



22364

11819

3 Hours / 70 Marks

Seat No.

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- Instructions :**
- (1) *All questions are compulsory.*
 - (2) *Answer each Section on same/separate answer sheet.*
 - (3) *Answer each next main question on a new page.*
 - (4) *Illustrate your answers with neat sketches wherever necessary.*
 - (5) *Figures to the right indicate full marks.*
 - (6) *Assume suitable data, if necessary.*
 - (7) *Use of Non-programmable Electronic Pocket Calculator is permissible.*
 - (8) *Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.*

Marks

1. Attempt any five :

10

- a) Define metric count. Give an expression for the same.
- b) Find the CSP of yarn having 80 lbs lea strength and 40^s Ne count.
- c) Find percentage weight loss of a fabric of 2 gram, which became 1.55 gram after 200 cycle on abrasion tester.
- d) Explain the term crease recovery.
- e) Compare waterproof and water repellent fabric .
- f) Define – Breaking length.
- g) Explain elastic recovery with help of an example.

2. Attempt any three :

12

- a) A polyester filament yarn having 100 mt. length and 2 gram weight. Calculate its count in :
 - i) Tex
 - ii) Denier.
- b) Describe with sketch random sampling for testing.
- c) Describe measurement of wear using Marfindale's abrasion tester.
- d) Define contact angle. Draw 3 different contact angles and give its significance.

3. Attempt any three :

12

- a) Suggest any two method to improve water repellency of fabric with justification.
- b) Define fabric length. Describe standard method to determine fabric length.
- c) Describe any four factors responsible for pilling.
- d) Explain the term CSP with its significance.

P.T.O.

4. Attempt **any three** :

12

- a) Describe the method of determination of yarn twist by twist contraction method with diagram.
- b) Calculate GSM of a fabric having following particulars :
 - i) Ends/inch = 88
 - ii) Picks/inch = 72
 - iii) Warp count = 30^s Ne
 - iv) Weft count = 80 Den polyester.
- c) Describe with the help of a neat sketch the method of determination of pilling with ICI pill box tester.
- d) Define air permeability. Describe method of testing air permeability with a neat sketch.
- e) A 40^sNe cotton yarn is made with two different TPI i.e.
 - i) 20 TPI
 - ii) 25 TPICompare its property with respective to yarn strength and yarn feel property.

5. Attempt **any two** :

12

- a)
 - i) Cotton lea of 120 yard length is having weight of 3.3 gram. Then calculate its cotton count.
 - ii) 3 single yarn of 30^s Ne count each is twisted together. Then calculate its resultant count.
- b) Describe with a neat sketch measurement of drape coefficient by using drape meter.
- c) Explain method of determination of single thread strength using single thread strength tester.

6. Attempt **any two** :

12

- a) Calculate the weight of polyester fabric from the following particular :
Warp denier = 60 denier
Weft denier = 60 denier
EPI = 78 PPI = 60 (ignore crimp%)
 - b) Calculate bending modulus of viscose sateen fabric with following data :
fabric over hanging length = 4 cms
Fabric weight = 70 mg per cm
Fabric thickness = 0.025 cm
 - c) Describe with the help of a neat diagram the measurement of tearing strength of fabric.
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