Printed Pages: 3 **EPL-401**

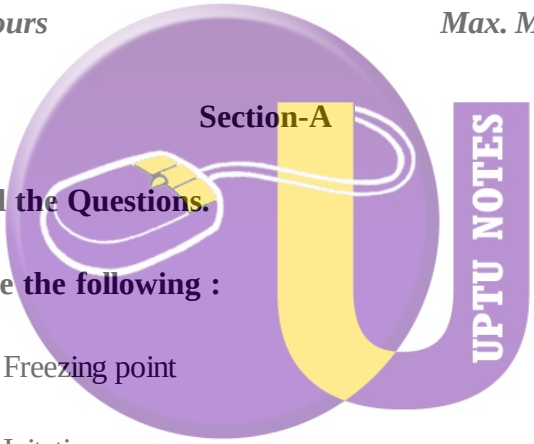
(Following Paper ID and Roll No. to be filled in your Answer Books)	
Paper ID : 187403	**Roll No.**

B.TECH.

Theory Examination (Semester-IV) 2015-16

PRINCIPLES OF POLYMERIZATION

Time : 3 Hours ***Max. Marks : 100***



Section-A

Attempt all the Questions.

Q1. Define the following : **(2×10=20)**

(a) Freezing point

(b) Initatior

(c) Polymer

(d) Copolymer

(e) Molecular weight

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(f) Osmotic pressure

(g) Crosslinked

(h) Homopolymer

(i) Order of reaction

(j) Functionality

Section-B

Q2. Attempt any five questions. (10×5=50)

(a) Give in detail the different type of initiation process to generate the free radical for polymerization.

(b) Define Inhibitors. Discuss the effect of temperature and pressure on the kinetics of polymerization.

(c) Describe kinetics of Condensation polymerization and also give the mechanism with suitable examples.

(d) How do you classify different electrochemical cell? Explain the liquid junction potential.

(e) Explain the ring opening polymerization with suitable example.

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(f) What is an electrochemical cell? How it differs from electrolytic cell? Give a brief account of redox potential?

(g) Define E.M.F. and also write its applications.

(h) Discuss the cationic polymerization and give its mechanism.

Section-C

Attempt any two questions. **(15×2=30)**

Q3. Explain the general theory of chain growth polymerization and its kinetics.

Q4. What is colligative properties? Explain the osmotic pressure and its relation with molecular weight.

Q5. What is autoacleration? Explain the factors affecting molecular weight and molecular weight distribution.

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