Education College-Scientific Depts. Chemistry Dept.
Practical Inorganic Chemistry 3rd Class 2021-2022 Time: 1hr.

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Name: .....

Q1/ A certain coordination compound has the formula $[Cu(NH_3)_4(H_2O)_2]SO_4$. (12M)

a. Which atom is the central atom? .....

b. Name the ligands and name the donor atoms.

.....

.....

c. Both these ligands are _____ (mono, di, poly) dentates.

d. What is the charge on the complex ion? .....

e. What is the oxidation number (O.S.) of the central atom? .....

f. What is the coordination number of the central atom? .....

Q2/**A**/ $[Ni(en)_3]Cl_2.H_2O$ complex consider more stable than $[Ni(NH_3)_6]Cl_2$ complex, why? (8M)

B/Calculate the theoritical percentage of Ni^{+2} in (0.3g) sample, if we know the weight of ppt. $[Ni(DMG)_2]$ = 0.1g. (10M)

At.wt of Ni=58.71, H=1, C=12, O=16, N=14

Q3/ Write the mechanism reaction of the preparation of $[Co(NH_3)_6]Cl_3$ complex? (10M)

Q4/ Complete this reaction (by structure) and name the product complex? (10M)

$CuSO_4.5H_2O$ + EDTA $\longrightarrow$

Q5/ How can your detection between cis and trans isomerism in the laboratory, supporting your answer by chemical equation? (10M)

Set by: -
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