

Paper Id: 

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Roll No: 

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**B. TECH.**  
**(SEM-III) THEORY EXAMINATION 2019-20**  
**YARN MANUFACTURE-I**

Time: 3 Hours

Total Marks: 100

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

**SECTION A**

1. Attempt all questions in brief. 2 x10 = 20
- What do you mean by staple yarn?
  - Define yarn count?
  - Define yarn Twist?
  - What are the objectives of blending in spinning process?
  - What do you mean by cleaning efficiency?
  - What do you mean by doubling?
  - What is CV%
  - What is U%
  - What do you mean by strength of a textile yarn?
  - What is initial modulus?

**SECTION B**

2. Attempt any three of the following: 10 x 3 = 30
- Discuss the various types of blending operation in blow room?
  - What is fineness of yarn? Explain yarn numbering system in both direct and indirect system?
  - Explain step cleaner in the opening and cleaning zone of blow room line with neat sketch?
  - What are the objectives of ginning? Explain the roller ginning process?
  - Explain the principle of piano feed regulating motion with the help of suitable diagram?

**SECTION C**

3. Attempt any one part of the following: 10 x 1 = 10
- Explain the concept of autoleveller in draw frame?
  - In a blowroom the production is 10000 lbs/ shift of 8 hour. Calculate the number of cards you will allocate with the given details if doffer speed = 20 rpm, efficiency = 90 %, sliver hank= 0.12, doffer diameter= 27 inch and waste = 5 %?
4. Attempt any one part of the following: 10 x 1 = 10
- Calculate the time taken for a card to exhaust a lap with following data, Lap weight= 35 lbs, sliver hank = 0.16, efficiency = 85%, waste= 1%, doffer dia= 27 inch, and doffer rpm= 10.
  - Discuss the various defects and causes in blow room line.
5. Attempt any one part of the following: 10 x 1 = 10
- Discuss the principle of roller drafting in draw frame with the help of suitable sketch?
  - Discuss in details the process control in carding?
6. Attempt any one part of the following: 10 x 1 = 10
- What are the objectives of blowroom? Explain different types of bale opener and kishner beater available in modern blow room line with neat sketch? <https://www.aktuonline.com>
  - What are the main objectives of carding? Explain the carding action takes place in between flats and cylinder with suitable diagram?
7. Attempt any one part of the following: 10 x 1 = 10
- What are the role of under casing in licker-in and cylinder during carding process?
  - Explain with suitable sketch the migration of fiber during drafting in draw frame?