

2021
B.A./B.Sc. Semester VI Honours Examination
University of Calcutta
CHEMISTRY
Paper DSE-B3
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. What is Novolac resin? Give the reaction scheme of preparation of the resin using phenol and formaldehyde as monomeric substrate. Give the procedural outline of preparation of the resin. Classify the resin based on its structural feature. What type of polymerization process is this?
2+3+3+1+1
2. Answer all the questions:
2x10=20
 - a) What is BPO? Give its utility in polymerization process.
 - b) What is the function of ammonium persulphate during redox polymerization of acrylamide?
 - c) Give the structure of urea-formaldehyde resin.
 - d) Give the brief procedure of precipitation polymerization of acrylonitrile.
 - e) Describe the procedure of microscale emulsion polymerization of PMMA (in brief).
 - f) Give the structure of acrylamide. Why use of acrylamide should be made with high caution?
 - g) In viscometer, why equal volume of experimental liquids is always transferred into the wider limb to measure time of flow for different solutions?
 - h) What is the dimension of viscosity coefficient? Mention the common unit of viscosity coefficient.
 - i) What is the hydroxyl number of a polymer?
 - j) Define Viscosity-average molecular weight of a polymer like PVOH.