

17465

15116

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.
- (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: 20**
- a) What is mathematical relation between cover factor, yarn count and diameter?
- b) Define crimp, crimp amplitude. State effect of crimp on fabric costing and air permeability.
- c) How fabric width is measured?
- d) What are effects of pilling on fabric properties?
- e) Define air permeability, air resistance, absorbability, water repellent fabrics.
- f) Draw neat sketch of sample size for tearing strength testing of the fabric.
- g) Draw neat sketch of fibro-sampler used in (HVI) testing and describe how sample is taken for test.

P.T.O.

- 2. Attempt any TWO of the following:** **16**
- a) Describe measurement of stiffness of fabric by tester based on cantilever principle.
 - b) Describe method of measurement of crease-recovery angle of fabric by crease-recovery tester.
 - c) What are factors responsible for pilling of fabric?
- 3. Attempt any FOUR of the following:** **16**
- a) How drapability of fabric is improved?
 - b) What are precautions taken during taking out fabric sample from roll of fabric? (Draw figure).
 - c) How crimp % in warp and weft is measured?
 - d) Define serviceability, wear, abrasion. Also write about types of abrasion resistance.
 - e) What are factors affecting air permeability?
 - f) What are the light sources used in colour fastness testing to light? Also write about photochromism in light fastness measurement.
- 4. Attempt any FOUR of the following:** **16**
- a) Define fabric length, cloth cover factor. Calculate cloth cover factor if EPI = 60, PPI = 56, warp count = 40, weft count = 80.
 - b) Describe measurement of waterproofness of fabric by hydrostatic water head test.
 - c) How bursting strength of fabric is measured?
 - d) What is scatter plot in tenso-jet tensile strength testing? How it is useful?
 - e) How to measure colour fastness to washing?
 - f) What are commonly recognized dimensional changes in the fabric.

- 5. Attempt any TWO of the following:** **16**
- a) Describe measurement of air permeability of fabric with sketch.
 - b) With neat sketch and label describe measurement of tensile strength of the fabric.
 - c) Explain principle, working and parameter's given by AFIS-Advanced Fibre Information System.
- 6. Attempt any FOUR of the following:** **16**
- a) How to measure seam slippage?
 - b) Describe gray scale for colour change and staining.
 - c) What are principles of all modules of High Volume Instruments (HVI).
 - d) Explain principle and working of Tenso-Rapid yarn tester.
 - e) Draw neat sketch and labelled diagram of tearing strength tester.
 - f) Why fabric strength is measured in three different types as tensile, tearing and bursting strength?
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