

## **CHEMISTRY**

## BOOKS - OSWAAL PUBLICATION CHEMISTRY (KANNADA ENGLISH)

## **Sample Paper 2**

Exercise

1. What is the effect of rise in temperature on the solubility of gases

in liquids?



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2. Define osmotic pressure.



**3.** Mention the concentration of  $H^{\,+}$  ions in the solution used in SHE.



**4.**  $2SO_2(g) + O_2(g) \xrightarrow{NO_2(g)}$  Is this reaction an example for Homogeneous or Heterogeneous catalysis.



**5.** Name the depressant used in separation of ZnS from PbS by froth floatation process.



**6.** Which noble gas does not occur in nature?



**7.**  $R-X+NaI \xrightarrow{ ext{Dry Acetone}} RI+NaX.$  This reaction is known



as.....

**8.** Give reason: Acetic acid is soluble in water.



9. Among the following which is a fat soluble vitamin

Vitamin -  $B_{12}$ , Vitamin - C, Vitamin - D.



**10.** Give two differences between p-type & n-type semiconductors.

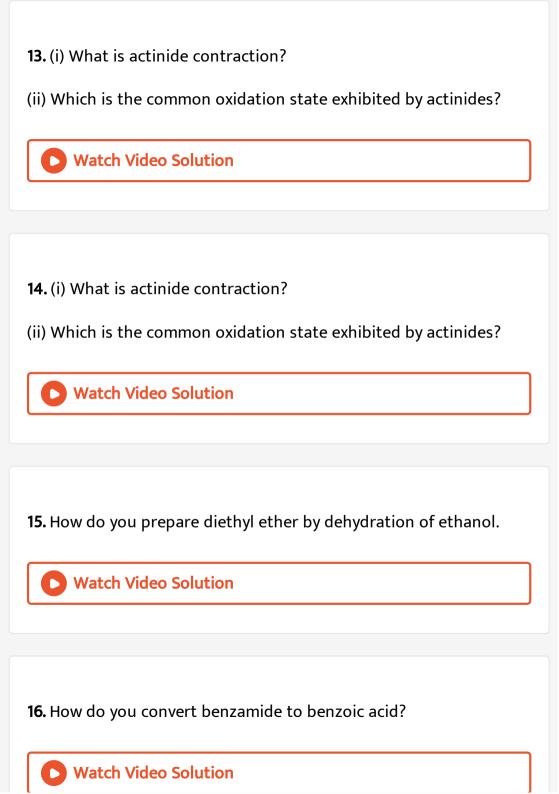


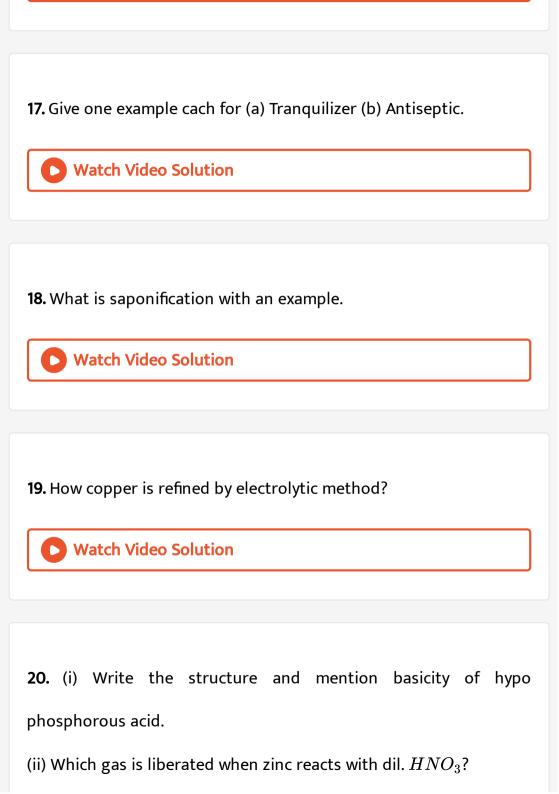
**11.** What is limiting molar conductivity? Represent graphically the variation in molar conductivity with concentration for acetic acid.



**12.** Rate constant of a first order reaction is  $6.93 \times 10^{-3} min^{-1}$ . Calculate the half-life period.









**21.** (i) Write the structure and mention basicity of hypophorous acid.

(ii) Which gas is liberated when zinc reacts with dil.  $HNO_3$ ?



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



23. (a) Give two reasons for the anomalous behaviour of fluorine.

(b) Give one example of interhalogen compounds.



