Register Number:……………..

KUMARAGURU
college of technology
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B.TECH. DEGREE EXAMINATIONS: APRIL / MAY 2023

(Regulation 2018)

Fourth Semester

TEXTILE TECHNOLOGY

U18TXT4001: Yarn Manufacturing Technology II

COURSE OUTCOMES

CO1: Explain the basic principles of different spinning system.
CO2: Compare the basic principle of different spinning system.
CO3: Plan the outline spinning system based on end use applications.
CO4: Calculate the production as well as draft of all the spinning systems.
CO5: Modern development in all spinning system.

Time: Three Hours   **Maximum Marks: 100**

Answer all the Questions: -
PART A (10 x 2 = 20 Marks)
(Answer not more than 40 words)

1. The delivery rate of a ring spinning machine producing 25^S Ne yarn is 15 m / min. If the spindle speed is 15,000 rpm. What will be the Twist Multiplier (TM) in the yarn? CO1 [K3]

2. Define traveler lag and traveler number. CO1 [K2]

3. What is spinning triangle? CO2 [K2]

4. List out compact spinning systems. CO2 [K2]

5. Enlist the various types of navels used in rotor spinning? CO3 [K1]

6. Calculate the back doubling for a 40 mm rotor revolving at 80,000 rpm when the delivery speed of the machine is 200 m/min. CO3 [K3]

7. If one yarn of 40^S Ne and two yarns of 20^S Ne are doubled together, what will be the resultant count? CO4 [K3]

8. Recall the principle of self-twist spinning. CO4 [K1]

9. Draw the structure of bobtex yarn. CO5 [K1]

10. State are the types of fancy yarn. CO5 [K1]

Answer any FIVE Questions: -
PART B (5 x 16 = 80 Marks)
(Answer not more than 400 words)

11.	Explain the balloon theory with neat diagram and derive the formula for Coriolis and other forces acting on the balloon during ring spinning.	CO1	[K2]
12.	Explain the process of yarn formation in compact spinning system and explain its yarn properties.	CO2	[K3]
13.	Explain with neat sketch the operating principle of rotor spinning.	CO3	[K2]
14.	Describe the formation of air jet yarn by false twisting principle with sketch.	CO4	[K4]
15.	Elaborate the mechanism of yarn formation in two for one twister with neat sketch.	CO5	[K4]
16.	Explain the SIRO yarn Spinning System with neat sketch also list the yarn properties.	CO5	[K3]

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