



22247

11819

3 Hours / 70 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**.*

Marks

1. Attempt **any five** of the following : **10**
 - a) Define biased sample.
 - b) Define absolute and relative humidity.
 - c) List the different methods to determine fibre length.
 - d) Define uniformity ratio.
 - e) State the importance of fibre fineness.
 - f) Define neps.
 - g) List the different cotton grading systems.

2. Attempt **any three** of the following : **12**
 - a) State the factors governing sampling methods.
 - b) Describe comb sorter method to find the fiber length with sketch.
 - c) Describe the working of “Airflow principle based instrument” with sketch.
 - d) Describe the technical significance of fibre maturity in spinning.

3. Attempt **any three** of the following : **12**
 - a) Explain the effects of moisture regain on fibre properties.
 - b) State the significance of staple length for setting in a given spinning line.
 - c) Differentiate between gravimetric method and microscopic method.
 - d) Describe the measurement of fibre neps by template method.

P.T.O.



4. Attempt **any three** of the following : 12
- a) Describe yarn sampling method with sketch.
 - b) Describe concept of wet and dry bulb hygrometer.
 - c) Describe the causticaire method to find maturity of cotton.
 - d) State the factors affecting maturity of cotton.
 - e) Differentiate the different types of trash in cotton.
5. Attempt **any two** of the following : 12
- a) Apply burning test, solubility test and microscopic test to identify the following fibre :
 - i) Cotton
 - ii) Wool
 - iii) Polyester.
 - b) Digital fibrograph is used to measure fibre length accurately. Justify it.
 - c) Discuss the process to select the given fibre based on fibre fineness.
6. Attempt **any two** of the following : 12
- a) Explain the oil plate method to measure the fibre length with sketch.
 - b) Apply gravimetric method to determine the fineness of fibre.
 - c) Explain differential dyeing method to measure maturity of cotton fibre.
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