

(4 Lect./Week)
(4 hrs. Lab/Week)
(1 Student's presentation /Week)

(Total Credits -7)

Paper 702: Speciality Polymers

1. Preparation, properties and applications of the following polymers
 - a) Polyether ether ketone resins (PEEK)
 - b) Polyamideimide resins (PAI)
 - c) Sulphur based polymers (Polysulphone and polyphenylene sulfide)
 - d) Polyamide resins
 - e) Polyetherimide resins (PEI)
 - f) Polyester resins
 - g) Polycarbonate (PC)
 - h) Acetal resins
 - i) Polyphenylene oxide (PPO)
2. Functional polymers & Liquid Crystalline Polymers.
3. Inorganic Polymers (Silicon and Nitrogen containing polymers)

Practical - Polymer VII:

1. Preparation of Nylon 6, 10 by interfacial polymerization.
2. Preparation of PAI.
3. Preparation of PEEK.
4. Preparation of unsaturated polyester resins (USP resins).
5. Preparation of polyester panels.
6. Preparation of silicon compounds.

Suggested Readings:

1. Plastic Materials by J. A. Brydson, Butterworth-Heinemann (1999).
2. Advanced Polymeric Materials by G.O. Shonaike, S. G. Advani, CRC Press (2003).
3. Engineering Plastic Handbook by J. M. Margolis, McGraw-Hill Company (2006).
4. Specialty Polymer by F. Mohammad, I K International Pub House (2007).
5. Applied Plastics Engineering Handbook by M. Kutz, Elsevier (2011).