17334

21718

3 Hours / 100 Marks   Seat No.

Instructions – (1) All Questions are *Compulsory.*

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

(3) Figures to the right indicate full marks.

(4) Assume suitable data, if necessary.

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

(6) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1.   **Attempt any <u>TEN</u> of the following:**   **20**

a)   Define the Tex count? Write its formula.

b)   Draw and define 'S' twist.

c)   Define metric count, also give its formula.

d)   What is meant by yarn Evenness?

e)   State the effect of crimp on fabric strength.

f)   Define the term E.P.I., P.P.I., P.P.M., E.P.M.

g)   Define crimp and crimp%.

h)   Define count. List the various methods used for count measurement.

i)   State the concept of bending length fabric.

j)   What is Drape and define Drapability?

k) Define:

   (i) Fabric serviceability

   (ii) Wear

l) What is meant by water proof fabric?

m) Define :

   (i) Load

   (ii) Elongation

n) State the importance of bursting strength of fabric.

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

   a) Describe the effect of twist on staple yarn strength.

   b) How twist affects on fabric handle and mechanical property?

   c) What is Random variation in yarn? Explain with diagram.

   d) How yarn evenness will affects on yarn and fabric properties?

   e) Explain:

      (i) U%

      (ii) CV%

   f) Describe twist contraction principle to find yarn twist.

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

   a) How yarn count can be determined using wrap reel method? Explain.

   b) What is fabric cover factor? Also give its formula.

   c) What is fabric abrasion? What are the types of fabric abrasion?

   d) How fabric pilling can be reduced? Explain.

e) Why fabric serviceability test is done? Give any four points.

f) Calculate warp, weft and cloth cover factor, if

EPI = 80

PPI = 60

Warp count = 40^s Ne

Weft count = 40^s Ne

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

a) Explain the various factors which affects on fabric air permeability?

b) List the various methods to test water repellency of fabric. Draw diagram of Hydrostatic water head water repellency tester.

c) What is yarn CSP? Give its significance.

d) Draw and describe the principle of fabric bursting strength tester.

e) Draw sample size for tearing strength tester and explain the working of tearing strength tester.

f) Explain the procedure to find threads / unit length in fabric.

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

a) Describe crease recovery tester with neat sketch. State the maximum crease recovery angle.

b) (i) Explain the procedure to find the fabric thickness.

(ii) What is fabric GSM?

c) Explain the testing of fabric pilling by ICI pill box tester. Draw neat diagram.

Marks

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

a) Draw neat sketch and explain the procedure to find fabric air permeability.

b) (i) Describe the procedure to measure the strength of single yarn.

(ii) Draw a well labelled diagram of single yarn strength tester.

c) (i) Explain sample size and sample preparation method for fabric tensile strength test.

(ii) Describe method of testing of fabric tensile strength.

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