

GUJARAT TECHNOLOGICAL UNIVERSITY**M.E –IIst SEMESTER–EXAMINATION – JULY- 2012****Subject code: 1722504****Date: 10/07/2012****Subject Name: Modern Fiber Technology****Time: 10:30 am – 13:00 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) Discuss merits of polypropylene fibre. Also write on problems with the same. **07**

(b) Describe in detail all stages of preparations of cellulose acetate. **07**

Q.2 (a) Mention advantages of Tencel fibre and list its uses in apparel as well as technical textiles with reasons. **07**

(b) Critically discuss structure of Tencel fibre with reference to mechanical properties and fibrillation. **07**

OR

(b) Write complete note on NMMO process of man made cellulosic fibre formation. **07**

Q.3 (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.3 (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**

Q.4 (a) Write brief note on processing of lyocell fibre in open width and rope form. **07**

(b) Compare aqueous suspension polymerization including dope preparation with solution polymerization of acrylic fibre. **07**

OR

(a) Compare wet spinning with dry spinning of acrylic fibre in detail. **07**

(b) State the functions and discuss critically all the function affecting quality in wet spinning of acrylic fibre. **07**

Q.5 (a) Write brief notes on various methods of spin finish applications of manmade fibre. **07**

(b) Write brief notes on specialty of acrylic fibre. **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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