



CHEMISTRY

BOOKS - CBSE COMPLEMENTARY MATERIAL CHEMISTRY (HINGLISH)

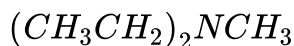
SOLVED SAMPLE PAPER (CBSE DELHI - 2017)

Cbse Delhi 2017

1. Write the formula of an oxo-anion of Manganese (Mn) in which it shows the oxidation state equal to its group number

 [Watch Video Solution](#)

2. Write IUPAC name of the following compound :



For a reaction $R \rightarrow P_2$ half-life ($t_{1/2}$) is observed to be independent of the initial concentration of reactants. What is the order of reaction?

 [Watch Video Solution](#)

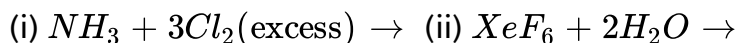
3. Write the structure of 1-Bromo-4-chlorobut-2-ene

 [Watch Video Solution](#)

4. Write one similarity between physisorption and chemisorption.

 [Watch Video Solution](#)

5. Complete the following reaction :



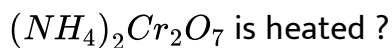
 [Watch Video Solution](#)

6. Complete the following reactions :



 [Watch Video Solution](#)

7. What happens when



Write the equations.

 [Watch Video Solution](#)

8. What happens when H_3PO_3 is heated ?

 [Watch Video Solution](#)

9. Define the following terms :

Colligative properties

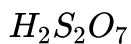
 [Watch Video Solution](#)

10. Define the following terms :

Molality (m)

 [Watch Video Solution](#)

11. Draw the structures of the following :



 [Watch Video Solution](#)

12. Draw the structures of the following :



 [Watch Video Solution](#)

13. Calculate the degree of dissociation (α) of acetic acid if its molar conductivity (Λ_m) is $39.05 \text{ Scm}^2\text{mol}^{-1}$

Given

$$\lambda^\circ(H^+) = 349.6 \text{ cm}^2\text{mol}^{-1} \text{ and } \lambda^\circ(CH_3COO^-) = 40.9 \text{ Scm}^2\text{mol}^{-1}$$

 [Watch Video Solution](#)

14. Wolff-Kishner reduction is :

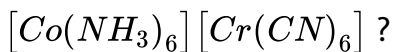
 [Watch Video Solution](#)

15. Write the equations involved in the following reactions :

Etard reaction

 [Watch Video Solution](#)

16. What type of isomerism is shown by the complex



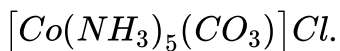
 [Watch Video Solution](#)

17. A solution of $[Ni(H_2O)_6]^{2+}$ is green but a solution of



 [Watch Video Solution](#)

18. Write the IUPAC name of the following complex :



 [Watch Video Solution](#)

19. Write one difference in each of the following :

Lyophobic sol and Lyophilic sol

 [Watch Video Solution](#)

20. Write one difference in each of the following :

Solution and Colloid

 [Watch Video Solution](#)

21. Write one difference in each of the following :

Homogeneous catalysis and Heterogeneous catalysis

 [Watch Video Solution](#)

22. Following data are obtained for the reaction:



t/s	0	300	600
$[N_2O_5]/molL^{-1}$	1.6×10^{-2}	0.8×10^{-2}	0.4×10^{-2}

(a) Show that it follows first order reaction

(b) Calculate the half-life

(Given $\log 2 = 0.3010$ $\log 4 = 0.6021$)

 [Watch Video Solution](#)

23. Following data are obtained for the reaction:



t/s	0	300	600
$[N_2O_5]/molL^{-1}$	1.6×10^{-2}	0.8×10^{-2}	0.4×10^{-2}

(a) Show that it follows first order reaction

(b) Calculate the half-life

(Given $\log 2 = 0.3010$ $\log 4 = 0.6021$)

 [Watch Video Solution](#)

24. Following compounds are given to you :

2- Bromopentane ,2-Bromo-2 methylbutane, 1- Bromopentane

Write the compound which is most reactive towards S_N2 reaction .

