

17471

15116

3 Hours / 100 Marks

Seat No.

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

**Marks**

1. **Attempt any TEN of the following:** **20**
- a) Define British count and give an expression for the same.
  - b) Define Metric count and give an expression for the same.
  - c) Define short term, medium term and long term periodic irregularities.
  - d) State the index of irregularities used for ascertaining yarn unevenness.
  - e) List down various methods for determination of threads/inch in the fabric.
  - f) Write formula for cover factor of fabric.
  - g) Define 'Drape'.
  - h) Define 'Serviceability'.

P.T.O.

- i) Define 'Waterproof' and 'Water repellent' fabric.
- j) Define 'Air-permeability'.
- k) Define 'Tenacity'.
- l) What is CSP? State its importance.
- m) State the different types of testings used to measure fabric strength. State its significance.
- n) What is Pilling?
- o) State the importance of assessment of stiffness and drape of fabric.

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

- a) A cone of 60<sup>s</sup> English count (British count) weighs 1.5 kg. Find out the length of yarn it contains.
- b) Describe the method of determination of denier of filament yarn (metric wrap reel)
- c) Explain the effect of twist on Spun yarn properties.
- d) Explain the method of determination of yarn twist by the method of twist contraction method.
- e) Explain working principle of 'Uster Evenness Tester'.
- f) Explain the effect of yarn evenness on fabric properties.

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

- a) Explain the method of determination of crimp in the yarn.
- b) Describe the method of determination of weight per unit area.
- c) Elaborate fabric sampling method used for determination of fabric tensile strength.
- d) How cover factor of fabric is determined?
- e) How fabric thickness is measured? Explain method for the same.
- f) State the factors responsible for pilling of fabric.

- 4. Attempt any TWO of the following:** **16**
- a) Describe the method of determination of crease recovery angle. State its importance.
  - b) Describe the method of determination of stiffness of fabric.
  - c) Describe working of Martindale Abrasion Tester.
- 5. Attempt any TWO of the following:** **16**
- a) Describe the measurement of water repellency by the method of Hydrostatic water head test.
  - b) Describe the method of determination of air permeability. State the factors affecting air permeability.
  - c) Explain the method of determination of lea strength of yarn.
- 6. Attempt any TWO of the following:** **16**
- a) Describe the method of determination of fabric tensile strength.
  - b) Describe the method of determination of 'tearing strength'. Why we need to test this strength?
  - c) (i) Define - work factor and work of rupture.  
(ii) Describe indirect yarn numbering system.
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