Register No……..

M.TECH DEGREE EXAMINATIONS: APRIL 2010

Second Semester

TEXTILE TECHNOLOGY

P07TX102: Yarn Formation Mechanics and Structures

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

Answer All Questions:-

PART A (10 x 2 = 20 Marks)

1. State the effect of fiber maturity on spinnability.
2. Mention the importance of FQI.
3. How to measure the blend evenness?
4. What are leading and trailing hooks?
5. State the difference between air jet and air vortex spinning with respect to yarn formation principles.
6. Give the structure of faciated yarns.
7. What is packing coefficient?
8. State the importance of twist factor.
9. On what basis yarn faults are classified.
10. Give the various methods of measurement of yarn hairiness.

PART B (5 x 16 = 80 Marks)

11. (a) Critically discuss the influence of fibre characteristics and their effect on spinning.

(OR)

(b) Discuss the importance of fibre contaminations on spun yarn quality.

12. (a) What is the cleaning efficiency? Discuss the theoretical aspects of opening and Cleaning.

(OR)

(b) Discuss the effect of post comber drawing passages on various yarn spinning system.

13. (a) Describe the principles of yarn formation in self twist spinning with sketch.

(OR)

(b) What are twistless yarn? How to produce twistless yarns and give their applications?

14. (a) Explain the various methods for measuring fibre migration.

(OR)

(b) Derive the relation between the yarn twist and count with suitable assumptions.

15. (a) Explain the classimat yarn faults with its influence on further processing.

(OR)

(b) What are flexural rigidity? How to measure the yarn bending and state its importance?

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