2021
B.A./B.Sc. Semester IV Honours Examination
University of Calcutta
CHEMISTRY
Paper CC10
PRACTICAL
F.M. 30

FAKIR CHAND COLLEGE CENTRE (551)

[Use A4 pages and black ink only for writing answers. Write Roll number and Registration number at the top and page number at the bottom of each page. Scan the current admit card and upload in a single pdf file along with the answer script]

1. Write elaborately the procedure for the preparation of $Fe(acac)_3$ clearly mentioning the reagents required and also the reactions involved in the preparation of the complex. 10

2. Answer all the questions: 2x10=20
   a) Write the IUPAC name of $K[Cr(C_2O_4)_2.(H_2O)_2].2H_2O$. Name the reagents used in the preparation of $K[Cr(C_2O_4)_2.(H_2O)_2].2H_2O$.
   b) Write the mathematical form of Lambert- Beer's law. Explain the terms involved in it.
   c) What is the colour of the complex $[Co(NH_3)_4CO_3]NO_3.0.5\ H_2O$? Name the reagents used in the preparation of $[Co(NH_3)_4CO_3]NO_3.0.5\ H_2O$.
   d) What is the colour of the complex $K[Cr(C_2O_4)_2.(H_2O)_2].2H_2O$. Write the reaction involved in the preparation of $K[Cr(C_2O_4)_2.(H_2O)_2].2H_2O$.
   e) Write the reaction involved in the preparation of $[Ni(en)_3]Cl_2.H_2O$.
   f) Write the reactions involved in the preparation of $K_3[Fe(C_2O_4)_3].3H_2O$.
   g) Write the reaction involved in the preparation of $[Co(NH_3)_4CO_3]NO_3.0.5H_2O$.
   h) If the Beer's law is obeyed, what will be the nature of Beer's law verification curve? What will you obtain from the slope of this curve?
   i) Name the solvents used to wash the crude product of $[Ni(en)_3]Cl_2.H_2O$. How this Nickel complex is finally dried after synthesis?
   j) What is the colour of the complex $K_3[Fe(C_2O_4)_3].3H_2O$? Name the reagents used in the preparation of $K_3[Fe(C_2O_4)_3].3H_2O$.