



Name :

Roll No. :

Invigilator's Signature :

CS/M.Tech (MTT)/SEM-2/MTT-205/2010

2010

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. $5 \times 14 = 70$

1. Explain with diagram the process of simultaneous draw texturing using principle of false twist method. Explain the function of cooling plate and function of secondary heater.

10 + 2 + 2

2. What are the three important 'T's of false twist draw texturing ? Explain the functions of each in producing the desired texturing effect. What is stabilizing overfeed and why is it necessary ? Why is residual torque present in the false twist draw textured yarn ? How these can be minimize and removed ?

1 + 5 + 2 + 2 + 2 + 2

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3. What is the present status of speed of false twist draw texturing ? On what factors does it depend ? What are the desired properties of a polyester poy as a feed yarn of draw texturing at high speed ? What is meant by 'D/Y' ratio ? What are its functions and what are its effects ? What are the materials used in the part that is used to impart 'D/Y' and what is the best material of texturing micro denier poy ?

2 + 3 + 2 + 2 + 2 + 3

4. What are the basic differences between false twist texturing and air jet texturing ? What are the differences in the yarn properties made through these routes ? What are 'parallel' air textured yarn and 'core and effect' air texture yarn ? What is the function of wetting w.r.t. air jet texturing ? How 'slub' effect can be produced in air jet texturing ? What is the basic difference of air jet path in air jet texturing in comparison to that used in simultaneous draw texturing for creating self intermingling ?

4 + 2 + 2 + 2 + 2 + 2

5. In which case you will prefer edge crimping to false twist draw texturing ? Explain with diagram the edge crimping process and stuffer box crimping process. Explain gear crimping process. How bulk effect can be produced by combining two yarn having different thermal behaviour ?

2 + 3 + 3 + 3 + 3



6. Explain the following and comment on their significance :

- a) 'Necking'
- b) 'HIM', 'SIM' and 'NIM'
- c) 'Natural Draw Ratio'
- d) 'Draw Force'
- e) 'OLT'.

3 + 3 + 3 + 3 + 2

7. a) Explain the brief solvent texturing of polyester.

- b) What are the factors responsible for boiling water shrinkage of a thermoplastic fibre ?
- c) In high speed draw texturing usually primary heaters are inclined. Why ?
- d) Briefly explain with a sketch the process of self intermingling during texturing.
- e) What are the probable reasons of getting dark warp lines while using draw textured yarn as warp ?

4 + 2 + 2 + 4 + 2

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