2021
B.A./B.Sc. Semester VI Honours Examination
University of Calcutta
CHEMISTRY
Paper CC13
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. Name the Group IV radicals. What is the group reagent for Group IV? Write elaborately the group analysis of the Group IV radicals using their aqueous solution and also clearly mention the treatment of the precipitate of Group IV. 10

2. Answer all the questions: 2x10=20
   a) How can you confirm Mn^{2+} salt using sodium bismuthate oxidation test. Write the reaction involved.
   b) What is Nessler's reagent? Which radical can be confirmed using it?
   c) What colour bead will you observe in the Borax Bead test for Co^{2+} salt in an oxidizing flame? Write the reactions involved.
   d) Write the reactions involved in the Oxidative fusion test for a chromium salt.
   e) What will you observe if you add potassium ferrocyanide solution to a solution of Cu(II) salt in acetic acid medium? Write the reaction involved.
   f) What flame colour will you observe while performing the flame test for Na^{+} salt in naked eye? Why do you observe the colour?
   g) Write the observation and reactions involved in the confirmatory test for borate radical.
   h) How can you confirm nitrate radical in presence of a nitrite radical?
   i) What will you observe if ammonium molybdate solution is added to a solution of aluminium phosphate in nitric acid medium and the resulting solution is warmed? Write the reaction involved.
   j) To the sodium carbonate extract of the thiosulphate salt, added dilute nitric acid, boiled off CO_2, then silver nitrate solution was added. What will you observe? Write the reactions involved.