| Seat No.: Enrolment No GUJARAT TECHNOLOGICAL UNIVERSITY | | | | |
|--|---|---|----------------|--|
| | | M. E SEMESTER – II • EXAMINATION – SUMMER • 2014 | | |
| Subject code: 1722504 Date: 20-06-2014 | | | | |
| • | Subject Name: Modern Fiber Technology Time: 02:30 pm - 05:00 pm Total Marks: 70 | | | |
| Time: 02:30 pm - 05:00 pm Total Marks: 70 Instructions: | | | | |
| motiu | | Attempt all questions. | | |
| | | 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) | Discuss critically differences amongst various variants of wet spinning of acrylic. | 07 | |
| Q.2 | (a) (b) | Compare wet spinning with dry spinning of acrylic fibre in detail. Describe in detail all stages of preparations of cellulose acetate. OR | 07 07 | |
| | (b) | 922 | 07 | |
| Q.3 | (a) | Mention advantages of Tencel fibre and list its uses in apparel as well as technical textiles with reasons. | 07 | |
| | (b) | | 07 | |
| Q.3 | (a) | Write complete note on NMMO process of man made cellulosic fibre formation. | 07 | |
| | (b) | List important rhelogical aspects of solution spinning and discuss in detail spinning stretch and polymer concentration. | 07 | |
| Q.4 | (a) | Write brief notes on various methods of spin finish applications of manmade fibre. | 07 | |
| | (b) | What are high bulk acrylic yarns? How are they produced? Discuss in detail. | 07 | |
| 0.4 | (-) | OR | 07 | |
| Q.4 | (a) | Discuss high speed spinning of polyester and its effects on fibre properties with graph and technical details. | 07 | |
| | (b) | Write a note on alternative routes for manufacturing cellulosic fibres. | 07 | |
| Q.5 | (a) | Discuss factors contributing formation of DEG in PET. Discuss also effects of DEG on polymer and fibre properties. Suggest also methods | 07 | |
| | , <u> </u> | of controlling DEG formation. | c - | |
| | (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 | | |

(b) Discuss effects of various parameters in caprolactum polymer catalysed 07

Q.5 (a) Draw neat sketch and describe VK type method of nylon 6.

by water.

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