

17226

16117

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 to the right indicate full marks.
(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

- What is the significance of fibre fineness?
- Define Random Sample.
- Define length biased sample.
- Define Relative and Absolute humidity.
- Define span length.
- State the formula for uniformity ratio and uniformity index.
- What are the significance of trash in the cotton?
- State difference between squared and cut squared sampling.
- Define effective length and mean length.
- Define of moisture regain and moisture content?
- List the methods of fibre sampling,

P.T.O.

- l) Define 'Nep'
- m) Enlist various methods of determination of fibre length.
- n) Enlist the various factors affecting the fibre maturity.
- o) What are the significance of fibre maturity in the cotton.

2. Attempt any TWO of the following: 16

- a) Describe square and cut-square sampling method for cotton fibre sampling with the help of schematic diagram.
- b) Explain in detail the working principle of Shirley trash analyzer for measurement of trash in the cotton.
- c) What do you understand by the term fibre fineness? Explain the air-flow principle for measurement of fibre fineness.

3. Attempt any TWO of the following: 16

- a) Describe the "Zoning" and "Cure" sampling techniques.
- b) Describe the method of measurement of maturity of cotton fibre using differential dyeing.
- c) Describe the 'comb sorter' method for determination of fibre length characteristics.

4. Attempt any TWO of the following: 16

- a) Describe the caustic soda method for determination of cotton fibre maturity.
- b) Describe the working principle of 'fibro-graph' for determination of fibre length characteristics?
- c) Describe the significance of fibre length and fibre maturity.

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

- a) Explain the hand stapling method for determination of fibre length. Write its advantages and dis-advantages.
- b) Describe the gravimetric method for determination of fibre finess.
- c) (i) State the objects of textile testing.
(ii) Describe the “American system of grading”.

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

- a) Explain the working principle of digital fibrograph for determination of fibre length. What are the advantages of digital fibrograph over conventional one?
 - b) What is the concept of span length? How does span length differ from mean length of fibre.
 - c) (i) Give the formula for moisture content and moisture regain?
(ii) State the effect of moisture regain on processing and fibre properties.
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