23124

3 Hours / 70 Marks Seat No. | | | | | | | | |

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.

Marks

1. Attempt any FIVE of the following : **10**

(a) State the objectives of textile testing.

(b) Define Absolute & relative humidity.

(c) Define span length and uniformity ratio of fibre.

(d) State the importance of fibre length in yarn manufacturing.

(e) Define fibre fineness.

(f) Define Neps.

(g) Define Lint & Trash.

2. Attempt any THREE of the following : **12**

(a) Describe the sampling procedure for sampling yarn from ring bobbins and cones.

(b) Describe working of digital fibrograph to measure length of cotton fibre.

(c) Elaborate technical significance of measurement of fibre fineness.

(d) Identify the different factors affecting maturity of cotton.

3. Attempt any THREE of the following : **12**

(a) Describe with neat sketch any one instrument to measure the atmospheric condition.

(b) State the significance of staple length of fibers while processing them on various spinning machines.

(c) Differentiate between micronaire and denier as measures of fibre fineness.

(d) Describe technical significance of fibre maturity in spinning.

4. Attempt any THREE of the following : **12**

(a) Describe the oil plate method to determine the fibre length with neat sketch.

(b) State the procedure to identify cotton and wool fibre by burning and solubility test.

(c) Define the term 'Maturity coefficient' and describe the method to calculate it.

(d) Describe the nep measurement technique.

(e) Describe the procedure to determine trash content in cotton by trash analyser.

5. Attempt any TWO of the following : **12**

(a) Justify, the need of raw material sampling with example.

(b) Analyze the comb sorter diagram for length measurement of fibres.

(c) Apply gravimetric method to determine the fineness of fibre.

6. Attempt any TWO of the following : **12**

(a) Utilize the working principle of digital fibrograph for determination of fibre length.

(b) Apply principle of air flow method to determine micronaire value of given cotton sample.

(c) Apply causticaire method to determine cotton fibre maturity.
