KATWA COLLEGE

6th Semester Practical Examination, 2020

CHEMISTRY (HONOURS)

## Paper – DSE-3

Date – 28.09.2020

Time – 2:00pm-4:00pm

A. Answer the following questions: -   (3X5=15)

1. A sample of polymer contains 300 molecules with molar mass 10^3, 400 molecules with molar mass 10^4 and 500 molecules with molar mass 10^5. Calculate PDI of the polymer.

2. Calculate the degree of polymerisation (DP) when 99.9% of the monomer takes part in the polymerisation reaction. Is 100% conversion of monomer into polymer possible?

3. Describe the procedure for preparation of nylon 66. Draw the synthetic scheme for one of the monomers.

4. Number-average molecular weight of a SBR co-polymer is 350000 g/mol and degree of polymerisation is 4425. Calculate the ratio of styrene to butadiene repeat units in the given co-polymer.

5. Draw the repeat unit of the polymer that would be obtained in the polymerization of the following monomers. Also classify the following polymers whether they are condensation or addition polymers, formed by chain or step or ring opening polymerization.

(i)

(ii)

(iii)

(iv)

(v)

(vi)

(vii)

(viii)

(ix)

(x)

(xi)
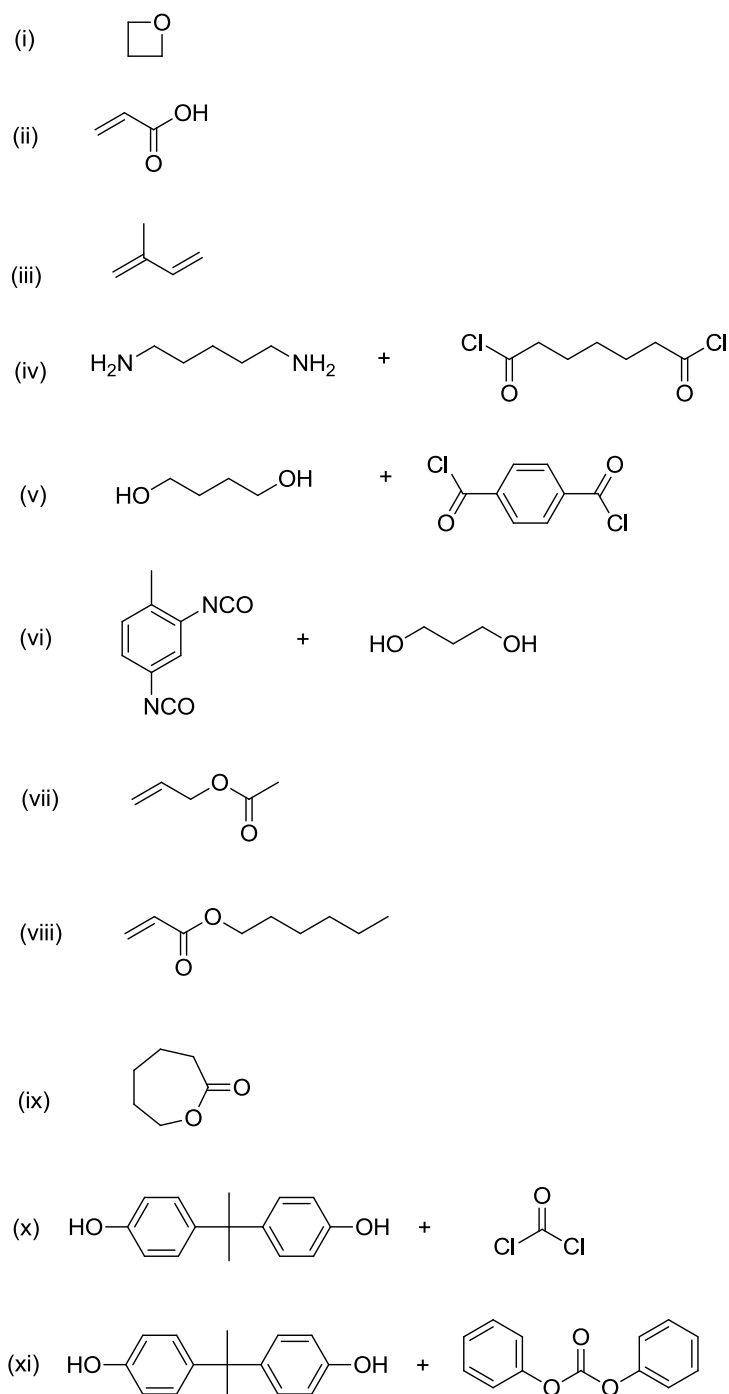
B. Viva-Voce (5)

➢ **Examinees are hereby instructed to write their answer with the front page prescribed by the University of Burdwan and must sent their complete answer script to the following mail id within 4:30 pm.**

kc.deptchemistry@gmail.com