Activity Code: 1903029031

B. Sc. 6th Semester (Honours) Practical Examination, October 2020

Subject: Chemistry

Course ID: 61427 **Course Code: UG/CHEM/604/DSE-4(P)**

Course Title: Polymer Chemistry

Full Marks: 10 **Time: 1 Hour 30 Minutes**

The figures in the margin indicate full marks.
Candidates are required to give their answers in their own words as far as possible.

Answer *any one* of the following questions: **10×1 = 10**

1. a) What is the principle for the preparation of nylon 6? Give balanced equation of the reaction.
   b) Describe the laboratory method for the preparation of nylon 6 indicating chemicals/reagents and apparatus needed.
   c) What are the precautions needed? (2+2)+5+1

2. (a) Provide the principle of preparation of urea-formaldehyde resin. Write the chemical reaction.
   (b) i) Provide the chemicals/reagents and apparatus needed for the preparation of urea-formaldehyde resin.
   ii) Describe the laboratory method for the preparation of urea-formaldehyde resin.
   (c) Give one application of urea-formaldehyde resin. (2+2)+5+1

3. (a) Give the principle for the determination of viscosity average molecular weight of a polymer. Write the working formula needed for this method.
   (b) Provide the chemicals, solvents, apparatus used and procedure for the determination of viscosity average molecular weight of a polymer.
   (c) What are the important precautions needed. (2+2)+5+1