12425

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 English count.

(b) Define wear.

(c) Calculate percentage loss in thickness of the canvas fabric whose thickness 0.52 mm become 0.47 mm after 400 cycles.

(d) Define air-permeability.

(e) Compare waterproof and water resistant fabrics.

(f) Explain mechanism of heat transfer by conduction principle.

(g) Calculate tenacity of 10 Tex yarn has 172 grams of breaking strength.

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

   (a) Describe the process for measurement of colour fastness to rubbing for shirting.

   (b) Compare constant rate of loading and extension principles used for strength measurement.

   (c) Draw neat labelled diagram for crease recovery angle tester.

   (d) Describe procedure for measurement of twist in single yarn with suitable diagram.

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

   (a) Explain sample preparation for colour fastness to washing.

   (b) Calculate Drape co-efficient for dress material fabric from following data :

   Draped pattern paper weight = 2.83 grams,

   Photosensitive paper weight = 0.012 gm/sq. cm,

   Sample area = 491 sq.cm.,

   Supporting Disk area = 123 sq.cm.

   (c) Calculate cloth cover factor for fabric having EPI = 80, PPI = 52, Warp count = 60 Ne, Weft Ne = 60 Ne.

   (d) Calculate dimensional stability of fabric having 48 inches of width becomes 47 inches after wet processing.

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

   (a) Define periodic variations and it's types.

   (b) Explain gray scale for change in colour.

   (c) Explain effect of pilling on fabric quality.

   (d) Explain fabric sampling method rules with suitable diagram.

   (e) Compare Tex and Ne yarn number

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

    (a) Describe procedure for measurement of bursting strength of fabric with suitable diagram.

    (b) Explain end points for assessment of fabric abrasion resistance.

    (c) Calculate bending modulus for dhoti fabric from following particulars :

        Bending length of fabric (c) = 2.2 cm

        Fabric weight (w) = 120 mg/sq.cm.

        Fabric thickness (g) = 0.03 cm

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

    (a) Describe procedure for spray test for water resistance with suitable diagram.

    (b) Convert 10 Tex into Ne and Denier.

    (c) Calculate fabric weight in grams per square meter from following particulars :

        EPI = 60, PPI = 60,

        Warp count = 10 Tex,

        Weft count = 10 Tex,

        Warp crimp = 6%,

        Weft crimp = 6%.

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