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B.Tech. (Textile Engg.) (2011 Onwards) (Sem.-4)

TEXTILE FIBRE-II
Subject Code: BTTE-402
M.Code: 71645

Time: 3 Hrs. Max. Marks: 60

INSTRUCTIONS TO CANDIDATES:

- SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
- 2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
- 3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A

1. Answer briefly:

- a. Why synthetic fibres exhibit dimensional instability?
- b. How orientation is developed-during elongational flow?
- c. Why back washing of nylon 6 chips are necessary?
- d. How radial quenching system influences the position of the point of solidification in melt spinning?
- e. Why synthetic fibres are more prone to development of static charge?
- f. What are the advantages of using annular spinneret during wet spinning?
- g. What is the moisture level of chips prior to spinning for polyester and nylon? Why there is a difference in the moisture level values in the two varieties?
- h. Why normally staple fibres are produced from solution wet spinning?
- i. What are the influences of parabolic flow of polymer fluid during extrusion process?
- j. What are the demerits of manmade fibres and how these are minimized?



SECTION-B

- 2. Give the repeat unit of Kevlar and also explain why Kevlar exhibit superior properties.
- 3. What are the advantages of PAN based carbon fibre process over rayon based carbon fibre process?
- What is neck drawing and why is it required for drawing of fibre? 4.
- 5. Solution wet spun fibres are comparatively dimensionally more stable than melt or solution dry spun fibres, why-so?
- 6. Discuss the factors influencing structure development of wet spun acrylic fibre.

SECTION-C

- 7. Discuss the chemistry and technology of PET fibre manufacturing process
- 8. Write short notes on:
 - a. Spin finish
 - b. Glass fibre
- Welcoll How heat setting of staple fibres is done? How heat setting influences the structure and 9. properties of fibre? How dyeability of PET fibre is influenced by the heat setting condition?

NOTE: Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.

2 | M - 71645 (S2)-1864