

St. Mary's P.G. College , Vidisha {M.P.}

B. Sc. 2nd Year – Inorganic Chemistry

Session – 2019-20

Q.{01} : - What are Transition Elements ? Write about following properties of transition elements :-

(I) Oxidation State (II) Magnetic behaviour (III) Catalytic properties

(IV) Formation of coloured ionic compounds .

Q.{02} : - Write the preparation methods and uses of the following complexes –

(A) $K_3[Fe(CN)_6]$ (B) $Na_2[Fe(CN)_5NO]$ (C) $KMnO_4$

Q.{03} : - Write shorte note on the following –

(I) L-S Coupling (II) Lanthanide Contraction (III) Law of Curie – Weiss

Q.{04} : - What do you understand by Magnetic - Susceptibility ? Describe Gouy – method?

Q.{05} : - What do you mean by Complex – Compound ? Describe Werner's Co – ordination theory of Complex Compoudes ?

Q. {06} : - Explain the Following –

(I) Central metal ion (II) Co – ordination Number (III) Ligand

(IV) EAN (V) Isomerism in ComplexCompounds

Q. {07} : - Explain –

(A) Latimer Diagram & Pourbaix Diagram (B) Redox Cycle

Q. {08} : - Write important minerals of Lanthanides ? How will you obtain a mixture of Lanthanides from Monazite mineral ?

Q. {09} : - Explain the chemistry of separation of N_p , P_u and A_m from U ?

Q.{10} : - Describe the theory of Bronsted and Lowry ? Write its utility and limitations ?

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Q. {11} : - Explain Lewis acid – base concept ? Write its utility and limitations ?

Q. {12} : - What are Non – Aqueous Solvents ? Classify them and write their properties ?

Q. {13} : - Describe various chemical reactions of Liquid NH₃ / Liquid SO₂ ?

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