22247

21718

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****.*
(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 random sample and bias sample.

b) Define absolute humidity.

c) Define effective length and 50% span length.

d) Define Decitex.

e) Define maturity and draw diagram for mature, halfmature and immature cotton fibre.

f) Define neps.

g) Define Trash.

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

a) Compare Micronair and Denier.

b) Explain measurement of relative humidity with Hygrometer.

c) Explain measurement of cotton maturity with differential dyeing method.

d) Explain wool fibre identification by burning solubility and microscopic test.

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

a) Explain significance of fibre fineness.

b) Explain measurement of trash content in cotton fibre with trash analyzer.

c) Explain significance of fibre maturity.

d) Explain classification of Neps.

P.T.O.

Marks

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

a) Explain significance of fibre length.

b) Explain cut-squaring method of fibre sampling from sliver.

c) Calculate trash content in cotton fibre, if raw cotton weight is 100 grams, weight of lint 93.5 grams and invisible loss is 1.2%.

d) Explain working principle of Digital Fibrograph.

e) Calculate moisture regain and moisture content of cotton fibre if oven dry weight of 200 grams cotton is 184 grams.

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

a) Describe measurement of fibre maturity by caustic soda method.

b) Utilize gravimetric (cut-weight) method for cotton fibre fineness measurement.

c) Describe comb sorter method for cotton fibre length measurement with graph analysis.

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

a) Apply air flow principle for measurement of fibre fineness.

b) Apply zoning method for cotton fibre sampling.

c) Describe oil plate method of fibre length measurement.
