

Paper Id: Roll No:

B. TECH
(SEM-III) THEORY EXAMINATION 2019-20
YARN TECHNOLOGY – 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 x 10 = 20

Qno.	Question	Marks	CO
a.	Name various types of staple yarn spinning systems.	2	1
b.	Define Ginning process.	2	2
c.	Name the sequences of machines in a Blow room used for processing cotton fibre having 4% trash content.	2	3
d.	Name the types of impurities present in cotton fibre.	2	3
e.	State the principles of opening & cleaning in a blow room.	2	3
f.	State the basic principle of chute feed system	2	4
g.	Name the types of carding machines used for staple fibre.	2	5
h.	What draw frame should not do.	2	6
i.	How the linear density of carded yarn and combed yarn are expressed, Give examples.	2	7
j.	Write specifications of few types of carding wires used for processing cotton fibres.	2	5

SECTION B

2. Attempt any three of the following:

3 x 10 = 30

Qno.	Question	Marks	CO
a.	State the objectives of Ginning process. With neat diagram explain the principles of Ginning through various Ginning machines.	10	2
b.	State the basic objectives of Blow room. Explain the principles of Processing of cotton fibres through various sections of Blow room.	10	3
c.	With a neat diagram explain the principles of processing fibre through chute feed system. State the advantages and disadvantages of chute feed system.	10	4
d.	Briefly mention process flow chart of carded and combed yarn. State the objectives of combing process. What comber should not do?	10	5
e.	State the objectives of drawing process. With a neat diagram mention the flow of material through a draw frame and functions of its important elements.	10	6

SECTION C

3. Attempt any one part of the following:

1 x 10 = 10

Qno.	Question	Marks	CO
a.	With a neat diagram show the functioning of a super lapper machine. How this machine is different to the traditional lap former machines (with neat diagram).	10	7
b.	Compare the effect of total draft and number of doubling in the traditional and modern pre combing process. Mention the process parameters and production rate of combing machine for medium, fine and super fine counts.	10	8

4. Attempt any one part of the following:

1 x 10 = 10

Qno.	Question	Marks	CO
a.	With a neat diagram show the flow of material and functioning of important organs of a modern carding machine. Mention the norms of carding machine productivity for different fibres.	10	5
b.	What are the functions of Auto leveler in a Draw frame machine. Explain the function of closed loop & open loop Auto leveler (with a neat diagram)	10	6

Paper Id: Roll No: **5. Attempt any one part of the following:****1 x 10 = 10**

Qno.	Question	Marks	CO
a.	A Blow room machine is running with the following parameters: Length of Blow room lap -40metres, Weight of Blowroom lap 16 kg. Shell roller rpm- 10 Shell roller dia- 10 inches. Efficiency- 90%, Waste – 5%. Determine the Production of the Blowroom line in kg. for a shift of 8hours. (Assume any relevant technical data., if necessary)	10	8
b.	A carding machine is running with the following parameters: Hank of lap fed - 0.00140sNe, Doffer rpm – 30, Doffer dia-26.75 inches. Tension draft-1.3, Hank of card sliver – 0.135s Ne. Efficiency-90 %, Waste- 2% Determine the Actual & Mechanical draft working in the machine. Production of the carding machine in kg for a shift of 8 hours. (Assume any relevant technical data., if necessary)	10	8

6. Attempt any one part of the following:**1 x 10 = 10**

Qno.	Question	Marks	CO
a.	Mention the speeds of important organs and setting (gauges) norms of a carding machine. Mention the specification of wires of a carding machine.	10	5
b.	Mention the norms of distribution of draft and recommended roller settings in a draw frame machine. Mention the stop motions working in a draw frame machine.	10	6

7. Attempt any one part of the following:**1 x 10 = 10**

Qno.	Question	Marks	CO
a.	Technically compare between Mixing & Blending process. Briefly explain various types of Blending Process (with a neat diagram)	10	3
b.	Mention the sequences of operation in a combing cycle (with a neat diagram).Mention noil level for different counts in a comber. https://www.aktuonline.com	10	7