

CHEMISTRY

BOOKS - JEEVITH PUBLICATIONS CHEMISTRY (KANNADA ENGLISH)

MODEL QUESTION PAPER 2 FOR PRACTICE

Part A

1. Sea water does not freeze at $0^{\circ}C$. Give reason.



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2. Name any one concentration term which is independent of temperature.



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3. What is the potential of standard hydrogen electrode.



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4. What is collision frequency?



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5. What is Brownian motion?



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6. Name the flux used to remove iron impurity from molten copper matte.



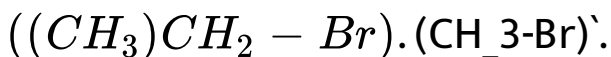
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7. What is the product formed when Xenon reacts with PtF_6 ?



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8. Which one of the following is more reactive towards SN^2 mechanism.



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9. Complete the following reaction:



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10. Define the term nucleotide.



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Part B

1. Write any difference between amorphous and crystalline solids.



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2. Write Nernst equation for single electrode potential at TK. What do each term stand for?



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3. If 40% of a first order reaction is complete in 20 minutes, find the rate constant.



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4. Give Reason.

Most of the transition metals have high melting point and boiling point.



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5. Give Reason.

Second ionisation enthalpy of copper is exceptionally high.



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6. What is Lucas reagent ? How it is used to identify secondary alcohols?



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7. Mention two tests to distinguish aldehydes from ketones.



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8. What are tranquilizers? Give an example.



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9. What are anti-microbials? Give an example.



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Part C

1. Draw a neat labelled diagram of blast furnace for the extraction of iron haematite and write the reactions taking place in slag formation zone.



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2. Explain the manufacture of ammonia by Haber's process.



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3. What happens when SO_2 is passed into

(i) acidified $KMnO_4$ solution.

(ii) NaOH solution.



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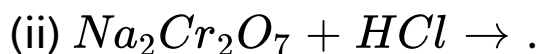
4. How is ozone prepared? What happens when ozone react with lead sulphide?

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5. What are actinoids?

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6. Complete the following equations.





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7. Between Sc^{3+} and Cr^{3+} which one will give colourless aqueous solution and why?



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8. Write any two characteristics of interstitial compounds.



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9. Using VBT, explain the geometry and magnetic property of $[NiCl_4]^{-2}$ given atomic number of Ni=28.



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10. Write the IUPAC name of coordination compound $[Pt(NH_3)_5Cl]Br_3$.



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11. Write any two postulates of Werner's theory of co-ordination compounds.



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Part D

1. A compound formed by the element A and B crystallizes in the cubic structure, where A is at the corners of the cube and B is at body centre. What is the formula of the compound? If edge length is 5\AA , calculate the density of the solid.

(Atomic weights of A and B are 60 and 90 respectively).



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2. What is a P-type semiconductor? Give an example.



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3. What is a reverse osmosis? How it used in desalination of sea water?



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4. What is the boiling point of an aqueous solution containing 0.6g of urea in 100g of water?

K_b for water is $0.52 \text{ K kg mol}^{-1}$.



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5. Write the nernst equation and calculate the emf of the following cell at 298K.



Given $E^\circ \text{Mg}^{+2} / \text{Mg} = - 2.36V$

and $E^\circ \text{Cu}^{+2} / \text{Cu} = + 0.34V$.



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6. Write the differences between metallic conductors and electrolytic conductors.



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7. Show that in case of a first order reaction, the time taken for completion of 99.9% reaction is ten times the time required for half change of the reaction.



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8. What is zero order reaction? Give an example.



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9. Give reason:

(i) Potash alum is used in clarification of water.

(ii) A solid catalyst is very efficient in the finally divided state.

(iii) Lyophilic sols are more stable than lyophobic sols.



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10. Write a note on ultrafiltration.



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11. Give one example to the following reactions.

(i) Swarts reaction.

(ii) Wurtz-Fittig reaction.

(iii) Sandmeyer's reaction.



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12. What are diastereomers? Give an example.



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13. What happens when

(i) Acetaldehyde react with methyl magnesium bromide followed by hydrolysis.

(ii) Phenol reacts with bromine dissolved in CS_2 .



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14. Williamson's ether synthesis with an example.



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15. How do you convert.

(i) Benzene to phenyl ethanone.

(ii) Benzene to benzaldehyde.



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16. What is Aldol condensation? Give example



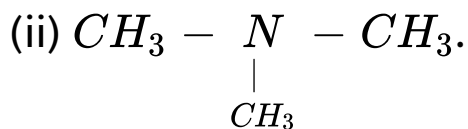
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17. Complete the following reaction:



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18. Give IUPAC name for



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19. (i) Write the Haworth's structure of Lactose.

(ii) Mention a function of hormone Insulin.



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20. What is meant by?

(i) Primary structure of protein.

(ii) Secondary structure of proteins.



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21. What are polymers? How are they classified on the basis of synthesis?

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22. Write the partial structure of

(i) Natural rubber.

(ii) Nylon-66.

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