

22247

24225

3 Hours / 70 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 FIVE of the following :

10

- (a) Define sample.
- (b) Define span length.
- (c) Explain uniformity index.
- (d) Define micronaire.
- (e) Define Denier.
- (f) Draw mature cotton fibre diagram.
- (g) Define neps.



2. Attempt any THREE of the following : 12

- (a) List factors governing sampling.
- (b) Explain effect of moisture on fibre properties.
- (c) Explain technical significance of fibre length.
- (d) Explain cotton grading by American grading method.

3. Attempt any THREE of the following : 12

- (a) Calculate moisture content and regain in 280 grams of cotton whose oven dry weight is 268 grams.
- (b) Explain technical significance of fibre fineness.
- (c) Explain technical significance of fibre maturity.
- (d) Calculate lint content and trash content in 200 grams of cotton containing 13 grams of trash.

4. Attempt any THREE of the following : 12

- (a) Explain viscose fibre identification by burning, microscopic and solubility test.
- (b) Describe procedure for measurement of fibre length by oil plate method.
- (c) Calculate uniformity ratio of cotton having 32 mm of 2.5% span length and 28 mm of 50% span length.
- (d) Explain relationship between air flow and fibre fineness.
- (e) Calculate maturity coefficient from the following particulars :

Number of mature fibres = 195

Number of half mature fibres = 70

Number of immature fibres = 35

5. Attempt any TWO of the following : 12

- (a) Describe procedure for selection of fibre sample by zoning method with suitable diagram.
- (b) Describe procedure for measurement of fibre fineness by gravimetric method.
- (c) Describe procedure for measurement of cotton fibre maturity by caustic soda method.

6. Attempt any TWO of the following : 12

- (a) Explain analysis of fibre array diagram obtained by comb sorter method.
 - (b) Calculate fibre fineness in micronaire of 1 cm length cotton bundle of 1000 fibers of 1.26 milligrams.
 - (c) Explain any three types of neps in cotton.
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