

- Q-3 Attempt all questions**
- a. Discuss factors affecting free radical polymerization and properties of resulting polymer (7)
 - b. Explain Anionic polymerization and discuss its kinetics. (7)

SECTION – II

- Q-4 Attempt the Following questions (07)**
- a. Define polycondensation (1)
 - b. Define aminolysis (1)
 - c. Write the reaction of transformation of polyvinyl alcohol to poly vinylacetal (1)
 - d. Give one example of ring scission polymerization (1)
 - e. What is the effect of monomer concentration on polycondensation reaction (1)
 - f. Write one reaction of cross linked polymer (1)
 - g. Define curing (1)

- Q-5 Attempt all questions (14)**
- a. Write a note on stepwise polymerization (5)
 - b. Discuss kinetics and mechanism of ring scission polymerization (5)
 - c. Explain thermal effect of polymer degradation (4)

OR

- Q-5 Attempt all questions**
- a. Discuss vulcanization of rubber (5)
 - b. Explain melt polycondensation and intrafacial polycondensation (4)
 - c. Explain thermodynamics of ring transformation to linear polymer. (5)

- Q-6 Attempt all questions (14)**
- a. Discuss the effect of monomer concentration and temperature on direction of polycondensation reaction. (7)
 - b. Explain polycondensation equilibrium and molecular weight of polymer. (7)

OR

- Q-6 Attempt all Questions**
- a. Discuss kinetics of poly condensation polymerization (7)
 - b. Explain molecular weight control in Polycondensation polymerization (7)

