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RM-7189

B. E. III (Sem. VI) (T.T. & T.P.) Examination

May / June – 2010

Textile Testing - I

Time : **3** Hours] [Total Marks : **100**

Instructions :

(1)

નીચે દર્શાવેલ ☛ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fillup strictly the details of ☛ signs on your answer book.

Name of the Examination :

☛ **B. E. 3 (Sem. 6) (T.T. & T.P.)**

Name of the Subject :

☛ **Textile Testing - 1**

☛Subject Code No. : **7 1 8 9** ☛Section No. (1, 2,.....) : **1&2**

Seat No. :

Student's Signature

(2) Answers to the **two** sections must be written in **separate** answer books.

(3) Figures to the **right** indicate full marks.

(4) Tie **two** sections **separately**.

SECTION I

Q1a.) Fill in the blanks for the following: [07]

i. Chart for _____ is also called as C chart.

ii. American staple= 0.91 x _____.

iii. For fibres of circular cross-section, specific surface is_____ proportional to the fibre diameter.

iv. _____ curve is also called as bell shaped curve.

v. U.R = $S_{50\%}$/_____

vi. _____ & _____ affect the regain of textile material.

vii. _____ guarantees that the goods are made from & possess the desirable attributes of pure wool.

Q1b.) Do as Directed: [03]

i. The mean deviation of the count test results on a 50's cotton yarn is 1.316. Find PMD.

ii. 4 bobbins are tested for count. The mean count was 37.9 and mean range was 3.13. Find out the C.V %.

Q1c.) With the help of necessary sketches, explain the following: [10]

- Drying by means of chemical oven.
- CSIRO Direct Regain Tester.

Q2a.) Write a brief note on "Quality Control Charts" [07]

Q2b.) Discuss the various methods of measuring Maturity of Cotton Fibres. [08]

OR

Q2a.) With the help of neat sketch, explain only the principle of Vibroscope. [06]

Q2b.) Two yarns, each of 32s count, were tested for lea strength. Thirty tests were made on each yarn. The mean lea strength obtained for Yarn A & B was 58 & 65 respectively. The S.D for Yarn A & B was 7.8 & 8.2 respectively. Is there a real difference between the lea strengths & SD's. [09]

Q3 .) Write Short Notes on : (Any three) [15]

i. Core Sampling.

ii. Wet & dry bulb hygrometer.

iii. Shirley Trash Analyser.

iv. Graphical representation of data.

SECTION II

Q4a.) Do as Directed: [10]

i. Enlist main units of Uster Staple diagram apparatus.

ii. Immaturity in fibres affects the shade after dyeing. State true of false.

iii. State the main advantage of thermo-hygrograph.

iv. Name the highest grade in American cotton grading.

v. Illustrate a bimodal curve. What does it interpret.

vi. 20 worsted count = _____ Tex.

vii. Weight in kilograms per kilometre or grams per metre is expressed as kilotex. State true of false.

viii. _____ balance is used to find out count of yarn from small samples.

ix. Define 'hairiness'

x. State any one yarn sampling method

Q4b.) Describe briefly how fibre sorter methods are used for measurement of fibre length. Also explain the analysis of the sorter diagram. [10]

Q5a.) State straighten fiber principle of twist measurement. Also explain Rock bank twist tester. [09]

Q5b.) Explain optical twist tester. [06]

OR

Q5a.) Describe how the wrap reel & an analytical balance are used for count measurement. [07]

Q5b.) Explain Bessley balance for count measurement. [04]

Q5c.) If a skein of 100m of filament viscose yarn weighs 1.67 gm, calculate its Ne. Also find its denier. [04]

Q6 .) Write Short Notes on : (Any three) [15]

i. Conversion of count from one system to another system.

ii. Yarn hairiness.

iii. Knowles balance.

iv. Continuous twist tester.
