2021

B.A./B.Sc. Semester V Honours Examination

University of Calcutta

CHEMISTRY

Paper CC12

(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. Images of answer script and admit card must be in a single pdf file.]

1. Analysis of ^{1}H-NMR spectra of 4-Aminobenzoic Acid shows peaks with δ values 12.0, 7.7, 6.6, 5.9 ppm. Answer the followings:
   a) Draw the structure of the molecule showing different types of hydrogen.
   b) In a tabular form assign the given δ values for different hydrogens, give the number of hydrogens for each δ value (from the structure of the compound) and write the splitting pattern for each peak with explanation (pointwise explanation in a few lines. Avoid elaborative writing). 1+2+2+2+3+4 = 14

2. Analysis of FT-IR spectra of 4-Aminobenzoic Acid shows peaks with $\overline{\nu}$ values 3460 and 3360, 2930 and 2860, 2700-2500, 1670 cm^{-1}. Draw the structure of the molecule and assign the peaks in tabular form. 6

3. Write short notes on: 3+4+3
   a) Stationary phase in TLC
   b) Separation principle in Paper chromatography
   c) R_f value & its significance