Scheme – I

Sample Question Paper

Programme Name : Diploma in Textile Manufacture
Programme Code : TX
Semester : Third
Course Title : Carding and Combing
Max. Marks : 70

22365

Time: 3 Hrs.

Instructions:
(1) All questions are compulsory.
(2) Illustrate your answers with neat sketches wherever necessary.
(3) Figures to the right indicate full marks.
(4) Assume suitable data if necessary.
(5) Preferably, write the answers in sequential order.

Q.1 Attempt any FIVE of the following. 10 Marks

a) Define the term carding action.
b) State the objects of carding.
c) State the importance of burnishing.
d) State the importance of cots buffing.
e) Define the term autolevelling.
f) State the necessity of comber preparation.
g) State the tasks of combing.

Q.2 Attempt any Three of the following. 12 Marks

a) Sketch and label passage of material through carding machine.
b) Describe with neat sketch the working of Horse fall grinder.
c) Describe with neat sketch passage of material through draw frame machine.
d) Suggest draw frame sliver defects with causes.

Q.3) Attempt any Three of the following. 12 Marks

a) Give the advantages of chute feed system related to quality of material**.**
b) Suggest the following settings for processing cotton fibre through carding machine with effect of each on sliver quality.
    i. Cylinder to flat,

ii. Doffer to cylinder

c) Select draft distribution in various zones of drafting system in draw frame to improve quality of sliver in terms of uniformity.

d) Draw neat labeled sketch for the passage of material through comber.

Q.4) Attempt any Three of the following. 12 Marks

a) Differentiate any four points between lap feed and chute feed system in carding based on ease of handling material, quality of delivered sliver, productivity and maintenance of machines.

b) Calculate the production of draw frame in kgs/shift of 8 hours from the following particulars:- i) Front roller speed-300 mts /min ii)Hank of sliver-0.12 iii) Efficiency-90%.

c) List the modern features of draw frame.

d) List the modern features of comber machine.

e) Define forward feed and backward feed .

Q.5) Attempt any Two of the following. 12 Marks

a) Calculate the production of carding machine in pounds/shift of7.5 hours from the following particulars:- i)Doffer speed-39 rpm ii)Weight of sliver-4.5 gms/mt iii) Efficiency-89% iv) Doffer dia.-27 inch

b) Calculate the production of a draw frame in kgs/shift of 8hrs from the following particulars:- i) Total draft-6 ii) Back roller speed-4 iii) Back roller dia -1 inch iv) Weight of delivered sliver- 3.5 gms/mt v) Efficiency-85%.

c) Suggest index cycle timing for combing, detaching and nipping processes with justification

Q.6) Attempt any Two of the following. 12 Marks

a) Suggest the effect of i) step gauge ii) brass groove gauge timing and setting of comber parts on comber sliver quality

b) Suggest the causes and remedies of more noil variation in comber.

c) Calculate the production of a comber in pounds/shift of 8hrs from the following particulars:- i) Feed/nip-9mm ii) nips/min-230 iii) feed roller dia -1 inch iv) Weight of lap fed 650 grains /yd v) Efficiency-85%vi) noil%-16% vii) no of heads-6 viii) feed ratchet wheel -10T ix) Through of pawl -1teeth.

Scheme – I

Sample Test Paper - I

Programme Name : Diploma in Textile Manufacture
Programme Code : TX
Semester : Third
Course Title : Carding and Combing
Max. Marks : 20

22365

Time: 1 Hour

Instructions:
(1) All questions are compulsory.
(2) Illustrate your answers with neat sketches wherever necessary.
(3) Figures to the right indicate full marks.
(4) Assume suitable data if necessary.
(5) Preferably, write the answers in sequential order.

Q.1 Attempt any FOUR. **08 Marks**

a) State any two uses of sliver coiling.
b) Draw over and under coiling.
c) State the action taken in carding and stripping.
d) Convert the following to gms/yd i) 3.5 gms/mt ii) 55 grains /mt.
e) Define the term drafting.
f) Define the term auto levelling.

Q.2 Attempt any THREE. **12 Marks**

a) Draw and label passage of material through carding machine.
b) Calculate the production of carding machine in pounds/shift of7.5 hours from the following particulars:- i)Doffer speed-30 rpm ii)Wright of sliver-4.6 gms/mt iii) Efficiency-88% iv) Doffer dia.-27 inch .
c) Calculate the production of a draw frame in kgs/shift of 8hrs from the following particulars:- i) Total draft-6 ii) Back roller speed-4 iii) Back roller dia -1 inch iv) Weight of delivered sliver- 3.5 gms/mt v) Efficiency-85%.
d) State the necessity of roller cots buffing.

Scheme – I

Sample Test Paper - II

Programme Name : Diploma in Textile Manufacture
Programme Code : TX
Semester : Third
Course Title : Carding and Combing
Max. Marks : 20

22365

Time: 1 Hour

Instructions:
(1) All questions are compulsory.
(2) Illustrate your answers with neat sketches wherever necessary.
(3) Figures to the right indicate full marks.
(4) Assume suitable data if necessary.
(5) Preferably, write the answers in sequential order.

Q.1 Attempt any FOUR. **08 Marks**

a) Explain the importance of pre-comber draft.
b) State the all functions of combing process.
c) Compare Unicom and Half lap on the basis of wire type and point density.
d) Calculate grams per meter of 750 Grains per yard sliver lap.
e) Explain working principle of close end autoleveller.
f) State the effect of pre-combing draft on noil percentage.

Q.2 Attempt any THREE. **12 Marks**

a) Calculate the production of a comber in pounds/shift of 8hrs from the following data,
- Feed/nip-6 mm
- Nips/min-350
- Feed roller dia -1 inch
- Weight of lap fed 750 grains /yd
- Efficiency-85%
- Noil%-17%
- No of heads-6
- Feed ratchet wheel -10T
- Through of pawl -1teeth.

b) Calculate pre-comber draft and pre-comber doubling with following data,
- Doubling at sliver lap – 18
- Doubling at Ribbon lap – 6
- Draft at Sliver Lap – 1.5
- Draft at Ribbon lap – 6.