17465

15162

3 Hours / 100 Marks Seat No. | | | | | | | | |

Instructions : (1) All Questions are *compulsory*.

(2) Answer each next main Question on a new page.

(3) Illustrate your answers with neat sketches wherever necessary.

(4) Figures to the right indicate full marks.

(5) Assume suitable data, if necessary.

Marks

1. (A) Solve any FIVE : **5 × 4 = 20**

(a) List various method of measurement of threads per unit length and describe any one.

(b) Describe fabric sampling method with neat sketch.

(c) Calculate the cover factor if warp count = 40 Ne

Weft count = 30 Ne, E.P.I. = 9.0, P.P.I = 40

(d) Define serviceability, wear and abrasion. Also state type of abrasion.

(e) Draw sketch of sample size for tearing strength tester. Also state the principle of tearing strength tester.

(f) Enlist all parameters given by AFIS (Advanced Fibre Information System)

(g) State the concept of swelling shrinkage in dimensional stability.

2. Solve any TWO : **2 × 8 = 16**

(a) Describe with neat sketch measurement of Brusting strength of fabric.

(b) Describe method of measurement of tensile strength of fabric with suitable figure

(c) State the principle and working of High Volume Instrument (HVI).

3. Solve any FOUR : **4 × 4 = 16**

(a) Define fabric width. Describe methods of measuring fabric width.

(b) Define crimp and crimp % and state method to measure crimp percentage in warp and weft ?

(c) Explain with neat sketch method to measure thickness of fabric.

(d) Derive the mathematical relation between cover factor, yarn count and yarn diameter.

(e) Define Bending length and bending modulus and give the formulae to calculate both.

(f) Draw neat sketch of crease recovery tester and lable the names.

4. Solve any FOUR : **4 × 4 = 16**

(a) Draw neat sketch of fabric stiffness tester.

(b) Describe method of measurement of drape-coefficient of fabric by drape meter.

(c) State the effect's of pilling on fabric properties.

(d) Define water proof fabrics and water repellent fabrics.

(e) Describe measurement of pilling by ICI pillbox tester.

(f) Define air permeability, air resistance, air porosity and contact angle.

5. Solve any TWO : **2 × 8 = 16**

(a) Describe how to measure colour fastness to light.

(b) Describe principle and working of Tenso-Jet tensile strength measuring instrument.

(c) Describe the method to measure seam slippage.

6. Solve any FOUR : **4 × 4 = 16**

(a) In HVI (High Volume Instrument's) how to convert span length to full length from fibrograph ? Draw figure and explain.

(b) What is Grey scale for colour change and staining ?

(c) Describe Hydrostatic water head test for measurement of water proofness.

(d) List methods of assessing end-point in abrasion resistance testing. Also state principle of Martindale abrasion tester.

(e) Discuss various factor's affecting air-permeability of fabric.

(f) State the Basic concept of wetting in water permeability.

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