

Roll No.
Printed Pages : 3

8458

BT- 7 / M-14

TEXTILE TESTING-I

Paper - TT-208-A Opt. (I)

Time allowed : 3 hours]

[Maximum marks : 100

Note : Attempt all questions.

1. Fill in the blanks. 5

- The atmospheric moisture level is normally expressed in terms of _____.
- The strength of cotton _____ when it absorbs water.
- Polyester has a density of _____ g/m³.
- Immature cotton fibres have _____ wall thickness.
- Yarn evenness can be defined as the variation in _____ of yarn.

State true or false 5

- Standard atmosphere is defined as relative humidity of 60%.
- Decitex is mass in grams of 10,000 meters of fibres.
- Fibres of different densities but of same decitex value will have same diameters.
- Longer wools are coarser than shorones
- Wrapped black board examination is for measuring yarn twist level.

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P.T.O.

(2)

Match the following

- | A | B |
|-----------------------|-----------------------|
| (a) Moisture regain | fibre bundle strength |
| (b) Fibre fineness | yarn strength |
| (c) Fibre length | neps |
| (d) Maturity of fibre | oven dry weight |
| (e) Pressley | air flow |

Answer the following 5

- Show hysteresis in moisture absorption by diagram.
- Arrange the fibres in increasing order of moisture regain: cotton, wool and silk.
- Why is it not possible to have a universal system of fibre fineness based on fibre diameter.
- Define the linear density of yarn and its units.
- Define work of rupture.

2. Describe various sampling methods for assessment of properties of fibres available at various stages of processing.

20

or

State clearly the role of regain on electrical resistance of material.
Explain the working of Shirley moisture meter.

3. Discuss the concept of span length of fibres. Explain the Fibrograph technique for measuring various fibre parameters.

20

or

State air flow method for measuring fibre linear density. Explain the working of one instrument based on this principle.

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(3)

4. Comment on the relationship of twist and yarn strength. Discuss the straightened fibre method of twist determination. 20

or

What are random variation and periodic variations. Explain the working of any electronic capacitance tester for measuring unevenness of a textile strand.

5. Describe the factors which affect the tensile properties of textile materials and the results obtained from tensile testing instruments.

20

or

What are the different methods of application of load to the textile specimen and specify their influence on results. Discuss the mechanism of inclined plane principle specifying the loading conditions.