11819

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 :**   **10**

   (a) Define 'British Count'. Give an expression (formula) for the same.

   (b) Define fabric abrasion. List down different types of abrasion.

   (c) Compare water proof and water resistant fabric.

   (d) Define tensile strength (tenacity) and extension and give an expression for the same.

   (e) Describe concept of elastic recovery with the help of an example.

   (f) Define – crimp % in fabric.

   (g) Define – drape co-efficient.

2. **Attempt any THREE :**   **12**

   (a) Compare direct and indirect system of yarn numbering. Give two examples of each system.

    (b)   Describe fabric sampling method with a neat sketch.

    (c)   Explain any four important points to be considered while testing abrasion resistance of fabric.

    (d)   Suggest the remedies to control the fabric pilling with respect to fibre property and fabric construction.

3. **Attempt any THREE :**   **12**

    (a)   Explain cantilever principle used to test fabric stiffness.

    (b)   Describe method of determination of fabric thickness with diagram.

    (c)   Describe the procedure to test fabric strength using fabric strength tester with diagram.

    (d)   Describe the method to determine colour fastness to light.

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

    (a)   The weight of 150 metre polyester yarn is 5 gram. Calculate its count in (i) Denier and (ii) Tex.

    (b)   Explain the procedure to measure the cover factor of a fabric.

    (c)   Describe the method to determine the fastness to perspiration and sublimation.

    (d)   Explain the grey scale for colour change and degree of staining.

    (e)   Explain the important of fabric serviceability test.

5. **Attempt any TWO :**   **12**

    (a)   State importance of yarn twist. Draw diagrams of S twisted and Z twisted yarn. Describe effect of twist on properties of yarns and fabric.

    (b)   Describe method of determination of single yarn strength by single yarn strength tester with diagram.

    (c)   Describe method of measurement of crease recovery with suitable diagram.

6. **Attempt any TWO :** 12

    (a)   Calculate the weight of cotton fabric if

           Warp count = 20^s Ne

           Weft count = 20^s Ne

           EPI = 68, PPI = 56

           Warp Crimp = 7%

           Weft Crimp = 10%

    (b)   Calculate bending modulus of viscose fabric from following data :

           Fabric overhanging length = 3 cms

           Fabric weight = 60 mg per sq. cm.

           Fabric thickness = 0.025 cm

    (c)   Describe method of measurement of drape of a fabric with neat sketch.

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