. The molarity of the solution of non-electrolyte at 0°C if its osmotic pressure is 17 mm of Hg is approximately _____ .

4. The _____ pressure of an aqueous solution of 0.1 M cane sugar is _____ than that of pure water.

5. The boiling point of sea water at 1 atm. pressure is _____ that of distilled water.

6. The evaporation of aqueous solution of glucose causes its molarity to _____ .

7. Solutions which strictly obey _____ law are called _____ solutions.

8. A solution which does not obey Raoult's law at all range of concentration is called _____ .

9. For an ideal solution, DH mixing is _____ .

10. Relative lowering of vapour pressure is equal to the mole fraction of the _____ .

11. The unit of conductance is _____ and that of specific conductance is _____ .

12. Equivalent conductivity is the conducting power of all the ions furnished by one _____ of an electrolyte present in a definite _____ of the solution.

13. In a galvanic cell, electrons flow from _____ to _____ through the connecting wires.

14. A galvanic cell stops after some time because _____ .

15. In a Daniel cell the copper vessel serves as _____ .

16. A device in which chemical energy of a fuel is directly converted into electrical energy is called _____ .

17. In representation of an electrochemical cell, the cathode is written on _____ .

18. The conductance of a solution placed between two opposite faces of a cm3 is called _____ .

19. The more _____ is standard reduction potential of a metal, the _____ is its ability to displace hydrogen from acids.

20. The equivalent conductance of a solution _____ with decrease in concentration of the electrolyte in the solution.

21. The sum of powers to which the concentration terms are raised in the rate law is called _____ of the reaction.

22. Half life period of a _____ order reaction is _____ of the concentration of the reactant.

23. If the activation energy of the reaction is low, it proceeds at _____ rate.

24. A catalyst provides an alternate path for the reaction with _____ energy barrier.

25. A catalyst _____ the time required to establish the equilibrium.

26. Larger surface area _____ the efficiency of the catalyst.

27. When the concentration of a reactant of first order reaction is doubled, the rate of reaction becomes _____ times, but for a _____ order reaction, the rate of reaction remains the same.

28. The reaction taking place under the influence of visible light is called as _____ reaction.

29. The order and molecularity of a complex reaction _____ be same.

30. In a multi-step reaction, the _____ step determines the rate of reaction.

31. The most abundant transition metal is _____ .

32. The transition metals show _____ character because of the presence of unpaired electrons and Cu+ is _____ because its electronic configuration is [Ar]3d10.

33. Among transition element, the element having lowest melting point is _____ .

34. The common oxidation state of lanthanoids is _____ .

35. The last element of lanthanoid series is _____ .

36. The ferrous metals are _____ .

37. The formula of pyrolusite is _____ .

38. The acidic oxide of manganese is _____ .

39. In acidic medium, KMnO4 is reduced to _____ .

40. CrO42-ion has _____ geometry.

41. Species in the coordination sphere are _____ .

42. The portion present outside the square brackets is called _____ sphere.

43. In _____ complexes metal is bound to only one kind of donor groups.

44. The number of chelating ligands indicate the _____ of the ligand.

45. A bidentate ligand is _____ if the two co-ordinating atoms are the same.

46. Glycinato is a _____ dentate ligand.

47. π acid ligands are also known as _____ ligands.

48. The coordination number and oxidation state of the complex K4[Fe(CN6)] are _____ and _____ respectively.

49. The EAN of central metal atom in K4 [Fe(CN)6] is _____ .

50. The formula of the coordination compound dichlorobis (ethane-1, 2-diammine) cobalt(III) is _____ .

51. Ethyl bromide on reaction with moist silver gives _____ as the main product.

52. The well known refrigerant freon has the structure _____ .

53. In SN1 mechanism _____ are involved as intermediate species.

54. Formation of phenol from chlorobenzene is an example of _____ aromatic substitution.

55. Bleaching powder, on treatment with ethanol or acetone gives _____ . This

is an example of _____ reaction.

56. Butane nitrile can be prepared by heating _____ with alcoholic KCN.

57. Vinyl chloride on reaction with dimethyl copper gives _____ .

58. The trade name of carbon tetrachloride is _____ .

59. BHC is commercially called _____ .

60. Phenyl isocyanide is formed when chloro-form is treated with _____ in the presence of alcoholic KOH.

61. During acid catalysed dehydration of alcohols, the intermediate species involved are _____ .

62. In case of _____ alcohols, the cloudiness appears immediately while performing Lucas test.

63. _____ is an example of trihydric alcohol and _____ is an example of dihydric alcohol.

