Printed Pages:02 **Sub Code: RCT-401**

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B TECH

(SEM-IV) THEORY EXAMINATION, 2018-19

YARN TECHNOLOGY-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. What is doubling?
b. Define spinning triangle.
c. What are the objectives of speed frame?
d. State the function of traveller?
e. What are the objectives of combing?
f. What is the importance of package building?
g. How can you decide the covering hardness in the ring frame drafting system?

SECTION B

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

a. Summarize the developments in ring and traveller in modern ring frame.
b. Explain the winding and package building mechanism in roving frame?
c. Explain Two-for-one twisting with suitable diagram?
d. How can you maintain the quality of yarn during spinning of cotton?
e. Explain various waste control technique during spinning?

SECTION C

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

(a) A speed frame is running with the following parameters:
Count of roving-60 s Ne
TPI-3.2
Twist contraction-2%
Spindle speed-1000rpm, No. of spindles per frame-100
Determine the production of the speed frame in a single day.
(Assume any relevant technical data, if necessary)

(b) A Ring frame is running with the following parameters:
Count of Yarn = 35 tex
No. of spindles per frame-180.
T.P.I. = 21.0
Spindle speed- 1200rpm.
Determine the production of the ring frame in 8 hours.
(Assume any relevant technical data if necessary).

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

(a) State and explain the importance and various parameters of reeling process?

(b) Calculate the production of a TFO machine running with following particulars:
Count of single yarn 30 tex, spindle speed 1000 rpm, efficiency 80 %, Running time per day.

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

(a) Explain ring doubler with suitable diagram?

(b) How automations in ring frame affects production performance?

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

(a) Explain the cone-drive motion arrangement for bobbin drive in modern speed frame?

(b) Explain the various systems of lap preparation?

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

(a) Why ring spun cotton yarn is widely used. What are the limitations of ring yarn?

(b) Explain cop building mechanism in the winding zone of the ring frame.