

17226

11819

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. **Solve any TEN :**

10 × 2 = 20

- (a) State any two factor's governing sampling methods.
- (b) Define numerical sample.
- (c) How to identify cotton and wool by using solubility test ?
- (d) State any two objectives of textile testing.
- (e) Define moisture content.
- (f) State standard testing atmosphere.
- (g) State the effect of fibre fineness on yarn irregularity.
- (h) Define span length.
- (i) Define uniformity index with formulae.

- (j) State the name of instrument used for taking out fibre sample in digital fibro graph.
- (k) Define decitex.
- (l) List any two methods of measuring fibre fineness.
- (m) State the names of dyes used in differential dyeing method of measuring fibre maturity.
- (n) Define neps.

2. Solve any FOUR :**4 × 4 = 16**

- (a) With figure explain cut squaring method of fibre sampling.
- (b) What are causes of biased sample ? Define biased sample.
- (c) Draw cross section view of wool; polyester and burning test for polyester & cotton.
- (d) State the effects of moisture regain on processing.
- (e) What is significance of fibre length ?
- (f) State causes of nep generation.

3. Solve any FOUR :**4 × 4 = 16**

- (a) What are Reason's of textile testing ?
- (b) Define relative humidity, absolute humidity, moisture regain with formulae.
- (c) Give any four applications of fibre length measurements.
- (d) What is technical significance or importance of fibre fineness.

- (e) With neat sketch explain air flow principle.
- (f) Draw neat sketch of fibro-sampler and describe how to take fibre sample in digital fibro-graph.

4. Solve any FOUR :**4 × 4 = 16**

- (a) Draw neat sketch with lable of zoning technique. Also state weight sample drawn from the bulk at start and sample size drawn by this technique at end.
- (b) Define 2.5% span length, 50% span length, mean length, uniformity ratio.
- (c) Describe gravimetric method of measuring fibre fineness.
- (d) Draw fibrogram in digital fibrograph and also show how to convert 2.5% span length and 50% span length to mean length and upper half mean length.
- (e) Describe differential dyeing method of measuring fibre maturity.
- (f) Define micronaire, millitex, tex, denier.

5. Solve any TWO :**8 × 2 = 16**

- (a) Draw comb sorter diagram and give step by step analysis of diagram to give effective length, mean length, % dispersion and short fibre %.
- (b) What is technical significance of trash analysis ? Give classification of trash. How to measure trash - content ?
- (c) Describe caustic soda method of measuring fibre maturity. Write expressions for all three term's i.e. % mature fibres, maturity ratio and maturity co-efficient.

P.T.O.

6. Solve any FOUR :**4 × 4 = 16**

- (a) Draw neat sketch of “Micro-naire” instrument with lable.
 - (b) Describe microscopic (optical) method of measuring fibre fineness.
 - (c) What are factor’s affecting maturity of cotton ?
 - (d) Write technical significance of fibre maturity.
 - (e) Describe Indian cotton grading system.
 - (f) Describe causticaire method of measuring fibre maturity.
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