Printed Pages: 01 **Sub Code: NTT801**

Paper Id: **161219** **Roll No.** | | | | | | | | | | |

B.TECH.
(SEM VIII) THEORY EXAMINATION 2018-19
THEORY OF TEXTILE STRUCTURE

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

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

SECTION A

1. Attempt *all* questions in brief. **2 x 10 = 20**

a. What relation is between twist and yarn diameter
b. Define the uniformity of spun yarn
c. Plot graph between yarn strength and twist level
d. Define contraction factor in spun yarn
e. What is the spinning limit of ring yarn?
f. Classify different types of yarn.
g. What is role of crimp in woven fabric formation?
h. What are the elements of woven fabric?
i. Why crimps have significance effect on drape
j. Why excess amount of twist in yarn caused contraction ?

SECTION B

2. Attempt any *three* of the following: **10x3=30**

a. Explain the different type packing in yarn structure
b. Explain the limit of twist in yarn structure
c. Explain the theoretical treatment of fabric deformation
d. Explain the spinability of textile fibers.
e. Explain the effect of fiber properties on yarn strength.

SECTION C

3. Attempt any *one* part of the following: **10x1=10**

a. Derive crimp balance equation
b. Explain the effect of fiber geometric properties and processing characteristics on yarn structural features.

4. Attempt any *one* part of the following: **10x1=10**

a. Explain the effect of twist on yarn diameter and specific volume.
b. Derive the idealized helical geometry of yarn. Explain the role of twist level in yarn structure

5. Attempt any *one* part of the following: **10x1=10**

a. Derive the relation between fabric cover and GSM
b. Explain the significance of contraction during yarn formation

6. Attempt any *one* part of the following: **10x1=10**

a. Explain the role of fabric parameter on fabric properties
b. Derive the Pierce's model of cloth theory.

7. Attempt any *one* part of the following: **10x1=10**

a. Explain the significance of contraction during yarn formation
b. Explain the translation of fiber properties into yarns properties