

CHEMISTRY

BOOKS - JEEVITH PUBLICATIONS CHEMISTRY (KANNADA ENGLISH)

MODEL QUESTION PAPER 5 FOR PRACTICE



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?



4. Define limiting molar conductivity?



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



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?



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.



2. State Kohlrausch law of independent migration of ions.



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



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



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



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.







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



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



3. Complete the following reactions:

(i)
$$2KClO_3 \xrightarrow{MnO_2}^{MnO_2}$$

(ii)
$$2SO_2(g) + O_2(g) \stackrel{V_2O_5}{\longrightarrow}$$

(iii)
$$NO(g) + O_2(g)
ightarrow .$$



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- 4. Explain the action of chlorine on slaked lime
- ? Give the equation.



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



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



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.



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.



11. For $\lceil Co(en)_3 \rceil Cl_3$: Give the IUPAC name.



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12. For $\left(Co(en)_3\right)Cl_3$.

Give the coordination number of the central metal ion.



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.



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 dissoved in 500 cm^3 of a solution at 300K.

What will be its osmotic pressure?



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



6. Find the value of AG° at $25^{\circ}C$ for the following electrochemical cell.

 $Cuig|Cu^{2+}(1M)ig|ig|Ag^+(1M)ig|Ag$

$$\left[Ec_{u}=\ +0.34V,E_{Ag}^{\,\circ}=\ +0.8V
ight] \ F=96487C$$



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



- **8.** A reaction is first order in A and second order in B.
- (i) Write differential rate equation.
- (ii) How is rate affected when concentrated of

B is tripled?

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



- 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.



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+} .



- 1. How do you convert a aryl halide to diphenyl
- ? Write the eqution and name the reaction.



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

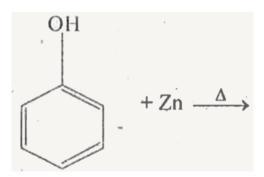


- 3. With equation, give an example for
- (i) Riemer Tiemann reaction.
- (ii) Dehydration of primary alcohol.



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4. Complete the following equation.





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.



- **7.** Give an example for the following properties of amines.
- (i) Coupling reaction.
- (ii) Carbyl amine reaction.



- **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.

 $(CH_3)_3N_1, (CH_3)_2NH_1, CH_3NH_2.$



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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} .



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



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



