

17226

15116

3 Hours / 100 Marks

Seat No.

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- 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 TEN of the following:** **20**
- a) Draw L.S. and C.S. cotton and wool fibre.
 - b) Define - 'sample' and 'population'.
 - c) Why fibre sampling is required?
 - d) What is meant by standard testing atmosphere?
 - e) Define: 'Relative humidity' and 'Humidity'.
 - f) What is span length?
 - g) Define 'uniformity index'. Write its significance.
 - h) Write the importance of fibre length in spinning.
 - i) Define - effective length and mean length.
 - j) Write the advantages of mature fibre.

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- k) What is mean by Normal fibre and Dead fibre?
- l) Define - Denier and Decitex.
- m) How cotton fibre can graded by Indian cotton grading method?
- n) Write the significance of fibre fineness.

2. Attempt any FOUR of the following: 16

- a) How you will identify cotton and polyester by solubility test and burning test?
- b) Explain core fibre sampling method.
- c) How you will select fibre sample from sliver?
- d) Write the burning characteristics for wool and polyester.
- e) Write any four objective of textile testing.
- f) Write the effect of moisture on fibre strength and fibre diameter.

3. Attempt any FOUR of the following: 16

- a) Explain - 'moisture content' and 'moisture regain'.
- b) What is micronaire? Give its rating.
- c) With neat diagram, explain Air-flow principle used for fibre fineness test.
- d) Explain differential dyeing method of fibre fineness testing.
- e) How fibre length can be measured by oil plate method?
- f) What is mean by degree of cell wall thickening? Explain.

4. Attempt any FOUR of the following: 16

- a) What is mean by maturity co-efficient? How it is calculated?
- b) Write the procedure for fibre fineness test by caustic soda method.
- c) Explain the various factors which affects fibre maturity.
- d) Explain principle used in fibrograph.
- e) What is staple length? How it can be measured?
- f) What is mean by upper quartile length? Explain.

5. Attempt any TWO of the following: 16

- a) A cotton fibre need to test for its fineness. Explain it test with following points:
 - (i) Shirley micron air tester - Draw diagram.
 - (ii) Sample size require for testing.
 - (iii) Procedure for testing.
- b) With diagram explain fibre length test by comb sorter method. Also write the analysis of effective length with suitable diagram.
- c) Explain the following test method:
 - (i) Gravimetric fibre fineness test.
 - (ii) Causticare fibre maturity test.

6. Attempt any FOUR of the following: 16

- a) Explain uniformity ratio give its rating.
 - b) Explain cotton grading by American grading method.
 - c) Draw a well label diagram of Shirley Trash analyser and also give the different classification of Trash.
 - d) What are neps? Write its causes?
 - e) Write the effect of neps on yarn properties.
 - f) Explain - lint and invisible loss in trash test.
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