

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
BE SEM-VII Examination-Nov/Dec.-2011

Subject code: 172907

Date: 29/11/2011

Subject Name: Advanced Physical Testing

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) Explain working of any one instrument for testing crystallinity of the polymers. **07**
(b) How infrared spectroscopy can be used to elucidate fiber structure? **07**

- Q.2** (a) Write in short on any one instrument for measuring the strength and other related properties of a single filament. **07**
(b) What is a spectrogram? How it is interpreted? Explain with the help of an example. **07**

OR

- (b) Why measuring the yarn tensile strength at a very high speed is important? Write briefly on features of the Tensojet. **07**

- Q.3** (a) Give classification diagram of yarn faults for thick and thin places. How channels are set for long and short thick places. **06**
(b) Define water vapour permeability and explain working of an instrument for the measurement of the same. **08**

OR

- Q.3** (a) Which property is measured by Crockmeter? Write briefly on Crockmeter **06**
(b) What is meant by fabric fingerprint as given by FAST? Explain with a neat sketch operation of FAST2. **08**

- Q.4** Write in full detail on Kawabata Evaluation System for Fabric properties. **14**

OR

- Q.4** Explain main yarn parameters measured by Modern yarn evenness tester. How the parameters are interpreted? **14**

- Q.5** (a) Which important properties are to be measured for geotextiles? Write in short on any one of them. **08**
(b) How performance of nonwoven fabric meant for medical purposes is evaluated? **06**

OR

- Q.5** Write in detail on quality management in Textiles. **14**
