

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-V (NEW) - EXAMINATION – SUMMER 2016****Subject Code:2152906****Date:11/05/2016****Subject Name:Physical Testing-I****Time:02:30 PM to 05:00 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) With the help of neat sketch, explain the construction & principle of working of “Shirley Trash Analyser” **07**
- (b) State the different methods used for measuring fineness of the fibres. Describe any one method in detail. **07**
- Q.2** (a) Briefly describe any two sampling techniques used for sampling of cotton fibres. **07**
- (b) Write a brief note on “Maturity of Cotton Fibres & its Measurement”. **07**
- OR**
- (b) Write a brief note on “HVI Testing” **07**
- Q.3** (a) With the help of neat sketches, explain how the moisture regain is measured using Shirley Moisture Meter. **07**
- (b) Define the term “Span Length”. Describe briefly the instrument used to measure it. **07**
- OR**
- Q.3** (a) With the help of neat sketch, explain the principle, construction & working of Lea Strength Tester. **07**
- (b) With the help of neat sketch, explain the construction & principle of working of the Fibre Bundle Strength Tester. **07**
- Q.4** (a) Define twist. Explain with neat sketch twist to break method for twist measurement. **07**
- (b) With neat sketch explain in detail any one method for determining yarn count. **07**
- OR**
- Q.4** (a) Define Yarn numbering system. Write the merits and demerits of Direct and Indirect yarn numbering system. **10**
- (b) Fill in the blanks: **04**
1. Conversion from English count to Metric count is _____.
 2. Conversion from Tex to Denier is _____.
 3. 1 Pound (lb) = _____ grains.
 4. In Indirect yarn numbering system _____ the count finer is the yarn.
- Q.5** (a) Explain in brief short, medium and long term variation. **07**
- (b) Enlist the methods for measuring the hairiness in the spun yarn. Also, explain any one method in detail. **07**
- OR**
- Q.5** (a) With a neat sketch explain any one instrument for testing yarn evenness based on compression method. **07**
- (b) Write a note on index of irregularity. **07**
