

**Total number of printed pages – 7**      **B. Tech**  
**CPTX 8306**

## **Sixth Semester Examination – 2008**

### **TESTING OF TEXTILE MATERIAL– II**

**Full Marks – 70**

**Time : 3 Hours**

*Answer Question No. 1 which is compulsory  
and any **five** from the rest.*

*The figures in the right-hand margin  
indicate marks.*



1. Answer all the questions in brief :      2 × 10
- (a) What is breaking length of a yarn ?
  - (b) What do you mean by irregularity index of yarn ?
  - (c) What is work of rupture ?

- (d) What will be the rate of strain of a yarn if the moving jaw traverses at 12 inches per minute during testing and the gauge length is 20 inches ?
- (e) How doubling in the input side effects the irregularity of the end product ?
- (f) Why the modern tensile testers are of electronic type ?
- (g) What is the relationship between fabric cover and air permeability in general ?
- (h) Why measurement of abrasion resistance is important for apparel fabrics ?

- (i) Why the yarns unraveled from a fabric are not straight but crimped ?
- (j) Why the breaking elongation of a fabric is greater than the same of the constituent yarns ?
2. (a) What do you mean by yarn irregularity ? Discuss the main causes of yarn irregularity. 4
- (b) Describe the working principle of any yarn irregularity tester commonly found in industry. 6
3. (a) Differentiate between CRE and CRL types of strength tester. 3

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**P.T.O.**

- (b) Draw a typical load-elongation curve for a textile material and write down the information to be obtained from this curve. 5
- (c) What will be the effect of test speed and gauge length on the ultimate breaking load and extension of the textile material. 2
4. (a) Write down the various dimensional and physical properties of a textile fabric generally measured for assessment of the quality of the same. 4
- (b) A square plain cloth is made of 30 Ne cotton yarn. If thread density is 60 per

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**Contd.**

inch, calculate the cover factor and GSM of the fabric. Assume necessary particularly. 6

5. (a) Define drupe coefficient and explain the measurement technique of drupe coefficient of a fabric. 7

(b) What is crease recovery of a fabric and why it is important to measure by using any standard instrument. 3

6. (a) Differentiate between tensile strength and tear strength. Why a satin woven fabric will have higher tear strength than a plain woven fabric ? 4

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P.T.O.

(b) Describe the technique of tensile strength measurement using modern tensile strength tester. 6

7. (a) What are air permeability and water permeability of a fabric and how those are expressed ? 5

(b) Describe the procedure for measurement of water permeability of any textile fabric. 5

8. Write short notes on any *two* of the followings : 3×2

(i) Classimat fault analyser

(ii) Fabric Handle

(iii) Pilling of cloth

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Contd.

(b) If the breaking load of a 30<sup>s</sup> (Ne) cotton yarn is 320 gramme, calculate its tenacity in cN/tex and breaking length in km.

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