



CHEMISTRY

BOOKS - OMEGA PUBLICATION

SAMPLE QUESTION PAPER

Question

1. Calculate the volume occupied at NTP by 2.5 mole of CO_2



Watch Video Solution

2. Calculate the volume occupied at NTP by 14g of nitrogen gas .



[Watch Video Solution](#)

3. Calculate the mass of 2.5g atom of oxygen



[Watch Video Solution](#)

4. Calculate the weight of CO having the same number of oxygen atoms as are present in 22 g of CO₂ .



[Watch Video Solution](#)

5. Calculate number of molecules in 1ml of CO₂ at NTP.



[Watch Video Solution](#)

6. Calculate the number of atoms in 3 mol of NH_3 .



[Watch Video Solution](#)

7. Define inert pair effect.



[Watch Video Solution](#)

8. Write the IUPAC name of salicylaldehyde.



[Watch Video Solution](#)

9. The shape of sulphate ion is



Watch Video Solution

10. What are antipyretics ?



Watch Video Solution

11. Write two main differences between Schottky and Frenkel defect.



[Watch Video Solution](#)

12. A solution containing 0.45 g of a urea in 22.5 g of water gave a boiling point elevation of 0.17 K. Calculate the molal elevation constant of water. Molar mass of urea is 60 g mol^{-1} .



[Watch Video Solution](#)

13. Define molality.





[Watch Video Solution](#)

14. The units of cell constant are:

$ohm^{-1}cm^{-1}$, cm , $ohm^{-1}cm$, cm^{-1}



[Watch Video Solution](#)

15. Can you store copper sulphate solutions in a zinc pot?



[Watch Video Solution](#)

16. State and explain Kohlrausch's law. How would you determine the molar conductance of a weak electrolyte at infinite dilution?



Watch Video Solution

17. What is rusting? What is the chemical formula of rust?



Watch Video Solution

18. Give one example of zero order reaction.



[Watch Video Solution](#)

19. Define rate law or rate equation.



[Watch Video Solution](#)

20. The units of rate constant for first order equation.



[Watch Video Solution](#)

21. Arrhenius equation is



Watch Video Solution

22. Define Leaching



Watch Video Solution

23. What are micelles ? Give one example of a micellar system.



Watch Video Solution

24. Explain Brownian movement.



Watch Video Solution

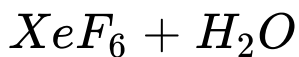
25. Give the synthesis of following polymers.

Nylon -66



Watch Video Solution

26. Give equation for the following:



Watch Video Solution

27. What are interhalogen compounds ? Give example.



Watch Video Solution

28. Arrange $HClO$, $HBrO$ and HIO in order to decreasing acidic strength giving reasons.



Watch Video Solution

29. Why is water liquid while H_2S a gas ?



Watch Video Solution

30. Write IUPAC name of $[Co(NH_3)_6]Cl_3$.



[Watch Video Solution](#)

31. On the basis of valence bond theory explain the structure and magnetic nature of $[Ni(CN)_4]^{2-}$ complex ion.



[Watch Video Solution](#)

32. Explain the following reaction reaction :
Friedal Craft acylation.



[Watch Video Solution](#)

33. Write down following name reaction :

Hunsdiecker reaction



Watch Video Solution

34. Write the following reactions:

Finkelstein reaction



Watch Video Solution

35. Write esterification reaction.



Watch Video Solution

36. Explain SchottenBaumann reaction.



Watch Video Solution

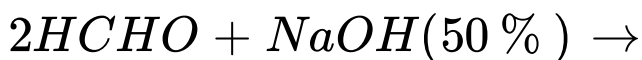
37. Explain the following reactions :

Kolbe's reaction.



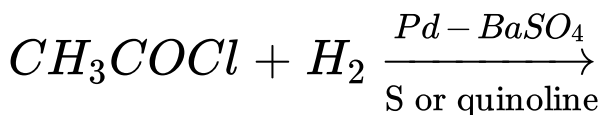
Watch Video Solution

38. Complete the following :



Watch Video Solution

39. Complete the following :



Watch Video Solution

40. Complete the following :

Formaldehyde to urotropine



Watch Video Solution

41. Complete the following :

Formaldehyde to acetaldehyde



Watch Video Solution

42. Complete the following :

Benzoyl chloride to benzaldehyde.



Watch Video Solution

43. What is Hofmann bromamide degradation reaction ?



Watch Video Solution

44. Out of ethylamine and ammonia which is more basic and why?



Watch Video Solution

45. What is mutarotation ?



Watch Video Solution

46. What do you mean by inversion of cane sugar ?



[Watch Video Solution](#)

47. Give IUPAC name of natural rubber.



[Watch Video Solution](#)

48. Give the preparation of Telfon.



[Watch Video Solution](#)

49. Give the name of first antibiotic discovered.



[Watch Video Solution](#)

50. Why Benzaldehyde is metadirecting for nucleophilic substitution reactions ?



[Watch Video Solution](#)

51. Discuss the shape of P_4O_6 .



[Watch Video Solution](#)

52. Why Cd^{2+} salts are white ? Cd=48



[Watch Video Solution](#)

53. why does nitrogen not form NCl_5 .



