

Registration No:

--	--	--	--	--	--	--	--	--	--

Total Number of Pages: 02

B.Tech
PTX3I102

3rd Semester Regular/Back Examination 2017-18

Yarn Manufacturing - I

BRANCH: TEXTILE

Time: 3 Hours

Max Marks: 100

Q.CODE: B810

Answer Question No.1 and 2 which are compulsory and any four from the rest.

The figures in the right hand margin indicate marks.

Q1 Answer the following questions: (Write the correct answer only) (2 x 10)

- a) "Denier" is primarily refers to
A. Woolen yarn numbering B. Cotton yarn numbering
C. Viscose yarn numbering D. Polyester yarn numbering
- b) Speed of beaters are kept more in Blow Room during processing of
A. Cotton B. Nylon
C. Polyester D. Rayons
- c) In which of the following regions of a carding machine, more wastes are produced?
A. Licker-in B. Cylinder
C. Doffer D. Flats
- d) Chute feeding is not suitable for finer count because of ,
A. High waste generation B. Static generation
C. high cost D. more unevenness
- e) The speed of doffer is
A. More than that of Cylinder B. more than that of Licker-in
C. Less than that of Cylinder D. Less than Flats speed
- f) Doubling is done in Draw Frames because;
A. it reduces waste B. it increases production
C. it reduces unevenness D. it is cost effective
- g) Increase in the beater speed of Blow Room ,
A. reduces waste % B. Increases waste %
C. Reduces neps D. Increases neps
- h) The objective of Draw Frame is to ;
A. increases production B. decreases maintenance cost
C. straightening and Parallisation D. Reduction of neps
- i) In order to produce a card sliver, a Blow room lap is approximately given a draft of
A. 1 B. 10
C. 100 D. 1000
- j) Fiber Quality index refers to ;
A. Cost of cotton B. Waste % of cotton
C. Spinnability D. Chutefeed system

Q2 Answer in short the following questions: (2 x 10)

- a) State the difference between Trash % and Waste %.
- b) Why drafting is required in cotton Spinning system ?
- c) Define count and tex.
- d) Write different machinery of a spinning mill.
- e) State the difference between staple fiber and filament.

- f) Explain the concept of chute feed system in spinning mills.
- g) What are neps, how they are formed?
- h) State the advantages of pneumatic drafting.
- i) State the difference between mixing and blending.
- j) State its importance of Fiber Quality index in spinning system.
- Q3** a) Briefly describe the machinery of a modern Blow room line. (10)
b) Calculate the hank of a Blow room lap of 50 meters' length weighing 24 Kg. (5)
- Q4** a) Describe different parts and functions of a modern carding machine. (10)
b) Explain how fiber individualization takes place in carding machine. (5)
- Q5** a) State the objectives of draw frame? Describe Polar drafting system in Draw frame (10)
b) Calculate the production in Kg for 08 hours from a pair of Draw frames from the following (5)
data;
Calender roller speed = 1600 r.p.m.
Calender roller diameter = 2 inches
No of delivery per Draw frame = 2
No of doublings = 8 and total draft = 8
Card sliver hank = 0.12
Efficiency of the Draw frame = 85%
- Q6** a) Discuss about Chute feed system and state its advantages and disadvantages. (10)
b) Explain how the hooked fibers are straightened in Draw frames. (5)
- Q7** a) Calculate the production in Kg for 08 hours of a carding Department from the following (10)
data;
Total numbers of Carding machine in the department = 50
Doffer speed = 22 r.p.m.
Doffer diameter = 27.5 inches
Mechanical draft = 100
Waste % removed = 4%
Blow room lap length = 40 meters and weight = 22 Kg
Tension draft = 1.6
Efficiency of the Carding machine = 85%
b) Describe different methods of mixing and blending in spinning process. (5)
- Q8** a) Explain different types of Ginning machinery. (10)
b) Write a note on "Card Clothing". (5)
- Q9** a) Explain how Auto leveler helps in improving evenness of Draw frame sliver. (10)
b) Describe the maintenance management system followed in a spinning industry (5)