

Code No: 153CR**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****B. Tech II Year I Semester Examinations, April/May - 2023****YARN MANUFACTURE – I****(Textile Engineering)****Time: 3 Hours****Max. Marks: 75**

- Note:** i) Question paper consists of Part A, Part B.
ii) Part A is compulsory, which carries 25 marks. In Part A, Answer all questions.
iii) In Part B, Answer any one question from each unit. Each question carries 10 marks and may have a, b as sub questions.

PART – A**(25 Marks)**

- 1.a) Mention the input package form and out package form for each process stage of Ring spinning. [2]
b) Draw a simple sketch of Saw ginning machine, mention the main parts and state the working principle of ginning. [3]
c) What is the purpose of Grid bars? Draw a simple sketch showing grid bar arrangement for cleaning machine. [2]
d) What are the uses of bypass arrangement in a blow room line? [3]
e) List various ancillary equipment used in Blowroom? [2]
f) What are different types of material feeding to the blow room machines? [3]
g) What are the objectives of carding process? [2]
h) What are the factors that help transfer of fibres from licker in to Cylinder? [3]
i) State the importance of stop motions on a carding machine. [2]
j) Find the production (in Kgs) of a Carding machine per a shift of 8 hours from the following particulars. [3]
Coiler calendar speed : 150 rpm
Coiler calendar diameter : 2.2 inches
Hank of sliver : 0.16
Efficiency : 90 %

PART – B**(50 Marks)**

- 2.a) Classify filament yarns into different categories.
b) Explain the parameters which govern the selection of Cotton before making into yarn. [5+5]

OR

- 3.a) Classify staple fibre spun yarns into different categories.
b) Explain the working principle of Mixing Bale opener using a simple diagram. [5+5]
- 4.a) What are the objectives of Blow room?
b) Explain the types of opening devices by using simple diagrams. [3+7]

OR

- 5.a) Explain different procedures followed for mechanical cleaning in Blow room.
b) Explain the working principle of Mono Cylinder using a simple sketch. [5+5]

- 6.a) Explain the purpose of cone drum mechanism in a blowroom.
b) Explain the working principle of Air flow cleaner. [5+5]

OR

- 7.a) Explain the importance of Metal extractors in a blowroom.
b) Explain the working principle of Kirshner beater. [5+5]

- 8.a) Explain different types of grinding in carding department.
b) Draw the simple sketch of carding machine and mention the setting points. [5+5]

OR

- 9.a) Explain the parts and functions of Cylinder region of a card.
b) Explain about card clothing on a carding machine. [5+5]

- 10.a) Explain about latest developments in cylinder region of a card.
b) Explain about Tandem carding process. [5+5]

OR

- 11.a) Explain how Coiler mechanism works on a carding machine.
b) Write the Causes and remedies for Sliver count variation. [5+5]

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Used papers 2023