



17334

21415

3 Hours/100 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**.

MARKS

1. Solve **any ten** :

(10×2=20)

- Define British count also give its formula.
- Define water proof fabrics.
- State types of variation in yarn evenness with definitions.
- List the various systems of yarn numbering.
- Define serviceability.
- What is yarn tenacity ?
- Define work of rupture.
- State the principle of tearing strength tester.
- Define air resistance.
- Define mass stress.
- State concept of twist direction and also draw figures of the both.
- State the formula for cover factor and what will be maximum cover factor theoretically.
- Define work factor.
- State principle of Lea strength tester.

2. Solve **any four** :

(4×4=16)

- Describe any one system of yarn numbering with its merits and demerits.
- While measuring yarn count by wrap reel method
 - What is circumference of British and metric wrap reel ?
 - How many threads/loops in a lea of British wrap reel and in a lea of metric wrap reel ?
 - What is length of lea in British and metric wrap reel ?
- What are effects of twist on fabric properties ?

P.T.O.

**MARKS**

- d) What is effect of yarn unevenness on yarn and fabric properties ?
e) Define fabric length. State the method to measure fabric length.
f) Enlist effects of crimp on fabric properties.
3. Solve **any four** : **(4×4=16)**
- a) Define cover factor and calculate warp, weft and cloth cover factor. If
EPI : 100, PPI : 60 warp count : 40 Ne and weft count : 30 Ne.
b) Describe periodic variation in yarn unevenness.
c) Explain any one method of measuring twist in yarn.
d) Describe fabric thickness tester.
e) With neat sketch describe fabric sampling method.
f) What are methods of measuring threads/unit length (EPI and PPI) ?
4. Solve **any four** : **(4×4=16)**
- a) How to measure drape of fabric ?
b) Draw neat sketch of stiffness tester.
c) List two points by which the drapability of the fabric can be improved.
d) State principle, sample size for stiffness testing. Give formula for bending length, flexural rigidity and bending modulus.
e) Describe crease recovery tester with neat sketch.
f) State maximum crease recovery angle possible. Name the natural fibre which are giving highest crease recovery and lowest crease recovery angle.
5. Solve **any four** : **(4×4=16)**
- a) Define wear, abrasion, crimp, air permeability.
b) Describe any four factors responsible for pilling of fabric.
c) What are factors affecting air-permeability ?
d) Explain Elastic recovery in tensile strength testing.
e) Draw neat sketch of lea strength tester.
f) Draw sample size for tearing strength tester. What is CSP ?
6. Solve **any four** : **(4×4=16)**
- a) Define U%, C.V. % and imperfections.
b) How to measure water repellancy by spray test ?
c) Draw neat sketch of air permeability tester with label.
d) Describe measurement of pilling resistance by ICI Pill box tester.
e) Only state principle of single thread strength tester, CSP-tester and fabric bursting strength tester.
f) Describe method of measuring tensile strength of fabric.
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