

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

Paper ID : 164613

Roll No.

**B. TECH.**

**Theory Examination (Semester-VI) 2015-16**

**ADVANCE YARN MANUFACTURE**

*Time : 3 Hours*

*Max. Marks : 100*

**Section-A**

1. Attempt all parts. All parts carry equal marks. Write answer of each part in short. (2 × 10 = 20)

- (a) What is the role of rotor surface in open end spinning.
- (b) What are the advantages of New spinning system.
- (c) What do you mean by self twist yarn.
- (d) What are the properties of twist less yarn.
- (e) What do you mean by texturization.
- (f) How can you measure the crimp rigidity of a textured yarn.

- (g) What are the applications of rotor yarn.
- (h) What is the role of air during air jet spinning.
- (i) How can you measure the diameter of textured yarn.
- (j) What is fancy yarn.

### Section-B

2. Attempt any five questions from this section. (10×5=50)
- (a) With a neat sketch explain the functions of Wrap spinning system. How Wrap spinning system is useful for manufacturing fancy yarn.
  - (b) Briefly discuss about the raw material requirement and preparation of feed material for the preparation of self twist yarn.
  - (c) Compare the relative merits & demerits of DREF-2 & DREF-3 spinning systems.
  - (d) State the principles of formation of twist less yarn. Illustrate few examples about properties of twist less yarn vis-a vis Ring frame spun yarn.

- (e) With a neat sketch, explain the functions of different organs of a DREF-3 spinning machine mentioning requisite machine & process parameters.
- (f) With neat sketch explain the airjet texturization process.
- (g) Briefly discuss on plyfil spinning system.
- (h) Explain the solvent texturization process of protein fibre.

### Section-C

**Note :** Attempt any two questions from this section.

(15 × 2 = 30)

- 3. Summarize in details the back doubling and yarn withdrawal process in open-end spinning System. Calculate the production of rotor in gm/hr if speed is 160m/sec and T.M. is 2 and efficiency 95%.
- 4. Discuss the various factors which affects the properties of friction spun yarn.
- 5. Mention the applications of self Twist yarn with respect to their properties.