21415

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.

(6) Use of Non-programmable Electronic Pocket Calculator is permissible.

Marks

1.   **Attempt any TEN of the following:**   **20**

a) Define 'TWIST'.

b) List down the expressions used for unevenness measurement.

c) Define 'Tex'.

d) What are types the of abrasion? Give examples.

e) State types of variations in yarn evenness.

f) What is the function of Roto-meter in air permeability testing?

g) State sample size for crease recovery angle measurement and also maximum crease recovery angle possible.

h) Define 'wear'.

Marks

i) Define 'waterproof fabrics'.

j) Define 'air resistance'.

k) What is the sample size for tearing strength?

l) What is end point in abrasion resistance testing?

m) Define 'Tenacity'.

n) What is 'CSP'? State it's unit.

o) Define 'mass stress'.

2. Attempt any FOUR of the following: **16**

a) Define english cotton count. Calculate english cotton count of 10,000 yards of yarn weighing in 2 lbs?

b) Describe standard method of determination of yarn count with electronic balance. (From package or fabric form)

c) What are the various types of twists? Draw figure of both types of twist.

d) Describe the periodic variation in yarn.

e) What is the effect of yarn unevenness on yarn and fabric properties?

f) Describe fabric sampling method with neat sketch.

Marks

3. **Attempt any FOUR of the following:** **16**

   a) State methods of measuring threads per unit length in the fabric.

   b) State formulae for warp, weft and cloth cover factor. Calculate cloth cover factor if EPI - 40, PPI - 60, warp count = 30^s and weft count 60^s.

   c) What is the effect of crimp on fabric properties?

   d) How drapability of fabric can be improved?

   e) Define:

      (i) service ability

      (ii) abrasion

      (iii) pilling

      (iv) drape

   f) Define:

      (i) shower proof

      (ii) water repellent

      (iii) air-permeability and

      (iv) air porosity.

4. **Attempt any TWO of the following:** **16**

   a) Describe method of measurement of twist by twist contraction principle.

   b) Describe method of measurement of drape by drape meter.

   c) Define 'crease recovery'. Describe any one method of measuring crease recovery angle in fabric.

Marks

5. Attempt any <u>FOUR</u> of the following: **16**

a) Define fabric width. Describe method of measuring fabric width.

b) State principle of thickness tester and draw neat sketch of fabric thickness tester.

c) Define:

    (i)   'work of ruptor' and

    (ii) 'work factor'

d) Draw neat sketch and label 'lea-strength tester'.

e) What are the Factors affecting air-permeability of fabric?

f) Describe method of measurement of water repellancy by spray test.

6. Attempt any <u>TWO</u> of the following: **16**

a) State factors responsible for pilling of fabric and describe the method of measurement of pilling by ICI pill.box.

b) Describe method of measurement of fabric tearing strength.

c) Explain with neat sketch the method of measuring fabric tensile strength.

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