

3. Attempt any **two** parts :
- When does solution spinning become essential for the spinning ? Classify the solution spinning process with few features of each class.
 - Discuss about the coagulation process of viscose fibre by wet spinning process.
 - Discuss about various features of dry spinning process which differ it from wet spinning.
4. Attempt any **two** parts :
- Discuss about dry-jet-wet spinning process with neat sketch. Define various advantages of this process over wet spinning process.
 - How does structure and morphology of fibres develops during dry-jet wet spinning process ?
 - How does various cross-sectional shapes develop during dry spinning process ?
5. Attempt any **two** parts :
- Explain about the various techniques of spin-finish application.
 - Explain the role of spin-finish in fibre industry. Discuss about various chemical components of a spin finish dedicated to polyester fibre.
 - Differentiate between dipping roller and spray technique of spin-finish application.

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 2744 Roll No.

B.Tech.

(SEM. VII) ODD SEMESTER THEORY

EXAMINATION 2012–13

FIBRE MANUFACTURE AND PROCESS CONTROL

Time : 3 Hours

Total Marks : 100

Note :- Attempt all **five** questions and all questions carry equal marks.

- Attempt any **two** parts :
 - Discuss various essential features of a fibre forming polymer to be spun through melt spinning process.
 - Discuss about various features of melt spinning process with targeted discussion of single screw extruder.
 - Discuss about the function of polymer filter, spinning manifold and spinneret.
- Attempt any **two** parts :
 - Discuss about the consequence of chips drying and crystallization on fibre spinning.
 - Explain the role of spinning pump in fibre manufacturing. Discuss various spinning pumps made by different manufacturers in detail.
 - Explain the significance of fibre quenching. Discuss about various quenching system comparatively.