

(Following Paper ID and Roll No. to be filled in your
Answer Books)

Paper ID : 164406

Roll No.

--	--	--	--	--	--	--	--	--	--

B.TECH.

Theory Examination (Semester-IV) 2015-16

YARN MANUFACTURE-II

Time : 3 Hours

Max. Marks : 100

Section-A

- 1. Attempt all parts. All parts carry equal marks. Write answer of each part in short. (2×10 = 20)**

- (a) What are the difference between yarn and sliver?
- (b) What is twist?
- (c) What do you mean by migration of fibre?
- (d) Define break draft.
- (e) What is the importance of package formation in speed frame?
- (f) What is the role of apron during roller drafting?
- (g) What do you mean by compact spinning?

- (h) What are the objectives of combing?
- (i) What do you mean by degree of parallization?
- (j) Define Roving.

Section-B

2. Attempt any five questions from this section (10×5=50)

- (a) Write the sequences for manufacturing combed yarn. State the precautions to be taken for getting better quality of combed sliver.
- (b) With a neat sketch show the path of material through a roving frame for package building.
- (c) With a neat sketch explain the features of any ring frame mentioning draft distribution.
- (d) Discuss the factors considered for optimizing :
 - (i) Total draft & draft distribution
 - (ii) Back zone & front zone roller setting
 - (iii) Twist multipliers for processing cotton fibres.
- (e) Describe spinning geometry & forces acting on the yarn in different zones.

- (f) Explain in details about new developments in ring spinning.
- (g) Briefly describe the yarn count and twist factor.
- (h) What is "Index of combing cycle"? Mention the different index(s) to explain the functions of individual organs of a comb.

Section-C

Note: Attempt any two questions from this section.

(15×2 = 30)

3. A speed frame is running with the following parameters:

Count of roving-1.2sNe

TPI-1.1

Twist contraction-4%

Spindle speed-1200rpm.

No. of spindles per frame-120

Determine the production of the speed frame for a shift of 8 hours.

(Assume any relevant technical data, if necessary)

4. A Ring frame is running with the following parameters:

Count of Yarn = 30s Ne

No. of spindles per frame-1008

T.P.I. = 17.0

Spindle speed- 17000rpm.

Determine the production of the ring frame per day of 24 hours.

(Assume any relevant technical data if necessary)

5. Explain the variable speed drive in Ring frame.

