

22369

22223

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) Compare direct and indirect yarn number.
 - b) Define denier number with expression.
 - c) Define random and periodic variation.
 - d) List the causes of yarn hairiness.
 - e) Calculate tenacity of 40^s Ne yarn has 200 gram force breaking strength.
 - f) Explain CRE principle with suitable sketch.
 - g) Define yarn bulk.

P.T.O.

- 2. Attempt any THREE of the following:** **12**
- a) Calculate tex yarn number of polyester yarn from package of 2.5 kgs has 2,50,000 meter length.
 - b) Explain effect of twist on yarn properties.
 - c) Explain factors responsible for yarn unevenness.
 - d) Explain effect of yarn hairiness on yarn and fabric properties.
- 3. Attempt any THREE of the following:** **12**
- a) Describe the measurement of twist in single yarn with twist contraction principle.
 - b) Describe the procedure for measurement of twist in double yarn with suitable diagram.
 - c) Explain capacitance principle.
 - d) List the features of tensojet single yarn strength tester.
- 4. Attempt any THREE of the following:** **12**
- a) Explain index of irregularity and addition of irregularity.
 - b) Describe procedure for measurement of yarn unevenness with visual examination.
 - c) Describe procedure for measurement of CSP of cotton yarn.
 - d) Describe the procedure for measurement of crimp rigidity of synthetic yarn.
 - e) Calculate the dimensional stability of draw textured yarn of 1.2 meter gets contracted to 1.1 meter after 30 min hot air treatment.
- 5. Attempt any TWO of the following:** **12**
- a) Convert 30 Ne into Tex, Denier and Metric yarn number.
 - b) Explain photoelectric method for yarn hairiness measurement.
 - c) Describe procedure for measurement of single yarn strength with strain gauge principle.

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[3]

Marks

6. Attempt any TWO of the following:

12

- a) Explain the capacitance principle of yarn unevenness measurement.
 - b) Define Tenacity, breaking length and breaking extension.
 - c) Calculate CSP of 40 and 30 Ne yarn has 63 and 70 lbs lea breaking strength respectively.
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