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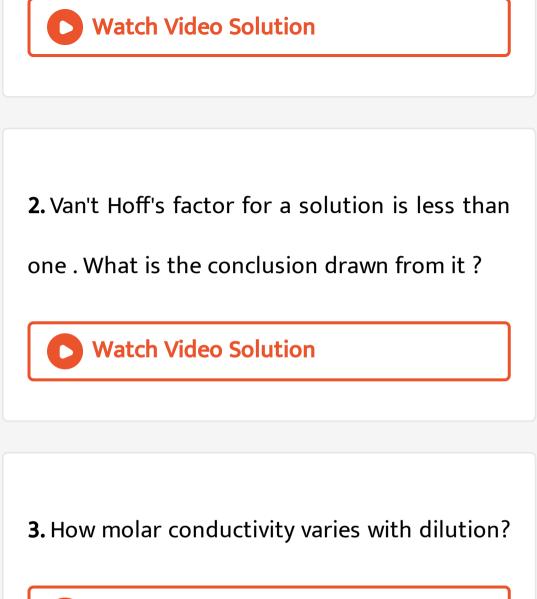
CHEMISTRY

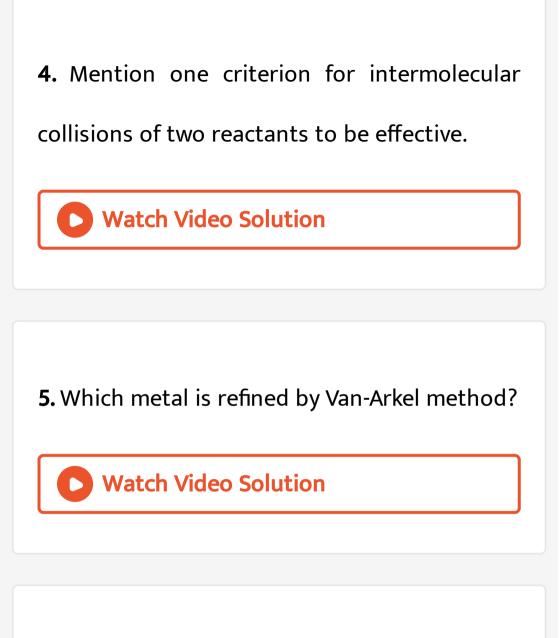
BOOKS - JEEVITH PUBLICATIONS CHEMISTRY (KANNADA ENGLISH)

PUE BOARD MODEL QUESTION PAPER 1 WITH ANSWERS

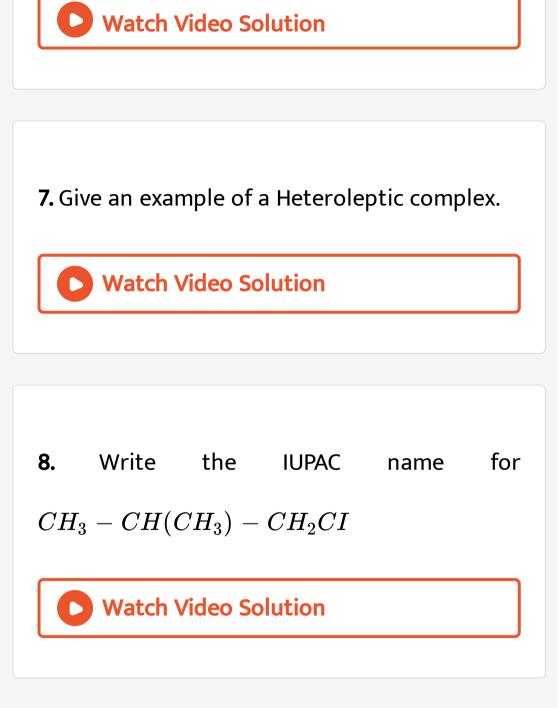


1. State Henry's law.





6. Name the first noble gas compound prepared by Neil Bartlett?



9. Give the name of the product X.



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10. Name the storage polysaccharide present

in animals.





1. (a) Give one example of a paramagnetic substance.

(b) Which type of binding force existing in ice?



2. Write anodic and cathodic half-cell reactions

taking place in Daniel cell.

3. Show that for first order reaction $t(87.5\%) = 3t_{50\%}$

4. What is lanthanoid contraction? Mention

the cause for it.



