Printed Pages: 01 **Sub Code: RCT601**

Paper Id: 900191 **Roll No.** | | | | | | | | | | |

B. TECH.
(SEM VI) THEORY EXAMINATION 2018-19
TEXTILE TESTING II

Time: 3 Hours ***Total Marks: 70***

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. 2 x 7 = 14

(a) The ratio of *strip strength per thread* to *single thread strength* is generally higher than unity. (True/ False)
(b) Differentiate between stress and mass stress with respect to textiles.
(c) With the help of a diagram, define crimp% of a yarn.
(d) A 200 denier viscose rayon yarn breaks at a load of 180 gram. Calculate the breaking length of the yarn.
(e) Define thermal insulation value of a fabric.
(f) A 2/2 matt structure exhibit poor resistance to tearing than 1/1 plain weave structure. (True/False)
(g) Define Wettability.

SECTION B

2. Attempt any *three* of the following: 7 x 3 = 21

(a) Discuss about the reasons of crease in a cotton fabric.
(b) Discuss the type of fabrics, in which Bursting strength testing is preferred. Explain the working principle of any Bursting strength tester using a labeled diagram.
(c) Discuss the working principle of "Shirley stiffness tester".
(d) Explain, how the test specimen length affects the tensile testing results. What is weak link effect?
(e) Define 'Elastic recovery' and 'work of rupture'.

SECTION C

3. Attempt any *one* part of the following: 7 x 1 = 7

(a) Explain the creep behavior of a textile specimen with the help of a neat diagram.
(b) Define 'flame resistance rating'. Discuss the factors affecting the flame resistance property of textile materials.

4. Attempt any *one* part of the following: 7 x 1 = 7

(a) Differentiate between shower-proof and water-proof fabrics. With the help of a neat labeled diagram, discuss the principle of spray test.
(b) Discuss about the raveled strip method of fabric preparation for tensile testing.

5. Attempt any *one* part of the following: 7 x 1 = 7

(a) Discuss the various reasons of generation of pilling in a fabric. How tendency of pilling can be reduced.
(b) What is drape coefficient? Discuss the principle of drape-meter.

6. Attempt any *one* part of the following: 7 x 1 = 7

(a) Define Air Permeability. Discuss the principle of Shirley Air Permeability tester with the help of a neat labeled diagram.
(b) Define serviceability, wear and abrasion with respect to textiles. Discuss the methods of assessment of abrasion damage in the fabric?

7. Attempt any *one* part of the following: 7 x 1 = 7

(a) Discuss the strain-gauge principle related to tensile testers.
(b) What are the conditions of a square plain weave structure? Calculate the maximum cover factor value of warp/weft in this condition.