 [Watch Video Solution](#)

25. Following compounds are given to you :

2- Bromopentane ,2-Bromo-2 methylbutane, 1- Bromopentane

Write the compound which is optically active.

 [Watch Video Solution](#)

26. Following compounds are given to you :

2- Bromopentane ,2-Bromo-2 methylbutane, 1- Bromopentane

Write the compound which is most reactive towards β -elimination reaction.

 [Watch Video Solution](#)

27. Write the principle of method used for the refining of germanium.

 [Watch Video Solution](#)

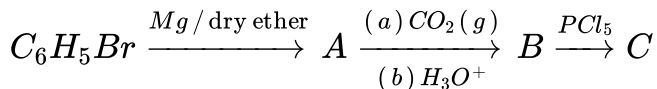
28. Out of PbS and $PbCO_3$ (ores of lead), which one is concentrated by froth floatation process preferably ?

 [Watch Video Solution](#)

29. What is the significance of leaching in the extraction of aluminium?

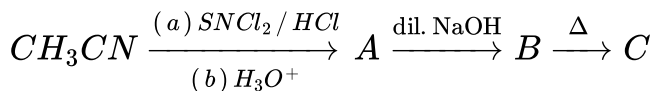
 [Watch Video Solution](#)

30. Write structures of compounds A, B and C in each of the following reactions :



 [Watch Video Solution](#)

31. Write structures of compounds A, B and C in each of the following reactions :



 [Watch Video Solution](#)

32. Do the following conversions in not more than two steps

Benzoic acid to benzaldehyde

 [Watch Video Solution](#)

33. Do the following conversions in not more than two steps

Ethyl benzene to Benzoic acid

 [Watch Video Solution](#)

34. Do the following conversions in not more than two steps

Prepanone to Propene

 [Watch Video Solution](#)

35. Write the structures of the monomers used for getting the following polymers :

Dacron

 [Watch Video Solution](#)

36. Write the structures of the monomers used for getting the following polymers :

Melamine - formaldehyde polymer

 [Watch Video Solution](#)

37. Write the structures of the monomers used for getting the following polymers :

Buna - N

 [Watch Video Solution](#)

38. Define the following :

Anionic detergents



Watch Video Solution

39. Define the following :

Broad spectrum antibiotics



Watch Video Solution

40. Define the following :

Antiseptic



Watch Video Solution

41. Give reasons :

Thermal stability decreases from H_2O to H_2Te .

 [Watch Video Solution](#)

42. Give reasons :

Fluoride ion has higher hydration enthalpy than chloride ion .

 [Watch Video Solution](#)

43. Give reasons :

Nitrogen does not form pentahalide.

 [Watch Video Solution](#)

44. Give reasons :

Acetylation of aniline reduces its activation effect.

 [Watch Video Solution](#)

45. Give reasons :

CH_3NH_2 is more basic than $C_6H_5NH_2$.

 [Watch Video Solution](#)

46. Give reasons :

Although $-NH_2$ is o/p directing group, yet aniline on nitration gives a significant amount of m-nitroaniline.

 [Watch Video Solution](#)

47. Account for the following :

Transition metals form large number of complex compounds.

 [Watch Video Solution](#)

48. Account for the following :

The lowest oxide of transition metal is basic whereas the highest oxide is amphoteric or acidic.

 [Watch Video Solution](#)

49. Account for the following :

E° value for the Mn^{3+} / Mn^{2+} couple is highly positive (+ 1.57V) as compared to Cr^{3+} / Cr^{2+} .

 [Watch Video Solution](#)

50. Write one similarity and one difference between the chemistry of lanthanoid and actinoid elements.

 [Watch Video Solution](#)

51. How does the variability in oxidation states of transition metals different from that of the p-block elements ? Explain with examples

 [Watch Video Solution](#)

52. Out of Cu^+ and Cu^{2+} , which ion is unstable in aqueous solution and why ?

 [Watch Video Solution](#)

53. Orange colour of $Cr_2O_7^{2-}$ ion changes to yellow when treated with an alkali. Why ?

 [Watch Video Solution](#)

54. Give two reasons for the following

Chemistry of actinoids is complicated as compared to lanthanoids.

