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18TX43

Fourth Semester B.Tech. Degree Examination, July/August 2022

Spinning Technology - II

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Stating the objects of Speed frame, describe the passage of material through speed frame. (10 Marks)
- b. Why Apron drafting system has advantage over other types of drafting system? Substantiate your answer with neat sketch, mentioning different parts of it. (10 Marks)

OR

- 2 a. Discuss the difference between flyer leading and bobbin leading mechanism. (10 Marks)
- b. Enlist the different change points in speed frame and outline the importance of them. (10 Marks)

Module-2

- 3 a. What is the difference between Actual and Practical TPI? Explain with example. (10 Marks)
- b. Illustrate the different types of builds practiced in Ring frame with their suitability. (10 Marks)

OR

- 4 a. With neat sketch, explain the working of COP building mechanism. (15 Marks)
- b. Enumerate traveler numbering both in direct and indirect system. (05 Marks)

Module-3

- 5 a. Discuss the faulty packages of Ring frame with remedial measures. (10 Marks)
- b. A Ring frame having a traveler speed of 85 ft/sec has a front roller delivery of 450"/min. If

the bare bobbin diameter is $1\frac{1}{16}$ " and ring diameter is $1\frac{3}{4}$ ". What is the spindle speed?

(10 Marks)

OR

- 6 a. With neat figures, explain the different types of threading in wet doubling. (10 Marks)
- b. A ring frame works at 11,000 rpm and produces 40s yarn. The machine has 400 spindles and uses 4.1 T.M. if the machine efficiency is 91%, find the production / shift and hanks produced/shift. (10 Marks)

Module-4

- 7 a. With neat sketch, explain the working of O.E Spinning. (10 Marks)
- b. Explain : i) Initial drafting ii) Transport zone iii) Twisting
iv) Yarn formation. (10 Marks)

OR

- 8 a. Discuss the effects of different Opening rollers and Rotors on performance of OE machine. (10 Marks)
b. Enlist the recent developments of O.E Spinning. (10 Marks)

Module-5

- 9 a. Explain the method of producing Core and Cover Spun yarn. (10 Marks)
b. Discuss about DREF Spinning. (10 Marks)

OR

- 10 a. Stating the Principle, enlist the merits and demerits of Air – Jet Spinning. (10 Marks)
b. Analyse by comparing the Conventional with Unconventional methods of Spinning. (10 Marks)

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