



CHEMISTRY

BOOKS - JEEVITH PUBLICATIONS

CHEMISTRY (KANNADA ENGLISH)

**MODEL QUESTION PAPER 3 FOR
PRACTICE**

Part A

1. Aquating animals are more comfortable in cold water rather than in warm water. Give reason.



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2. What is hypertonic solution?



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3. Write the composition of rust?



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4. What happens to the energy of activation of a reaction when positive catalyst is added?



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5. Give an example for protective colloid.



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6. Name the method used to refine semiconducting metals.

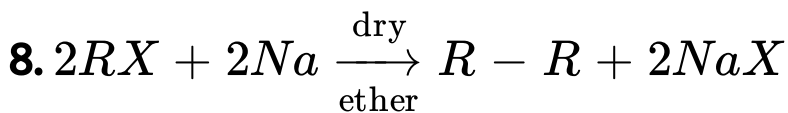


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7. Mention the noble gas element used in cancer therapy.



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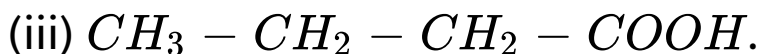
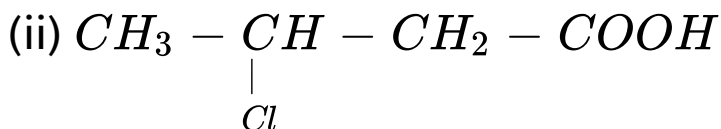
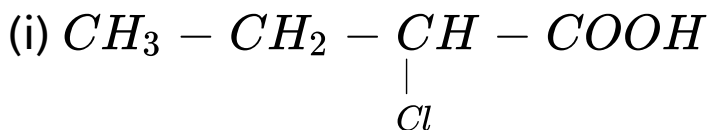


Write the name of the reaction.



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9. Arrange the following in the increasing order of their acidity.



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10. Write the Zwitter ion structure of Glycine.



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Part B

1. In terms of band theory, what is the difference between a conductor and an insulator?



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2. Find the mass of copper deposited on cathode when a current of 1.5A is passed through copper sulphate solution for 5 minutes (At. Mass of Cu=63.5).



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3. Write any two differences between order and molecularity of a reaction?



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4. Write the balanced equation for the reaction between acidified $KMnO_4$ and oxalic acid. What is the importance of this reaction?



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5. Why is phenol more acidic than cresol?



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6. How is benzaldehyde prepared by Etard's reaction?



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7. Explain Hofmann's bromamide reaction with an example.



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8. What is an antibiotic? Give an example.



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Part C

1. Name any two ores of zinc. How is zinc extracted from zinc oxide?



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2. What happens when ammonium dichromate crystals are heated?



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3. How do you convert N_2 to nitric oxide?



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4. Mention any one use of nitrogen.



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5. Mention any two anomalous properties of nitrogen.



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6. Write the structure of orthophosphoric acid?



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7. How is chlorine gas prepared in laboratory.



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8. Give reason "All halogens are coloured".



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9. Give reason:

Transition elements exhibit variable oxidation states.



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10. Give reason:

Ti^{+4} ion is colourless.



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11. Give reason:

Cu^{+1} ion is diamagnetic.



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12. Explain the preparation of $KMnO_4$ from pyrolusite.



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13. Write the general electronic configuration of 3d series of transition elements.



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14. Using VBT, explain the geometry and magnetic property of $[CO(NH_3)_6]^{+3}$.



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15. Mention any one importance of coordination compounds in the field of

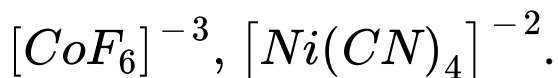
(i) Biology

(ii) Metallurgy.



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16. identify the low spin complex in the following:



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Part D

1. Calculate the number of atoms per unit cell of BCC.



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2. Point out the differences between tetrahedral voids and octahedral voids.



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3. What type of semiconductor is formed when 13th group element is doped with silicon?



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4. 15 g of an unknown molecular substance was dissolved in 450 g of water. The resulting solution freezes at -0.34°C . what is molar mass of the substance ?

$$\left(K_f \text{ for water} = 1.86\text{kg mol}^{-1}\right)$$



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5. What are azeotypes? Give an example.



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6. The resistance of solution of salt occupying a volume of between two platinum electrodes 1.8 cm apart and 5.4 cm^2 in area was found to be 32 ohms. Calculate the conductivity of the solution.



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7. Write the symbolic representation of standard hydrogen electrode and give its standard potential value.



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8. Derive an integrated rate equation for the rate constant of a first-order reaction.



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9. Draw the graph for $[R]$ versus time (t) for a zero order reaction. Give the relationship between the rate constant and the slope of the curve.



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10. Give any differences between physical adsorption and chemical adsorption.



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11. What is

(i) Tyndall Effect.

(ii) Peptisation.



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1. How does bromo ethane react with

(i) alcoholic KCN

(ii) alcoholic AgCN



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2. Give an example for Wurtz-Fitting reaction.



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3. How do you distinguish between primary, secondary and tertiary alcohols using Lucas reagent.



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4. What happens when benzene diazonium chloride is warmed with water?



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5. How does benzaldehyde react with

(i) NH_2OH

(ii) Nitrating mixture.



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6. Write the structure of

(i) 3 hydroxybutanol

(ii) 4-chloro acetophenone.



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7. i) Explain Hoffmann bromamide degradation for the preparation of aniline.

ii) Give the IUPAC name of $CH_3 - NH - CH_2 - CH_3$.



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8. b) What is Hinsberg's reagent? Between CH_3NH_2 and $C_6H_5NH_2$ which is more basic?



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9. What are reducing Zwitter ion form of an α -amino acid.



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10. (i) Write the Zwitter ion form of an α -amino acid.

(ii) Name the naturally occurring α -amino acids that is not optically active.



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11. What is copolymerization? Give an example with equation.



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12. Give an example for

(i) Polymer fibre.

(ii) thermosetting polymer.



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