



CHEMISTRY

BOOKS - JEEVITH PUBLICATIONS

CHEMISTRY (KANNADA ENGLISH)

MODEL QUESTION PAPER 5 FOR

PRACTICE

Part A

1. What is the SI unit of molar elevation constant (K_b) of a solvent?



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2. Give an example of a solute for which $i=1$ in an aqueous solution.



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3. What is secondary cell?



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4. Define limiting molar conductivity?



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5. Give reason "activated charcoal is used in gas mask".



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6. Name the refining method used to produce semiconductors.



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7. What is emulsion?



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8. What are Freons?



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9. Give IUPAC name of CH_3CHO .



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10. Name the protein present in hair.



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Part B

1. Name any two crystal system.



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2. State Kohlrausch law of independent migration of ions.



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



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4. What is the formula of the products formed when a lanthanoid (Ln) reacts with (i) halogen (X) (ii) nitrogen?



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5. How is anisole converted into 2-methoxytoluene and 4-methoxytoluene?



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6. What is HVZ reaction ? Give example/.



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7. What are analgesics? Give an example.



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8. What are anti-fertility drugs? Give an example.





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Part C

1. Explain with equation Van-Arkel method for refining of zirconium.



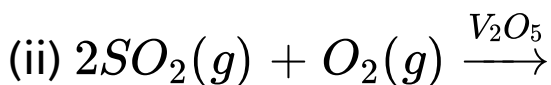
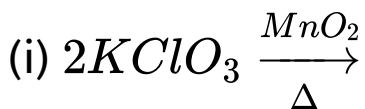
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2. Describe the equation to manufacture nitric acid by Ostwald's process.



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3. Complete the following reactions:



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4. Explain the action of chlorine on slaked lime

? Give the equation.



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5. Fluorine exhibits -1 oxidation state. Give reasons.



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6. What are interstitial compounds? Write any one their characteristics.



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7. Out of the following elements identify the element which does not exhibit variable oxidation state Cr Co Zn.



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8. What happens when H_2S gas is passed into potassium dichromate in acidic medium. ? Give the equation.



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9. What is the composition of chromite ore?



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10. Give differences between $[NiCl_4]^{2-}$ and $[Ni(CN)_4]^{2-}$ with respect to type hybridization, magnetic behaviour and geometry.



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11. For $[Co(en)_3]Cl_3$: Give the IUPAC name.



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12. For $(Co(en)_3)Cl_3$.

Give the coordination number of the central metal ion.



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13. For $(Co(en)_3)Cl_3$.

What type of hybridisation does it exhibit?



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Part D

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



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2. What is ferromagnetism? Give an example for ferromagnetic substance.



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3. Give an example for molecular solid.



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4. If 1.71 g of sugar (molar mass=342) is dissolved in 500 cm^3 of a solution at 300K.

What will be its osmotic pressure?



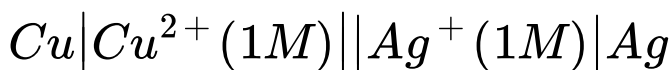
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5. Point out the difference between ideal solution and non-ideal solution.



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6. Find the value of ΔG° at 25°C for the following electrochemical cell.



$$\left[E_{Cu} = +0.34V, E_{Ag}^{\circ} = +0.8V \right]$$

$$F = 96487C$$



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7. Draw a neat labelled diagram of $H_2 - O_2$ fuel cell. Write the reaction occurs at cathode of the cell.



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8. A reaction is first order in A and second order in B.

(i) Write differential rate equation.

(ii) How is rate affected when concentration of B is tripled ?

(iii) How is rate affected when concentration of both A and B is doubled ?



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9. Define the terms,

(i) Temperature coefficient of a reaction.

(ii) half life period of a reaction.



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10. Write any two differences between physical and chemical adsorption.



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11. What is homogenous catalysis? Give an example.



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12. In the coagulation of negative sol, arrange the following ions in the ascending order of their flocculating power Ba^{2+} , Na^{+} , Al^{3+} .



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1. How do you convert an aryl halide to diphenyl?
Write the equation and name the reaction.



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2. Write SN^2 mechanism of the conversion of methyl chloride to methyl alcohol.



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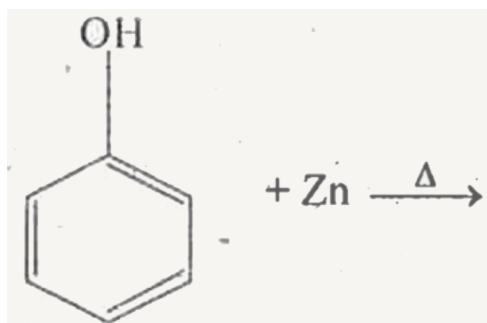
3. With equation, give an example for

(i) Reimer Tiemann reaction.

(ii) Dehydration of primary alcohol.

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4. Complete the following equation.



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5. Explain the mechanism of addition of HCN to acetaldehyde.



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6. Write any two tests to distinguish between acetaldehyde and acetone.



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7. Give an example for the following properties of amines.

(i) Coupling reaction.

(ii) Carbyl amine reaction.

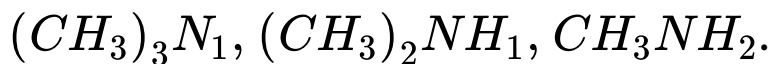


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8. i) Write IUPAC name of $CH_3CH_2NH_2$.

ii) Arrange the following amines in the order of their increasing basic strength in aqueous

solution.



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9. Write any three differences between RNA and DNA.



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10. What disease is caused by the deficiency of

(i) vitamin C

(ii) vitamin B_{12} .



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11. Discuss the classification of polymers on the basis of their structures.



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12. Write the names and structure of the monomers of Buna-s.



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