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- (b) Give one example of interhalogen compounds.
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- 25. Write any two characteristics of interstitial compounds.
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- **26.** (i) Write the two chemical equations to show the inter conversion of chromates & dichromates in aqueous solution.
- (ii) Complete the equation:

$$5C_2O_4^{2\,-}\,+\,2MnO_4^{\,-}\,+\,16H^{\,+}.$$

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**27.** (i) Write the two chemical equations to show the inter conversion of chromates & dichromates in aqueous solution.

(ii) Complete the equation:

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**28.** With the help of valence bond theory account for the geometry and magnetic property of  $\left(Co(NH_3)_6\right)^{3+}$  .



29. What is an ambidentate ligand?

Name the type of structural isomerism that arises in the coordination compound containing such a ligand.



## **30.** Give the IUPAC name of $K_2ig[Zn(OH)_4ig]$ .



- **31.** (a) Calculate the packing efficiency in c ccp crystal lattice.
- (b) What is the number of particles per unit cell of a simple cube.



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**33.** Calculate the osmotic pressure of 0.05% urea solution in water at  $20^{\circ}$  C. Given R = 0.0821 atm  $mol^{-1}K^{-1}$  . Molar mass of urea = 60 g  $mol^{-1}$  .



**34.** Give two general characteristics of an ideal solution of two liquids.



**35.** Calculate the e.m.f. of the cell in which the following reaction takes place.

$$Ni_{\,(\,s\,)}\,+2Ag_{\,(\,0.002M\,)}^{\,+}\, o Ni_{\,(\,0.160M\,)}^{\,2\,+}\,+2Ag_{\,(\,s\,)}^{\,}\,, ext{Given}\;\;E_{ ext{cell}}^{\,\circ}=1.05V$$



**36.** A galvanic cell after use in recharged by passing current through it. What type of cell is it? Give an example.



**37.** Rate constant of reaction at 300 K and 400 K are  $0.0345S^{-1}$  and  $0.1365S^{-1}$  respectively. Calculate the activation energy for the reaction.

[Given : 
$$R = 8.314JK^{-1}mol^{-1}$$
]



**38.** Derive an expression for half-life of zero order reaction.

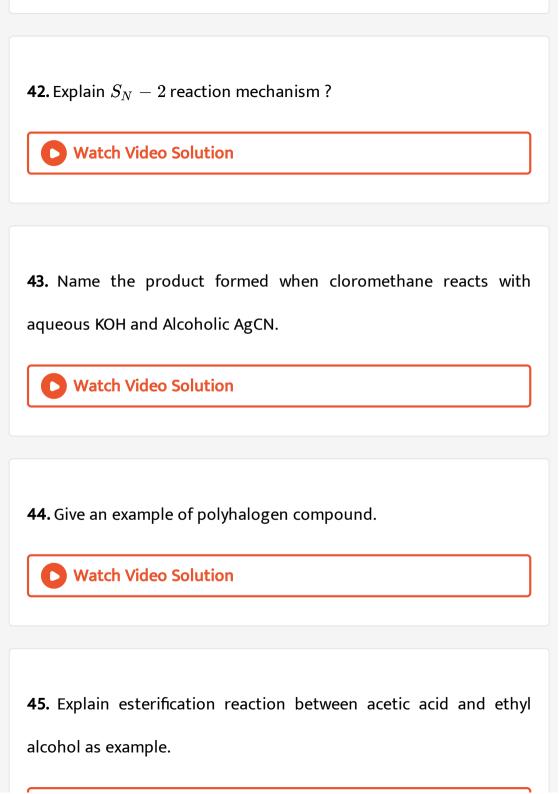


- **39.** (a) Mention two applications of adsorption.
- (b) What are emulsions? Give an example for O/W emulsion.
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**46.** Boiling point of alcohol is greater than the boiling point of hydrocarbons of comparable molar masses. Why?



**47.** What is the effect of the group on the acidity of phenols?

 $-NO_2$ 



48. Explain Etards reaction.



| <b>49.</b> Name the reagent used in the decarboxylaion of carboxylicacid. |
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|   |
| <b>50.</b> How do you convert benzene diazonium chloride into             |
| chlorobenzene. Name the reaction.   |
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|   |
| <b>51.</b> Explain Hofmann's bromamide reaction with an example.          |
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|   |
| <b>52.</b> Write Haworth structure for maltose.                           |
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|   |

| <b>53.</b> What are harmones? Give one biological function of insulin. |
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| <b>54.</b> What are nucleosides?                                       |
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|  |
| <b>55.</b> Name the monomers of Nylon-6,6.                             |
|  |
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|  |
| FC 11  |
| <b>56.</b> How is neoprene prepared ?                                  |
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|  |
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**57.** Give an example of thermoplastic polymer.