 [Watch Video Solution](#)

55. If the edge length of its unit cell is 300 pm, determine the type of unit cell when an element has atomic mass 93g mol^{-1} and density 11.5g cm^{-3} .

 [Watch Video Solution](#)

56. Write any two differences between amorphous solids and crystalline solids.

 [Watch Video Solution](#)

57. Calculate the number of unit cells in 8.1 g of aluminium if it crystallizes in a face centered cubic (f.c.c) structure. (Atomic mass of Al = 27 gmol^{-1})

 [Watch Video Solution](#)

58. Give reasons :

In stoichiometric defects, NaCl exhibits Schottky defect and not Frenkel defect.

 [Watch Video Solution](#)

59. Give reasons :

Silicon on doping with Phosphorus forms n-type semiconductor.

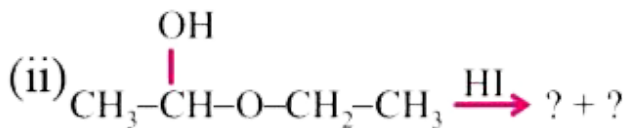
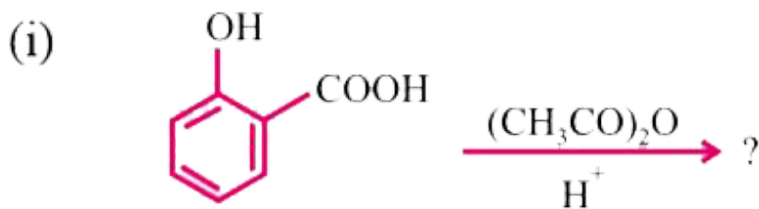
 [Watch Video Solution](#)

60. Give reasons :

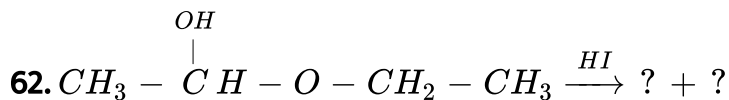
Ferromagnetic substances show better magnetism than antiferromagnetic substances .

 Watch Video Solution

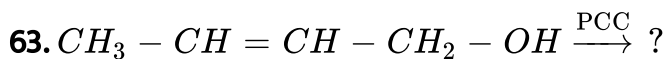
61. Complete the following reaction



 Watch Video Solution



 Watch Video Solution



 [Watch Video Solution](#)

64. Give simple chemical tests to distinguish between the following pairs of compounds:

Ethanol and Phenol

 [Watch Video Solution](#)

65. Give simple chemical tests to distinguish between the following pairs of compounds:

Propanol and 2-methylpropan-2-ol

 [Watch Video Solution](#)

66. Write the formula of reagents used in the following reactions:

Bromination of phenol, 2, 4, 6 – tribromophenol .

 [Watch Video Solution](#)

67. Write the formula of reagents used in the following reactions:

Hydroboration of propene and then oxidation to propanol.

 [Watch Video Solution](#)

68. Arrange the following compound groups in the increasing order of their property indicated:

p-nitrophenol, ethanol, phenol (acidic character)

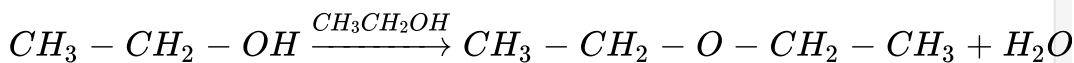
 [Watch Video Solution](#)

69. Arrange the following compound groups in the increasing order of their property indicated:

Propanol, Propane, Propanal (boiling point)

 [Watch Video Solution](#)

70. Write the mechanism (using curved arrow notation) of the following reaction:



 [Watch Video Solution](#)