Printed Pages: 02 **Sub Code: NTT602**

Paper Id: | 1 | 6 | 1 | 6 | 0 | 2 | **Roll No.** | | | | | | | | | | |

B. TECH (TEXTILE TECHNOLOGY)

(SEM – VI) THEORY EXAMINATION 2017-18

YARN MANUFACTURE-IV

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 are the objectives of ring spinning process?

b. Write the names of top roller loading systems?

c. What do you mean by yarn twist & direction of twist?

d. How twist is imparted in the yarn at ring frame?

e. Why ABC ring is used in ring spinning?

f. How many types of waste are generated in ring spinning process?

g. What is yarn C.V% & U%?

h. What is plain and cross reeling?

i. What is sewing thread?

j. What do you mean by tyre cord?

SECTION B

2. Attempt any three of the following: **10 x 3 = 30**

a. Explain the concept of twist multiplier. What are the TM values for different end product? How high and low TM values affect the yarn properties?

b. Describe the construction & working of 3/3 double apron drafting system with neat sketch?

c. Explain with the neat sketch different types of rings used in textile industry and their importance.

d. What are the objectives of Ring doubling? Explain the passage of yarn in ring doubling with neat sketch. What are the disadvantages of this process?

e. What is fancy yarn? Explain the construction of any **two** fancy yarns:

(i) Marl yarn (ii) Cork screw yarn (iii) Boucle yarn (iv) Slub yarn

SECTION C

3. Attempt any one part of the following 10 x 1 =10

(a) What are the main parts of ring-frame machine? Explain the functioning of these parts with neat sketch.

(b) What type of material is used for rings travellers? Mention different shapes of ring travellers with neat sketch and their importance.

4. Attempt any one part of the following 10 x 1 =10:

(a) What are the recent developments in ring spinning system and their benefits to textile industry.

(b) What are the disadvantages and limitations of ring spinning system?

5. Attempt any one part of the following 10 x 1 =10

(a) Explain the cop winding process with neat line diagram. Why the movement of balloon control rings and lappet rail is important with the up and down movement of ring rail?

(b) What are factors that affect the cop content in ring frame?

6. Attempt any one part of the following 10 x 1 =10

(a) What is compact spinning system? What is the principle of yarn formation in compact spinning process?

(b) What are the advantages of compact spinning system over normal ring spinning system?

7. Attempt any one part of the following 10 x 1 =10

(a) What are various reasons of yarn breakages in ring frame and how it affects the pneumafil waste?

(b) Calculate the production of Ring frame in Kg/Shift (8 Hours) with following data.

Spindle Speed (rpm)	:	15000
TPI	:	20
Machine Efficiency (%)	:	96
Count	:	36^s
Number of spindles	:	960