16172

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 TEN : **20**

(a) What are the advantages of sampling ?

(b) What is meant by (i) Random Sample and (ii) Biased Sample ?

(c) State the difference between moisture content and moisture regain.

(d) Why different textile fibres are having different moisture regain value ?

(e) How fibre length will affect on yarn quality ?

(f) What is fibre fineness ?

(g) State the importance of fibre maturity.

(h) Define – Denier by giving its formula.

(i) What is 'Micronair' ?

(j) Draw cross-section of fully mature and immature cotton fibre.

(k) What is the effect of trash content on spinning ?

(l) How cotton fibre is Graded by Indian cotton grading method ?

(m) What is meant by Neps ? Give the causes of Neps formation.

(n) What is "Span Length" ?

2. Attempt any FOUR : **16**

(a) How Textile fibre is identified by Burning Test ? Explain with example.

(b) Explain factors which govern the sampling method.

(c) Explain effect of moisture regain on mechanical property of Textile fibres.

(d) How fibre length can be measured by oil plate method ?

(e) Describe principle of fibrograph for fibre length testing.

(f) How fibre maturity determine by differential dyeing method ?

3. Attempt any FOUR : **16**

(a) Describe various factors which affects on fibre maturity.

(b) Describe how Air flow principle used for fibre fineness testing.

(c) Explain Uniformity ratio and Uniformity Index.

(d) How fibre fineness is determine by Gravimetric method ? Explain.

(e) Describe measurement of fibre length by hand stapling method.

(f) Explain – 'Maturity Ratio'.

4. Attempt any FOUR : **16**

(a) Describe cotton grading by American cotton grading method.

(b) Explain : (i) Immaturity Ratio
(ii) Half mature Fibre

(c) What is meant by Effective length and staple length ? Give relation between them.

(d) Describe fibre identification by microscopic test.

(e) How cotton, wool, viscose and polyester can identify in solubility test method ?

(f) How moisture affects on Textile processing ?

5. Attempt any TWO : **16**

(a) Describe any four important objectives of Textile Testing.

(b) Describe procedure to find effective length in comb sorter method. Also explain Analysis of effective length by comb sorter diagram.

(c) Enlist the various methods to find fibre fineness. And with neat diagram describe construction and working of 'Micronair Tester'.

6. Attempt any TWO : **16**

(a) Define – Trash, explain the significance of trash. Also explain measurement of trash by using trash analyser (draw diagram).

(b) Describe Caustic Soda method for determination of maturity of cotton.

(c) (i) A finer fibre can be spun to finer counts than coarse fibre – Give reasons.

(ii) Describe the concept of 'Degree of cell wall thickening'.

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