[Watch Video Solution](#)

54. Which ion has maximum size in Lanthanoid series ?



[Watch Video Solution](#)

55. Explain the structure of $Cr_2O_7^{2-}$



[Watch Video Solution](#)

56. What is formalin solution ? Give its one use..



[Watch Video Solution](#)

57. What is Chirality?



Watch Video Solution

58. What happens when phenol is treated with conc. HNO_3 ?



Watch Video Solution

59. Close packing is maximum in the crystal which is

A. bcc

B. fcc

C. simple cubic

D. end centered cubic.

Answer:



Watch Video Solution

60. The boiling point of a solvent containing non volatile solute :

A. is depressed

B. is elevated

C. does not change

D. None of the above

Answer:



Watch Video Solution

61. For a redox reaction to proceed in a cell, the e.m.f. must be:

A. Positive

B. Negative

C. Fixed

D. zero

Answer:



Watch Video Solution

62. Movement of dispersion medium under the influence of electric field is known as

A. Electrodialysis

B. Electrophoresis

C. Electroosmosis

D. Cataphoresis

Answer:



Watch Video Solution

63. Zone refining is used for the

A. Concentration of an ore

B. Reduction of metal oxide

C. Purification of metal

D. Purification of an ore.

Answer:



Watch Video Solution

64. Cinnabar is an ore of

A. Hg

B. Zn

C. Ag

D. Cu

Answer:



Watch Video Solution

65. Define inert pair effect.



Watch Video Solution

66. Write IUPAC name of isobutyl alcohol.



Watch Video Solution

67. What is the shape of chromate ion ?



Watch Video Solution

68. What are antipyretics ?



Watch Video Solution

69. Write four differences between Schottky defect and Frenkel defect.



Watch Video Solution

70. A solution containing 12.5 g of a non-electrolyte substance in 175 g of water gave boiling point elevation of 0.70 K. Calculate the molar mass of the substance (K_b for water = 0.52 K kg mol⁻¹).



Watch Video Solution

71. Define molality.



Watch Video Solution

72. Write the units of cell constant.



Watch Video Solution

73. Can you store copper sulphate solutions in a zinc pot?



Watch Video Solution

74. State and explain Kohlrausch's law. How would you determine the molar conductance

of a weak electrolyte at infinite dilution?



[Watch Video Solution](#)

75. Write chemical formula of “rust.



[Watch Video Solution](#)

76. Give one example of zero order reaction.



[Watch Video Solution](#)

77. Define rate law or rate equation.



[Watch Video Solution](#)

78. The units of rate constant for first order equation.



[Watch Video Solution](#)

79. Arrhenius equation is



[Watch Video Solution](#)

80. Define Leaching



Watch Video Solution

81. What are micelles ? Give one example of a micellar system.



Watch Video Solution

82. Explain Brownian movement.



Watch Video Solution

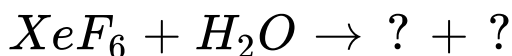
83. Give the synthesis of following polymers.

Nylon -66



Watch Video Solution

84. Complete the following equation:



Watch Video Solution

85. What are interhalogen compounds ? Give example.



Watch Video Solution

86. Arrange $HClO$, $HBrO$ and HIO in order to decreasing acidic strength giving reasons.



Watch Video Solution

87. Why is water liquid while H_2S a gas ?



Watch Video Solution

88. Write IUPAC name of $[Co(NH_3)_6]Cl_3$.



Watch Video Solution

89. On the basis of valence bond theory explain the structure and magnetic nature of $[Ni(CN)_4]^{2-}$ complex ion.



[Watch Video Solution](#)

90. Write the following reactions :

Friedel Craft alkylation.



[Watch Video Solution](#)

91. Write down following name reaction :

Hunsdiecker reaction



[Watch Video Solution](#)

92. Write the following reactions:

Finkelstein reaction



Watch Video Solution

93. Write esterification reaction.



Watch Video Solution

94. Explain SchottenBaumann reaction.



Watch Video Solution

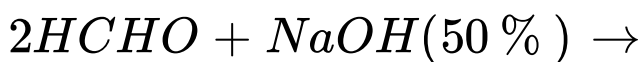
95. Explain the following reactions :

Kolbe's reaction.



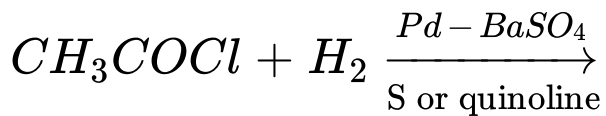
Watch Video Solution

96. Complete the following :



Watch Video Solution

97. Complete the following :



Watch Video Solution

98. Complete the following :

Formaldehyde to urotropine



Watch Video Solution

99. Complete the following :

Formaldehyde to acetaldehyde



Watch Video Solution

100. Complete the following :

Benzoyl chloride to benzaldehyde.



Watch Video Solution

101. What is Hofmann bromamide degradation reaction ?



Watch Video Solution

102. Out of ethylamine and ammonia which is more basic and why?



Watch Video Solution

103. What is mutarotation ?



[Watch Video Solution](#)

104. What do you mean by inversion of cane sugar ?



[Watch Video Solution](#)

105. Give IUPAC name of natural rubber.



[Watch Video Solution](#)

106. Give the preparation of Telfon.



Watch Video Solution

107. Give the name of first antibiotic discovered.



Watch Video Solution

108. Why Benzaldehyde is metadirecting for nucleophilic substitution reactions ?



Watch Video Solution

109. Discuss the shape of P_4O_6 .



Watch Video Solution

110. Why Cd^{2+} salts are white ? $Cd=48$



Watch Video Solution

111. why does nitrogen not form NCl_5 .



[Watch Video Solution](#)

112. Which ion has maximum size in Lanthanoid series ?



[Watch Video Solution](#)

113. Explain the structure of $Cr_2O_7^{2-}$



[Watch Video Solution](#)

114. What is formalin solution ? Give its one use..



Watch Video Solution

115. What is Chirality?



Watch Video Solution

116. What happens when phenol is treated with conc . HNO_3 ?



Watch Video Solution