

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-V • EXAMINATION – SUMMER • 2014****Subject Code: 152804****Date: 17-06-2014****Subject Name: Chemical and Physical Analysis of Textiles****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) State the methods employed for moisture removal from fibres. Discuss any two methods in detail. **07**
- (b) With the help of neat sketch, explain the instrument used for measuring of length of yarn available in package form for calculating the yarn count. **07**
- Q.2** (a) Write a brief note on “Determination of size content used in textiles”. **07**
- (b) Discuss how the fibre identification can be done using different chemical reagents. **07**
- OR**
- (b) Discuss how the microscopic methods are used for analysis of fibre identification. **07**
- Q.3** (a) Give the different methods by which the twist in the yarn can be measured. Briefly describe the rock bank twist tester. **07**
- (b) A lea (120yds) of cotton yarn weighs 40 grains. Find out whether the yarn is coarser or finer. **07**
- OR**
- Q.3** (a) With the help of neat sketch, explain briefly the Wet & Dry Bulb hygrometer. **07**
- (b) Write a brief note on “Measurement of Maturity of cotton fibres”. **07**
- Q.4** (a) Give the significance of measuring tearing strength of fabric. With the help of neat sketch, explain briefly the Tearing strength Tester. **07**
- (b) Which are the properties of fabric which determine the fabric handle. Name the instruments used to assess them and describe any one instrument in detail. **07**
- OR**
- Q.4** (a) With the help of neat sketch, explain the principle, construction & working of Fibre trash analyser. **07**
- (b) Define the following terms: **07**
- i. Breaking Load & Tenacity
 - ii. Stress & Strain
- Q.5** (a) Discuss the different methods used for determination of the blend content of textiles. **07**
- (b) Give the significance of measuring the blend content in textiles and also discuss the different factors affecting the accuracy of quantitative analysis of them. **07**
- OR**
- Q.5** (a) With the help of neat sketches, explain the different methods used to find the melting point of textile fibres **07**
- (b) What is the desiccant? Explain its working in detail. **07**
