

PANIPAT INSTITUTE OF ENGINEERING & TECHNOLOGY

Department of Textile Engineering

Faculty Name: - Ms. Neeraj Bala

Subject Name: - Textile Fiber II

Year/Semester: - 2nd /4th

Subject Code: - PCC-TEX-202A

Unit No.	Topic of the Lecture	Hours	Total Hours
Unit I	Introduction of polymerization, monomer, oligomer, comonomers	1	13
	Classification of polymers, homopolymer and copolymers	1	
	Thermo sets , Thermoplastic, Elastomers , Tg, Tm	1	
	Degree of polymerization, molecular weight and its practical significance	1	
	Criteria for fibre forming polymers	3	
	Polymerization techniques with respect to acrylic and polypropylene	4	
	Polymerization mechanisms addition polymerization, condensation polymerization	1	
	Revision & doubt clearance session	1	
Unit II	Production of PET polymer	1	11
	Side reactions & effect of DEG during PET synthesis	2	
	Polymerization of polyester by DMT and TPA route	1	
	Melt Spinning Technique	3	
	High speed Spinning and properties of polyester	2	
	Physical and chemical properties of polyester	1	
	Revision & doubt clearance session	1	
Unit III	Nylon 6 polymer production	2	15
	Effect of different parameters on polymerization of nylon 6	2	
	VK tube polymerization process	1	
	Nylon fiber formation by melt spinning	1	
	Physical and chemical properties of nylon	1	
	Acrylic polymer production	2	
	Fiber formation by wet and dry spinning	2	
	Acrylic fiber formation and coagulation variables	2	
	Comparative study of wet and dry spinning process, dry jet wet spinning	1	
	Revision & doubt clearance session	1	
Unit IV	Polyolefin fibers, types physical and chemical properties	2	11
	Drawing and texturing introduction	1	
	Phenomenon of necking	1	
	Drawing condition, continuous filament drawing machine	2	
	Draw texturing process	1	
	Heat setting	1	
	Revision & doubt clearance session	2	
	University paper discussion	1	