22247

12425 3 Hours / 70 Marks

Seat No.

Instructions :	(1)	All Questions are <i>compulsory</i> .	
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- (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.

1. Attempt any FIVE of the following :

- (a) List type of sampling methods.
- (b) Define moisture content in fiber.
- (c) Define staple length of fiber.
- (d) Define Uniformity Ratio.
- (e) Calculate micronaive value of fiber if fibre has 2" length weighing 8 microgram.
- (f) List the methods to determine fiber maturity.
- (g) Calculate trash content if 50 gm fiber sample content 10 gm trash.

2. Attempt any THREE of the following :

- (a) Explain cut-square sampling method for roving.
- (b) Analyse the graph from digital fibrograph to determine 2.5% and 5% span length.



Marks

10

12

	(d)	Describe the differential dyeing method to measure fiber maturity.		
3.	Attempt any THREE of the following :			
	(a)	Determine moisture content and moisture regain if oven dry weight of fiber is 100 gm and wet weight is 108 gm.		
	(b)	Explain the technical significance of fiber length.		
	(c)	Explain the air-flow principle to determine fiber fineness.		
	(d)	Identify the different factors affecting fiber maturity.		
4.	4. Attempt any THREE of the following :			
	(a)	Identify the wool fiber by burning, solubility and microscopic tests.		
	(b)	Suggest the effect of moisture regain on fiber properties.		
	(c)	Explain importance of fiber maturity.		
	(d)	Use causticaire method to determine fiber maturity.		
	(e)	Determine trash content in cotton using trash analyser.		
5.	Atte	empt any TWO of the following :	12	

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Explain the importance of fiber fineness.

- (a) Apply the zoning technique to extract the cotton sample from bales.
- (b) Find staple fiber length by using oil-plate method.
- (c) Use microscopic method to find fiber fineness.

6. Attempt any TWO of the following :

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(c)

(a) Analyze the comb sorter diagram to determine upper quartile length, effective length, modal length, short fiber length, short fiber percentage.

12

- (b) Use gravimetric method to determine fiber fineness.
- (c) Use causticaire method to find fiber maturity.