

INORGANIC CHEMISTRY I

CODE: INA
STD: XII

MARKS: 75
TIME: 1½ HR

I. CHOOSE THE BEST ANSWER:

10X1=10

- Dual character of an electron was explained by
a) Bohr b) Heisenberg c) de-Broglie d) Pauli
- The bond order of Oxygen molecule is
a) 2.5 b) 1 c) 3 d) 2
- Noble gases has – electron affinity
a) High b) Low c) Zero d) Very Low
- The C-C bond distance in ethane molecule is
a) 0.154m b) 1.54m c) 0.154nm d) 1.54nm
- The compound used as smoke screen
a) PCl_3 b) PCl_5 c) PH_3 d) H_3PO_4
- Which of the following is used as flux in metallurgy?
a) CaCl_2 b) CaF_2 c) CaBr_2 d) CaI_2
- Hybridisation of phosphorus in phosphorus trichloride is
a) sp b) sp^3 c) sp^2 d) dsp^2
- The Maximum Oxidation state exhibited by lanthanide is
a) +1 b) +2 c) +3 d) +4
- Ceria is used in
a) Toys b) Tracer Bullets c) Gas Lamp Materials d) None of the Above
- Alloys of lanthanides are called as
a) Misch-metals b) Metalloids c) plate metal d) Actinides

II. GIVE ANSWER IN ONE OR TWO SENTENCES

10X3=30

- State Heisenberg's Uncertainty Principle.
- Why He_2 is not formed?
- Mention the disadvantage of Pauling's scale.
- The ionisation energy of Beryllium is greater than that of lithium? Explain why?
- Write the uses of Neon?
- Explain why the electron affinity of halogen is high?
- Draw the structure of Pyrophosphoric acid?
- What is Plumbo Solvency?
- What are Misch metals? Give their uses?
- Write the uses of lanthanides and Actinides.

III. GIVE SHORT ANSWERS:

3X5=15

- Explain the formation of O_2 molecule by molecular orbital theory?
- State various methods of purification of lead?
- Describe the extraction of lanthanide from monazite sand?

III. GIVE DETAILED ANSWERS:

2X10=20

- Write notes on Pauling's and Mulliken's scale of Electronegativity.
- A) Explain the factors which influence the magnitude of ionisation energy.
B) Mention the uses of Phosphonic acid.

