

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-III (OLD) - EXAMINATION – SUMMER 2017

Subject Code: 132901

Date: 31/05/2017

Subject Name: Textile Fibers

Time: 10:30 AM to 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) Answer the following OBJECTIVE questions: **07**
- i. The solvent used for xanthation process is _____.
 - ii. The plasticizer used in manufacturing of Nylon 6 fibre is _____.
 - iii. State the main significance of retting process.
 - iv. The fibre which is naturally synthesized in filament form is _____.
 - v. Orientation to the synthetic fibres is imparted by the process called _____.
 - vi. Minor hair fibres on basis of their chemical constitution fall under class of _____ fibres.
 - vii. PAN fibres cannot be manufactured by _____ spinning technique.
- (b) Explain the detailed process to produce Nylon 6, 6 chips. **07**
- Q.2** (a) Describe various chemical and physical properties of silk fibre with explanation. **07**
- (b) Draw a flow chart for classification of different textile fibres with their class and suitable examples. **07**
- OR**
- (b) Enlist various requirements for the formation of fibre. Discuss any three in detail with suitable examples. **07**
- Q.3** (a) Discuss the growth, cultivation and extraction of Ramie fibres. **07**
- (b) Give microscopic longitudinal view and cross sectional view of any four natural and any three man-made fibres. **07**
- OR**
- Q.3** State the class of Viscose rayon. Elaborately explain the complete manufacturing process for the same using flow chart. **14**
- Q.4** (a) Depict the manufacturing, properties and applications of Saran fibres. **08**
- (b) State various properties of PET fibres. **06**
- OR**
- Q.4** Describe the growth, production, manufacturing and properties of cotton fibre. **14**
- Q.5** (a) Elaborately explain the manufacturing process of Triacetate fibres. **07**
- (b) Write a vast note on Polypropylene fibres. **07**
- OR**
- Q.5** (a) Describe about minor hair fibres in depth. **07**
- (b) Write a note on Pineapple leaf fibres. **07**

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GUJARAT TECHNOLOGICAL UNIVERSITY
BE / ~~ME~~ / ~~MBA~~ / ~~MCA~~ - SEMESTER- III **EXAMINATION – WINTER 2014**

Subject Code: 132901

Date: / /

Subject Name: Textile Fibres

Time:

Total Marks: 70

SOLUTION

Q.1 (a) Answer the following OBJECTIVE questions:

07

- i.** The solvent used for xanthation process is **CARBON DISULFIDE**.
- ii.** The plasticizer used in manufacturing of Nylon 6 fibre is **WATER**.
- iii.** State the main significance of retting process.
Answer: To separate the fibres from the stem and to partially solubilise the binding substance called Lignin.
- iv.** The fibre which is naturally synthesized in filament form is **SILK**.
- v.** Orientation to the synthetic fibres is imparted by the process called **DRAWING**.
- vi.** Minor hair fibres on basis of their chemical constitution fall under class of **PROTEIN** fibres.
- vii.** PAN fibres cannot be manufactured by **MELT** spinning technique.