DEPARTMENT OF TEXTILE TECHNOLOGY

Theory of Yarn Structure

TTL721

Discipline: M.Tech
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Marks: 50
Time: 2 hours

1. During yarn washing, transvense swelling of fibres depends on yarn spinning system and number of washing cyeles. Explain.

2. The validity of models used in textile sciences highly depends on random structural characteristics of the fibrous assembly. Justify.

3. Comparison of fibres having different fibre density with the standard fibre fineness and tensile strength should be avoided. Justify.

4. During fibre eompression, number of contacts per unit of total volume is proportional to the square of packing density. Explain.

5. The theory of compression of fibrous assembly proposed by van Wyk does not holds good for yarns. Explain.

6. Parameters of conventional pore in the fibrous assembly are independent of the choice of imaginary bondries. Explain.

7. In a spun yarn, the relative mean force per fibre, breaking strain utilization and strength utilization depend on the C V of fibre breaking strain. Explain.

8. Fibre non-parallelisation increases the sliver unevenness but fibre length does not effect the sliver unevenness. Explain.

9. Yarn strength behavior at different length can be better modeled by assuming that the strength of neighboring sections along the yarn are correlated. Explain.

10. In equidistant migration, the fibre length increases equidistantly with steps of yarn radius. Explain.