* S F - 7 1 8 9 / 1 0 0 *

SF-7189

B. E. III (Sem. VI) (TT & TP) Examination

May / June – 2011

Textile Testing - I

Time : **3** Hours] [Total Marks : **100**

Instructions :

(1)

નીચે દર્શાવેલ ☛ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fillup strictly the details of ☛ signs on your answer book.

Name of the Examination :

☛ **B. E. 3 (Sem. 6) (TT & TP)**

Name of the Subject :

☛ **Textile Testing - 1**

☛ Subject Code No. : **7 1 8 9** ☛ Section No. (1, 2,.....) : **Nil**

Seat No. :

Student's Signature

(2) Figures to the right indicate full marks.

1 (a) Do as Directed : **10**

(i) Chart for _____ and _____ is also called as C & R chart respectively.

(ii) _____ curve is also called as bell shaped curve. Also illustrate it.

(iii) _____ and _____ affect the regain of textile material.

(iv) Two sets of five warp way strips of cloth are tested for strength and the results obtained are as follows :

Strength of fabric A in pounds :	120	118	124	122	116
Strength of fabric B in pounds:	108	106	140	124	122

Find out which fabric appears to be more variable.

(v) 4 bobbins are tested for count. The mean count was 37.9 and mean range was 3.13. Find out the C.V %

(b) With the help of neat sketch, explain the construction and working of Sheffield micronaire. **10**

2 (a) With the help of neat sketch, explain the principle and working of Shirley Trash Analyser. **10**

(b) Discuss the sampling techniques for cotton. **5**

OR

2 (a) 100 ring bobbins are tested for count and the mean count is found to be 34.2s. The frame is normally spinning 34s. If SD of the sample is 0.62, can we conclude that the frame is really spinning of count. **7**

(b) 50 mules are tested for count from each of 2 mules. Mean count of yarn A, 82s with a SD of 4. Mean count of yarn B, 78s with a SD of 5. Estimate the difference in mean count between the 2 mules at 95. **8**

3 Write short notes on : (any **three**) **15**

(i) Quality Control Charts
(ii) Electrolytic hygrometer
(iii) WIRA fibre length Tester
(iv) Photo electric stapler.

4 (a) Do as directed : **10**

(i) Illustrate absorption - desorption curve
(ii) Define random sample.
(iii) Define the term Relative humidity.
(iv) Give the relation between the diameter of yarn and English Cotton Count.
(v) If a skein of 100 m of polyester yarn weighs 0.84 gm, what is its denier ?

(b) Explain how air flow method is used to measure fibre fineness. Hence Explain my one instrument using air flow method to measure the fineness of fibers. **10**

5 With the help of necessary sketches, explain the following : **15**

- Warp reel and analytical balance
- Twist measurement by microscope

OR

5 (a) Describe the straightened fibre method of twist determination. **10**

(b) Discuss the effect of twist on fabric properties. **5**

6 Write short notes on : (any **three**) **15**

(i) Universal yarn numbering system
(ii) Beesley balance
(iii) Optical Methods for Twist Measurement
(iv) Yarn hairiness.
