V. P. & R. P. T. P. Science College
T.Y. B.Sc. Industrial Chemistry, Semester-VI
US06CICV03
POLYMER TECHNOLOGY
Date: 14th March 2018

Time: 11:00 am to 12:30 pm **Total Marks: [25]**

Q-1 Answer the following multiple choice questions: **[03]**

I. Cellulose is example of _____polymer.
(a) Natural (b) Semi-synthetic
(c) Synthetic (d) Plastic

II. Molecular Mass of polymer is always expressed in.....term.
(a) Absolute (b) Average
(c) Both A and B (d) None of these

IV. Phenol formaldehyde is produced by _____of phenol & formaldehyde.
(a) Polycondensation (b) Addition
(c) Ionic polymerization (d) Ring opening polymerization

Q-2 Answer the following short question (Any Two) **[04]**

I. Give the name of methods and techniques of polymerization.
II. What is degree of polymerization and how it is related to molecular weight?
III. Draw batch process flow chart for the production of phenol formaldehyde (resole).

Q-3 Write a short note on Ziegler Natta catalyst. **[06]**

OR

Q-3 Explain Emulsion & Suspension polymerization techniques. **[06]**

Q-4 Explain the cryoscopy method for determining molecular weight. **[06]**

OR

Q-4 Explain the number – average concept for averaging out the molecular weight of the polymer. **[06]**

Q-5 Explain the process of forming phenol formaldehyde (Resole) resin. **[06]**

OR

Q-5 Describe the process of manufacturing Melamine formaldehyde resin. **[06]**