64. Ethyl bromide on reaction with moist silver oxide gives _____ as the main product.

65. The common name of 1, 2, 3-trihydroxy-ben-zene is _____ .

66. Phenol reacts with sodium liberating _____ gas.

67. Phenol is _____ reactive than chlorobenzene towards electrophilic substitution reactions.

68. IUPAC name of picric acid is _____ .

69. A mixture of conc. HCl and anhydrous $ZnCl_2$ is called _____ which shows maximum reactivity with _____ alcohol.

70. Ethers behave as weakly _____ substances because of the presence of _____ of electrons on the oxygen atom.

71. The primary alcohols are easily oxidised first into _____ and then into _____ .

72. The addition reactions of aldehydes and ketones are initiated by _____ attack on car-bonyl carbon.

73. Carbonation of Grignard's reagent involves reaction of _____ with _____ .

74. Trimer of acetaldehyde is named as _____ .

75. Meta formaldehyde is a _____ of formaldehyde.

76. A 40% solution of formaldehyde in water is known as _____ .

77. Acetaldehyde reacts with HCN to give _____ which on hydrolysis gives _____ .

78. Addition of water to acetylenic compounds is catalyzed by _____ and _____ .

79. Benzaldehyde when treated with an alcoholic solution of _____ forms _____ .

80. Propanone on reaction with zinc-amalgam in presence of conc. HCl gives _____ and the reaction is known as _____ reduction.

81. Ethyl isocyanide, on hydrolysis with dilute sulphuric acid gives _____ and _____ .

82. Schotten Baumann reaction involves reaction between _____ .

83. N,N-dimethyl aniline on treatment with HNO_2 gives _____ .

84. Direct nitration is _____ suitable to get pure nitroalkanes.

85. Electrolytic reduction of nitrobenzene in strongly acidic medium produces _____ .

86. The alkyl nitrites and nitro alkanes are _____ of each other.

87. Alkyl nitrite can be considered to be an _____ of alcohol and nitrous acid.

88. Sulphanilic acid exists as _____ structure.

89. Stephan's reduction converts alkyl cyanide into _____ .

90. When acetamide is treated with bromine and caustic soda, it gives _____ as the main product and the reaction is called _____ .

91. The linkage holding monosaccharide units in maltose is _____ .

92. Primary structure of proteins refers to _____ .

93. The helical structure of proteins is stabilised by _____ .

94. Solubility is exploited in the _____ of different a-amino acids obtained by hydrolysis of _____ .

95. Condensation of two molecules of amino acids gives _____ involving elimination of _____ molecule.

96. Condensation of more than ten molecules of amino acids results in formation of _____ .

97. Globular proteins function as _____ , regulates _____ processes and act as _____ which protects body from diseases.

98. All enzymes are _____ .

99. Insulin is secreted by _____ .

100. Biotin is neither soluble in _____ nor in water.

Answers

1. Concentration, temperature

2. one, solvent,

3. 0.001 M,

4. vapour, less.

5. greater than,

6. increase,

7. Raoult's, ideal,

8. non-ideal,

9. zero.

10. solute

11. ohm-1, ohm-1 cm-1

12. gram equivalent, volume

13. anode, cathode

14. potential difference becomes zero
15. 5. cathode
16. fuel cells
17. right hand side
18. specific conductance
19. negative, greater
20. increases
21. order
22. first, independent
23. faster
24. lower
25. alters
26. increases.
27. two, zero
28. photochemical
29. may or may not
30. slowest
31. Iron
32. paramagnetic, diamagnetic
33. Mercury
34. +3
35. lutetium
36. Fe, Cu, Ni

37. MnO_2

38. Mn_2O_7

39. Mn^{2+}

40. Tetrahedral

41. Non-ionisable

42. Ionisation

43. Homoleptic

44. Denticity,

45. Symmetrical

46. Bi

47. π-acceptor

48. 6, 2

49. 36

50. $[CoCl_2(en)_2]^+$

51. Ethanol

52. CCl_2F_2

53. Carbocation

54. Nucleophilic

55. Chloroform, haloform

56. n-propyl chloride

57. Propene, $CH_3CH=CH_2$

58. Pyrene

59. gammaxene

60. Aniline
61. carbocations
62. tertiary
63. Glycerol, glycol
64. ethanol
65. pyrogallol
66. hydrogen (or H_2)
67. more
68. 2, 4, 6-Trinitrophenol
69. Lucas reagent, tertiary
70. basic, lone pair
71. aldehyde, carboxylic acid
72. nucleophilic
73. CO_2, Grignard's reagent
74. Paraldehyde
75. trimer
76. formalin
77. acetaldehyde cyanohydrin, lactic acid
78. dil. H_2SO_4, $HgSO_4$
79. potassium cyanide, benzoin
80. propane, Clemmensen's Reduction
81. Ethylamine, formic acid
82. aniline and benzoylchloride
83. p-nitroso-2, 4-dimethyl aniline

84. Not

85. 4 - Aminophenol

86. Isomers

87. Ester

88. Zwitter ion

89. Aldoximes

90. Methylamine, Hofmann's degradation

91. Glycoside linkage

92. Sequence of amino acids

93. H-bonds

94. Separation, protein

95. Dipeptide, water

96. Polypeptide

97. Enzymes, metabolic, antibodies

98. Globular proteins

99. Pancreas

100. Fat