Seat No.: _____ *Enrolment No._____*

GUJARAT TECHNOLOGICAL UNIVERSITY

M. E. Sem. – II[nd] - Examination – June/July- 2011

Subject code: 1722504

Subject Name: Modern Fibre Technology

Date:27/06/2011 **Time: 10:30 am – 01:00 pm**

Total Marks: 70

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**(a)**	Compare aqueous suspension polymerization including dope preparation with solution polymerization of acrylic fibre.	**07**
	(b)	Compare wet spinning with dry spinning of acrylic fibre in detail.	**07**
Q.2	**(a)**	State the functions and discuss critically all the function affecting quality in wet spinning of acrylic fibre.	**07**
	(b)	Write brief notes on various methods of spin finish applications of manmade fibre.	**07**
		OR	
	(b)	Write brief notes on specialty of acrylic fibre.	**07**
Q.3	**(a)**	Write complete note on NMMO process of lyocell fibre formation.	**07**
	(b)	Write brief note on processing of lyocell fibre in open width and rope form.	**07**
		OR	
Q.3	**(a)**	Mention advantages of lyocell fibre and list its uses in apparel as well as technical textiles with reasons.	**07**
	(b)	Critically discuss structure of lyocell fibre with reference to mechanical properties and fibrillation.	**07**
Q.4	**(a)**	What is the significance of spin finish in manmade fibre production? Discuss in detail functions of spin finish, types of spin finish and precautions to be taken while applying spin finish.	**07**
	(b)	Draw neat sketch and describe VK type method of nylon 6.	**07**
		OR	
Q.4	**(a)**	Discuss merits and demerits of polypropylene fibre.	**07**
	(b)	Describe in detail all stages of preparations of cellulose triacetate.	**07**
Q.5	**(a)**	Discuss aramid fibre with specific reference to fibre structure and fibre properties.	**07**
	(b)	Define draw ratio, neck formation and neck propagation with reference to drawing and heat setting of manmade fibres. Describe also morphological changes in fibre structure during drawing.	**07**
		OR	
Q.5	**(a)**	Discuss role of spinning parameters on PET fibre productions.	**07**
	(b)	Discuss merits, demerits and main features of viscose rayon. Mention various uses of viscose fibre and filaments.	**07**

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