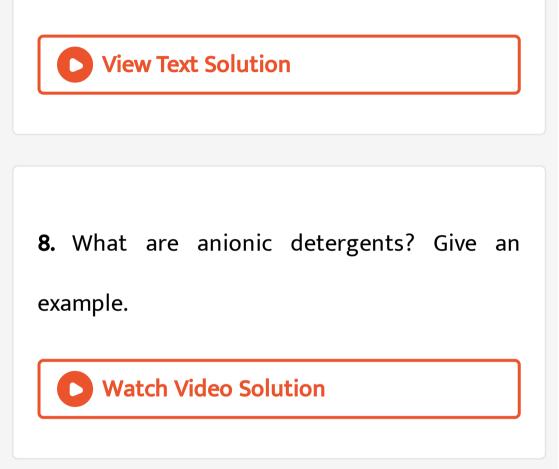
5. How do you convert bromomethane into tertiary-butyl ethyl ether? Give the chemical equation of the reaction.



6. What is Stephen's reaction? Give the chemical equation of the reaction.



7. What is the therapeutic action of





 Explain the extraction of aluminium from purified alumina by Hall-Heroult process.
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2. Explain manufacture of nitric acid by Ostwald's process.

3. (a) How is ozonised oxygen prepared?

(b) Write the structure of sulphurous acid.



4. How does phosphorus react with limited amount of chlorine? Give equation.



5. (a) 3d Transition metals and their compounds are good catalysts. Give two reasons?2

(b) Give the formula for the calculation of spin

only magnetic moment.

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6. Explain the manufacture of Potassium

dichromate from chromite ore.

7. Using VBT explain, (i) Geometry of the complex

(ii) Type of hybridization, in the complex ion $\left[CoF_6
ight]^{3-}$

(iii) Is it an inner or outer orbital complex?



8. Draw the cis and trans isomers of $[Pt(NH_3)_2Cl_2].$

Part D

1. (a) Calculate the packing efficiency in a Face Centered Cubic lattice. (b) If a metal with atomic mass 209 crystallizes in a simple cubic lattice what is the edge length of its unit cell. (Given d = 91.5 kg m-3).



2. (a) 5.8g of a non-volatile solute was dissolved in 100g of carbon disulphide (Molar mass = 76). The vapour pressure of the solution was found to be 190 mm Hg. Calculate the molecular mass of the solute. The vapour pressure of pure carbon disulphide 195 mm Hg.

(b) What are azeotropes? Give an example.



3. (a) The resistance of 1/10 M solution is found to be 2.5×10^3 ohms. Calculate molar conductance (Given Cell constant = 1.15 cm). (b) Mention two general methods for prevention of corrosion.

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4. What is the effect of positive catalyst on the

energy of activation?

5. (a) Mention two factors which affect adsorption of a gas on a solid.

(b) Is synthesis of ammonia by Haber's process, a homogeneous or heterogeneous catalysis?

(c) State Hardy-Schulze rule. Among $Al_2(SO_4)_3$ and $(NH_4)_3PO_4$ which is better coagulating agent for a negative sol?

6. (a) Complete the following reaction and write its name $2C_6H_5CI + 2Na \xrightarrow{"DryEther"}$? + 2NaCl (b) Explain Zaitsev rule with an example.

(c) A Haloalkane when boiled with aqueous KOH which gives an alcohol having inversed configuration. Name the mechanism involved in this reaction.



7. (a) Explain the mechanism involved in the conversion of ethanol into ethene.

(b) An organic compound with molecular formula C_6H_6O gives white precipitatewith bromine water. Identify the functional group in the organic compound and write the chemical equation for the reaction.

8. (a) Explain Cannizaro's reaction with an example.

(b) Name the product obtained by the reaction of acetyl chloride with

dimethylcadmium. (c) Explain the reaction

between carboxylic acid and PCI5

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9. (a) Explain carbylamine reaction by taking methyl amine as an example.

(b) Why do primary amine have higher boiling point than tertiary amines? (c) Give an example for a coupling reaction of diazonium salt and give its chemical equation.



10. (a) Deficiency of which vitamin leads to night blindness?

(b) Which hormone is responsible for the hyperthyroidism?

(c) What is a Zwitter ion of an amino acid? Give

its general formula.

(d) What is a nucleotide?

