

MAR-21-210056

B. Tech. EXAMINATION, March 2021

Semester IV (CBCS)

YARN MANUFACTURE-II

TE-403

Time : 2 Hours

Maximum Marks : 60

The candidates shall limit their answers precisely within 20 pages only (A4 size sheets/assignment sheets), no extra sheet allowed. The candidates should write only on one side of the page and the back side of the page should remain blank. Only blue ball pen is admissible.

Note : Attempt *Four* questions in all, selecting *one* question from each Sections A, B, C and D. All questions carry equal marks.

Section A

1. With the help of neat sketch, explain combing cycle. **15**
2. Discuss different types of feed on a combing machine. How will noil be affected by type of feed ? **15**

Section B

3. Explain the mechanism of drafting, twisting and winding for a speed frame. **15**
4. Explain the developments in speed frame. **15**

Section C

5. Discuss different types of traveler along with their wire profile and suitability. **15**
6. Discuss different elements of spinning geometry along with their influence on yarn quality. How does spinning geometry of conventional ring-spinning differ from compact-spinning ? **15**

Section D

7. Draw a diagram to show the passage of material through a rotor spinning machine. Label various parts and state their tasks. **15**
8. Compare structures and properties of ring spun, rotor spun and air-jet spun yarns. **15**
9. (a) What is comber noil ?
(b) Mention the function of top comb.

- (c) What is detachment setting ? Mention its role on noil extraction.
- (d) What is the function of apron ?
- (e) What is the function of presser arm in a flyer in speed frame ?
- (f) Define break draft and main draft of a speed frame.
- (g) How can you calculate the surface speed of a traveler ?
- (h) Name few modern methods in yarn production.
- (i) What are the tasks of rotor spinning machine ?
- (j) What is back-doubling ? **10×1.5=15**