

Roll No.

Total Pages : 03

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B.Tech. EXAMINATION, 2022

Semester VI (CBCS)

POST SPINNING OPERATION

TE-607

Time : 3 Hours

Maximum Marks : 60

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Attempt *Five* questions in all, selecting *one* question from each Sections A, B, C and D. Q. No. **9** is compulsory.

Section A

1. Why drawing process is required in synthetic fibres ?
Discuss the drawing behaviour of thermoplastic polymers. **10**

2. Describe the phenomenon of necking with the help of suitable example. How neck formation can be predicted ? **10**

Section B

3. What is importance of heat setting ? Discuss the mechanism of temporary and permanent set. **10**
4. Discuss the methods used for evaluation of heat setting. **10**

Section C

5. What are objectives of producing bulked yarn ? Discuss the principle of manufacturing high bulk acrylic yarn. **10**
6. What is difference in sequential draw texturing process and simultaneous drawing process ? Explain any *one* with the help of suitable diagram. **10**

Section D

7. Discuss the air-jet texturing process with the help of neat sketch. **10**

8. State the influence material and process variable on the structure and properties of air-jet textured yarns. **10**

(Compulsory Question)

9. (a) Discuss the objectives of post spinning operations.
- (b) What is Spin Draw Process ?
- (c) Enlist the operations involved in post spinning of synthetic fibres.
- (d) What do you understand by tow to top conversion ?
- (e) Define 'Settability'.
- (f) Explain bulk yarn.
- (g) What is knit-de-knit texturing process ?
- (h) Give the classification of textured yarns.
- (i) Explain any *one* recent development in texturing process.
- (j) What is air entanglement process ? **10×2=20**