

## **CHEMISTRY**

## BOOKS - JEEVITH PUBLICATIONS CHEMISTRY (KANNADA ENGLISH)

## MODEL QUESTION PAPER 4 FOR PRACTICE



**1.** Mention the sign of enthalpy of mixing for a solution showing positive deviation from Raoult's law.



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**2.** What happens to the solubility of a gas in a liquid on increasing temperature.



**3.** Wriite the SI unit of molar conductance.



**4.** What is the rate determining step in a multiple step reaction?



5. Why is adsorption always exothermic?



**6.** Give an example for sulphide ore of coper.



7. Mention of nobel gas not present in air.



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8. mention any one use of iodoform.



9. Write the IUPAC name of t-butyl bromide.



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10. Name a basic amino acid.



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Part B

**1.** Calculate the number of particles per unit cell in bcc.



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**2.** Give the relation between conductivity and molar conductivity.



**3.** What is pseudo first order reaction? Give an example.



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4. What are lathanides? Give an example.



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**5.** Write the name of X and Y in the following reacton:

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 $CH_3MgBr + X \stackrel{dry}{\longrightarrow} CH_3COOMgBr \stackrel{H_3O}{\longrightarrow} Y$ 

**6.** Write the aldol condensation reaction of acetaldehyde.



**7.** What are monosaccharides ? Give an example.



**8.** Mentionthe difference between antiseptic and disinfectant.



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Part C

**1.** Explain the process of obtaining "blister copper" from "copper matte" with equations.

**2.** Draw the flow chart for the manufacture of sulphuric acid by Contact process. Name the catalyst used in the process.



**3.** Give reason " $H_2O$ " is liquid while  $H_2S$  is gas.



**4.** Write any three anomalous properties of oxygen with respect to other element of 16th group.



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**5.** Complete the following equations:

(i) 
$$H_2S+Cl_2
ightarrow\ldots +S\downarrow$$

(ii) 
$$2NaOH+Cl_2
ightarrow NaCl+\ldots + H_2O.$$



**6.** Give reason  $''BrF_5$  Is more reactive than  $Br_2$ ''



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**7.** Calculate the magnetic moment of  $Cr^{+3}$ .



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8. Which has got smallest size

 $Fe, Fe^{+2}\&Fe^{3+}$  ?

**9.** Write the chemical reactions in the preparation of potassium dichromate from chromite ore.



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**10.** Using VBT, explainthe geometry and magnetic property of  $\left[Ni(CN)_4\right]^{-2}$ . (Atomic Number of Ni=28).



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11. Explain linkage isomerism with example.



**12.** Give an example for homoleptic coordination compound.



**1.** Calculate the packing effeciency of bcc crystal lattice.



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**2.** What is the Schotky defect? How does it affect the density of the crystal?



**3.** A solution containing 12.5 g of non-electrolyte solution in 175g of water gave a boiling point elevation of 0.7 k. calculate the molar mass of the solute if  $K_b$  for water is 0.52 K kg  $mol^{-1}$ .



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**4.** State Raoult's law of relative lowering of vapour pressure of a solution.



**5.** Derive an expression for the rate constant of a zero order reaction.



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**6.** Calculate the half-life period of a first order reaction if rate constant is 0.45  $min^{-1}$ .



7. Wriite any three differences between lyophilicc and lyophobic colloids.



**8.** Explain the regio of delta formation on the basis of co-agulation.



**9.** how is SHE constructed? Mention its use.





**1.** Discuss the mechanism of  $SN^1$  reaction with suitable example.



2. Give an example for Finkelstein reaction.



**3.** Explain the mechanism of dehydration of ethanol to ethene.



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**4.** How is salicylic acid converted into aspirin? Give reaction.



5. Write Cannizaro's reaction of Banzaldehyde.



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**6.** Complete the following equations.

(i) 
$$RCOONa \xrightarrow[+CaO]{NaOH} \ldots + Na_2CO_3$$

(ii) 
$$CH_3COOH + Cl_2 \xrightarrow[H_2O]{\operatorname{Red P}} \ldots + HCl.$$



**7.** Give reason: (i) Methyl amine is soluble in water but not in aniline.

(ii) Methyl amine is more basic than ammonia.



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**8.** how do you convert aniline to benzene diazonium chloride ?



9. What is non-reducing sugar? Give an example.



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**10.** Draw the Haworth structure of  $\beta$ -(D) fructofuranose.



**11.** Why is viramin-C not stored not in the body?



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12. What is copolymerization? Give example.



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**13.** Write any one difference between thermoplastic and thermosetting plastic.



**14.** Identify homopolymer among Nylon-6,6 and Nylon-6.

