

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-V • EXAMINATION – WINTER • 2014****Subject Code: 152804****Date: 01-12-2014****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) With the help of neat sketch, explain the principle, construction & working of Fibre trash analyser. **07**
- (b) With the help of neat sketches, explain the quadrant balance for measuring Fabric GSM. **07**
- Q.2** (a) Describe elaborately the usefulness of solubility test in fibre identification. **07**
- (b) Write a brief note on “Microscopic examination of fibres”. **07**
- OR**
- (b) Write a brief note on “Birefringence”. **07**
- Q.3** (a) With the help of neat sketch, explain any one instrument for measuring Twist in yarn. **07**
- (b) Describe how the beesley balance is used for count measurement. **07**
- OR**
- Q.3** (a) With the help of neat sketch, explain briefly the hydraulic bursting strength tester. **07**
- (b) With the help of neat sketch, explain briefly the Drapemeter. **07**
- Q.4** (a) Write a brief note on “Measurement of maturity of cotton fibres”. **07**
- (b) State the methods employed for moisture removal from fibres. Discuss any two methods in detail. **07**
- OR**
- Q.4** (a) Explain how end group analysis useful in determination of molecular weight of nylon. Describe any one method in detail. **10**
- (b) Discuss how the elemental analysis of fibres is done. **04**
- Q.5** (a) Write a brief note on “Viscosity average molecular weight”. **07**
- (b) Discuss in detail the behaviour of different fibres in burning test. **07**
- OR**
- Q.5** (a) Describe the application of I.R. spectroscopy in characterization study of fibres. **07**
- (b) Write a brief note on “Blend analysis of P/C blended fabric”. **07**
