



Name :

Roll No. :

Invigilator's Signature :

CS/M.Tech (TT)/SEM-2/MTT-205/2013
2013

TEXTURED YARN TECHNOLOGY

Time Allotted : 3 Hours

Full Marks : 70

The figures in the margin indicate full marks.

*Candidates are required to give their answers in their own words
as far as practicable.*

Answer any five questions.

5 × 14 = 70

1. Write briefly about polyester poy properties and its importance with respect to draw texturising. What is natural draw ratio and what is its significance ? What type of filament cross-section is used for draw texturising and why ?
7 + 4 + 3
2. Write in detail about the changes that happen in thermoplastic yarns during heat setting. What do you understand by crystallization temperature and what is its importance with respect to draw texturising ? What should be the approximate value of crystallization temperature of polyester ? How will you explain the texturising process in terms of setting ?
5 + 4 + 2 + 1 + 2

30165 (M.Tech)

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3. What are the features of textured yarn ? Why is texturising done ? What do you understand by sequential texturising and simultaneous draw texturising ? What would be the difference in properties between a flat drawn yarn and a draw textured yarn with respect to tenacity and crystallinity ? $5 + 2 + 4 + 3$
4. Explain the process of false twist draw texturising with friction disc using a neat sketch of yarn path in a draw texturising machine. Explain the functions of primary heater, positorque unit and secondary heater. Why is there a residual torque in the final textured yarn made through this route ? $8 + 5 + 1$
5. What are the major defects of draw textured yarn ? How do the defects impact on the fabric made out of these yarns ? What are the main causes of generation of defects and what are the remedies ? $4 + 4 + 3 + 3$
6. Briefly discuss about the process of air texturising using a neat sketch of yarn path. What are the features of air textured yarn ? What do you understand by core and effect of air textured yarn ? What is the importance of wetting ? $7 + 3 + 2 + 2$
7. How is intermingling done in draw textured yarn ? Explain the mechanism with a diagram. What are meant by HIM and SIM ? What are their advantages with respect to image ? What is OLT and what is its benefit ? $2 + 3 + 4 + 2 + 3$