



17334

14115

3 Hours/100 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.
 - (5) **Use** of Non-programmable Electronic Pocket Calculator is **permissible**.
 - (6) Mobile Phone, Pager and any other Electronic Communication devices are **not permissible** in Examination Hall.

MARKS

20

1. Solve **any five** :

- a) Compare direct yarn numbering system with indirect yarn numbering system.
- b) Define the terms related to fabric.
 - i) Stiffness
 - ii) Crease.
- c) What are the different types of variations in yarn ?
- d) How will you calculate weight per unit area of a fabric ?
- e) Explain the terms :
 - i) Serviceability
 - ii) Wear.
- f) Define the terms :
 - i) Tenacity
 - ii) Work of rupture
 - iii) Work factor
 - iv) Elastic recovery.
- g) Write about the sample preparation of fabric tensile strength tester.

2. Solve **any four** :

16

- a) What is the standard method of determination of yarn count with electronic balance ?
- b) Explain the terms :
 - i) Limit irregularity
 - ii) Index of irregularity.

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- c) What are the different fabric sampling method ? Explain any one in detail.
- d) With neat sketch explain the working of crease recovery tester.
- e) State the factors responsible for pilling of fabric.
- f) Explain the principle of bursting strength tester and also give its applications.

3. Solve **any four** : 16

- a) What is the effect of twist on the yarn and fabric properties ?
- b) Define the terms :
 - i) British count
 - ii) Metric count
 - iii) Tex
 - iv) Denier.
- c) Define crimp. Give the standard procedure for measurement of crimp.
- d) Define cloth cover factor and give formula for :
 - i) Warp cover factor
 - ii) Weft cover factor
 - iii) Cloth cover factor.
- e) State the procedure of drape testing.
- f) Explain the factors which affects the abrasion resistance.

4. Solve **any two** : 16

- a) Define air permeability. Explain with neat sketch air permeability test.
- b) Explain the principle and procedure to measure the strength of single yarn.
- c) Explain the principle and working of tearing strength tester.

5. Solve **any two** : 16

- a) i) Give the interpretation of $V(l)$ and $B(l)$ curves.
ii) Compare single yarn strength tester with lea strength tester.
- b) With neat sketch explain the principle and method of measuring stiffness of fabric.
- c) Define water proof fabrics. Explain with neat sketch spray test method.

6. Solve **any two** : 16

- a) With neat sketch explain the twist contraction method for determination of twist.
 - b) What is the importance of fabric thickness tester ? Explain the procedure of fabric thickness tester with diagram.
 - c) Explain with neat sketch the measurement of pilling by ICI pill box tester.
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