HOLIDAY HOMEWORK 23.12.2023

XI th

☆ Write the answer of each of the following questions.

Qu No.

1. Compare the alkali metals and alkaline earth metals with respect to
   i) ionisation enthalpy
   ii) basicity of oxides
   iii) solubility of hydroxides.

2. What are electron deficient compounds. Are BCl_3 and $SiCl_4$ electron deficient species?

3. What are electrophiles and nucleophiles? Explain with examples.

4. What are the necessary conditions for any system to be aromatic?

5. Calculate energy of one mole of photons of radiation whose frequency is 5×10^{14} Hz.

HOLIDAY HOMEWORK 23.12.2023

XII th

Write the answer of each of the following questions.

Q. No.

1. Define the following terms:

a) Azeotrope b) Osmotic pressure

c) Colligative properties

2. What is primary cell? Give an example.

3. Compare non-transition and transition elements on the basis of their

a) variability of oxidation states

b) stability of oxidation states.

4. i) Why are alkyl halide insoluble in water?

ii) Why is butan-1-ol optically inactive but butan-2-ol is optically active?

5. How will you convert the following:

i) Aniline to chlorobenzene.

ii) Benzene diazonium chloride to phenol.

HOLIDAY HOMEWORK

D-II(H)

Write the answer of each of the following questions:

Q.No.

1. What do you mean by extensive and intensive properties? Explain with example.

2. Discuss molecular orbital theory.

3. Write a short notes on oxides of halogens.

4.

a) Give an important ore for the extraction of fluorine.

b) How is fluorine extracted and stored?

5. Write short notes on:

a) Invert sugar

b) Osazone formation

c) Mutarotation

HOLIDAY HOMEWORK 24.12.2023

D-III (H)

Write the answer of each of the following questions.

Q. No.

1. Explain chain growth polymerisation.

2. Give the synthetic applications of the following reagents:

a) Sodium borohydride

b) Periodic acid

c) Diazomethane

3. Write notes on

a) Zieglar Natta polymerisation.

b) Synthetic rubber

c) Detergents

d) Soaps

4. Write notes on :-

a) Third law of Thermodynamics.

b) Heisenberg's uncertainty Principle.