

22582

24225

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) List down the methods used for measurement of fabric length.
 - b) Enlist the ways for improvement of fabric drapability.
 - c) Define serviceability.
 - d) Define air resistance.
 - e) Explain waisting effect in tensile strength testing.
 - f) Explain CRE principle.
 - g) Explain button impact resistance measurement.

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- 2. Attempt any THREE of the following :** **12**
- a) Explain any method for measurement of threads per unit length and list other methods.
 - b) Calculate the crimp percentage in warp and weft of shirting fabric. The extended length of warp and weft thread is 12 cm and 13 cm respectively of 11.5 cm warp and weft thread in fabric.
 - c) Describe the measurement of drape coefficient of knitted fabric on drape meter with suitable diagram.
 - d) Draw neat labeled diagram of stiffness tester and show the following parts,
 - i) Sample sliding platform
 - ii) Index mark
- 3. Attempt any THREE of the following :** **12**
- a) Explain different types of fabric abrasion.
 - b) List the factors affecting pill formation in fabric.
 - c) Describe the measurement of water repellency with spray test.
 - d) Describe procedure to measurement of thermal insulation value.
- 4. Attempt any THREE of the following :** **12**
- a) Explain the significance of fabric tensile strength measurement.
 - b) Explain the principle of bursting strength measurement for parachute fabric.
 - c) Calculate value of fabric assistance for suiting fabric having average tensile strength of 29 kgf, the single thread strength is 198 gram force for 20 cm gauge length and 60 EPI in fabric.
 - d) Calculate dimensional stability percentage of garment. The index mark on 20 cm contracts to 17.5 cm after hot air oven treatment for 30 min.
 - e) Explain procedure for measurement of colour fastness of garment to perspiration.

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

- a) Calculate the fabric weight in grams per square meter from the following particulars;

$$\text{EPI} = 82, \text{ PPI} = 60$$

$$\text{Warp Count} = 80 \text{ Ne}, \text{ Weft count} = 60 \text{ Ne},$$

$$\text{Warp Crimp} = 6\%, \text{ Weft Crimp} = 6\%$$

- b) Calculate the bending modulus of denim fabric with following particulars;

$$\text{Overhanging length} = 6.4 \text{ cm},$$

$$\text{Fabric weight} = 340 \text{ grams/sq. meter},$$

$$\text{Fabric Thickness} = 0.050 \text{ cm}.$$

- c) Explain factors affecting abrasion resistance of fabric.

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

- a) Describe the measurement of water resistance on hydrostatic head test with suitable diagram.
- b) Describe procedure for measurement of tensile strength for laminated fabric with suitable diagram.
- c) Explain measurement of degradation of laundering of an elastic tape.
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