

Curriculum
For
Certificate in Spinning Operations Supervisor
(Certificate Level: 1 Year)
Code:VI87S007
(2013)

Scheme of Studies
20% Theory 80% Practical

Spinning Operations Supervisor

Sr no.	Module	Theory Hours	Practical Hours	Total Hours
1	Module 1: Supervise Blow Room	29	117	146
2	Module 2: Control of Card	36	144	180
3	Module 3: Monitor the Draw rame	29	116	145
4	Module4: Lap Former	33	130	163
5	Module5: Comber	33	133	166
6	Module 6: Roving Frame	37	147	184
7	Module 7: Ring Frame	51	202	253
8	Module 8: Auto Cone	44	175	219
9	Module 9: Conditioning & Packing	29	115	144
	TOTAL HOURS	320	1280	1600

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Introduction

Textile Spinning is one of the largest industries in the world. Spinning is the backbone of textile industry in the world and it is also major industry in Pakistan. Furthermore, all textile products depend upon spinning process and due to the improvement in spinning process and industry all subsequent textile related industries can improve ultimately. The course covers all the operations involved in spinning process with an emphasis on the fact to provide skilled manpower to the industry. Finally, students will learn about all the operations related to the spinning process.

Name of course:

Spinning Operations Supervisor

Overall objective of course:

- To make trainees able to monitor the operations of yarn manufacturing unit all the way from blow room to yarn manufacturing
- To be able to assess the conditioning requirements of spinning plant
- To be able to balance the spinning process flow from one section to other
- To be able to attend the spinning machine errors/faults in the light of machine manual direction
- To be able to rectify the machine operation faults

Competencies gained after completion of course

Knowledge based Competencies:

Professional approach towards the spinning operations management

To supervise the blow room, carding, draw frame, comber, Simplex, Ring frame, Autocone and Conditioning packing process

To inspect and ensure that the machine controls are according to the directions of the Laboratory Manager/Mills Manager

Skill based Competencies:

Trainee will be able to monitor the cotton handling from bale state to sliver form, roving form and finally the yarn form

Job opportunities available immediately and in the future

Textile Spinning Mills

Trainee entry level

Min. Matriculation

- **Minimum qualification of trainer**

B.Sc. Textile Engineer (Yarn Manufacturing) with three years experience or Equivalent

- **Medium of Instruction i.e. language of instruction**

Urdu/English

Sequence of the modules

Module 1: Supervise Blow Room

Module 2: Control of Card

Module 3: Monitor the Draw frame

Module4: Lap Former

Module5: Comber

Module 6: Roving Frame

Module 7: Ring Frame

Module 8: Auto Cone

Module 9: Conditioning & Packing

Timeframe of assessment (Recommendation)

Duration: 1 Year

Total hours: 1600

Theory Hours: 320

Practical Hours: 1280

Overview about the program –Curriculum for (Spinning Operations Supervisor) –

Module Title and Aim	Learning Units	Theory ¹ /hours	Workplace ² /hours	Total Hours	Timeframe of modules
<p>Module 1: Supervise Blow Room</p> <p>Aim: ..Learner be able to supervise and monitor the Blow Room Department</p>	<p>LU1: Check of Bales w.r.t mixing plan</p> <p>LU2: . Check the feeding bin of mixing machine</p> <p>LU3: Check the types of machine</p> <p>LU4: Check the function of coarser and fine opening machine</p> <p>LU5: Check the function of cleaning machines</p> <p>LU6: Check the function of scutcher/ chute feed.</p> <p>LU7:Check the start and stop motions (Sensors & Photocells)</p> <p>LU8:Check the waste collection system (Filter Room)</p> <p>LU9: Check the balance of feed and output of blow room.</p> <p>LU10: Monitor the lap weighting</p> <p>LU11: Check machine errors, safety instructions.</p> <p>LU12: Check the wastage extraction (Quantity & Quality) of each machine</p>	29	117	146	Independent
<p>Module 2: Control of Card</p> <p>Aim:Learner be able to supervise and monitor the Carding Department</p>	<p>LU1:Check the chute/lap feed system.</p> <p>LU2: Check the passage of material from feed roller to calendar rollers</p> <p>LU3: Difference in carding machines</p> <p>LU4: Check the stop and go on machine</p> <p>LU5: Check the control panel and cleaning section on carding machine.</p>	36	144	180	Completing Module# 1

¹ Learning hours in training provider premises

² Training workshop, laboratory and on-the-job workplace

	<p>LU6: Check the error messages and rectify them.</p> <p>LU7: Check the card wires and daily cleaning.</p> <p>LU8: Check waste material.</p> <p>LU9: Check the condition of machine and material</p>				
<p>Module 3: Monitor the Draw frame</p> <p>Aim: Learner be able to supervise and monitor the Draw frames Department</p>	<p>LU1: Check the drawing frame either it is breaker or finisher draw frame.</p> <p>LU2: Check the functions of different parts of draw frame</p> <p>LU3: Check the display panel</p> <p>LU4: Check the feeding material</p> <p>LU5: Check the start and stop motions of machine</p> <p>LU6: Check the number of doubling for mixing and blending</p> <p>LU7: Check the cleaning and running of machine</p> <p>LU8: Check the daily machine schedule</p> <p>LU9: Check the humidity of the department</p>	29	116	145	Completing Module# 1,2
<p>Module4: Lap Former</p> <p>Aim: Learner be able to supervise and monitor the Lap Formers</p>	<p>LU1: Check the function of lap-former machine</p> <p>LU2: Check the number of doubling of sliver</p> <p>LU3: Check the start and stop of machine and it's display panel</p> <p>LU4: Check the running of lap-former with and without the material</p> <p>LU5: Check the error messages and rectify them</p> <p>LU6: Check the RH% of the department</p>	33	130	163	Completing Module# 1,2,3
<p>Module5: Comber</p> <p>Aim: Learner be able to supervise and monitor the function of Comber</p>	<p>LU1: Check the function of combing machine</p> <p>LU2: Check the number of doubling of lap and output sliver</p> <p>LU3: Check the start and stop motion system of machine and it's display panel</p> <p>LU4: Check the running of comber with and</p>	33	133	166	Completing Module# 1,2,3,4

	<p>without the material</p> <p>LU5: Check the error messages and rectify them</p> <p>LU6: Check the RH% of the department</p> <p>LU7: Check the waste of the combing machine</p> <p>LU8: Check the electrical problems in comber machine</p>				
<p>Module 6: Roving Frame</p> <p>Aim: Learner be able to supervise and monitor the Simplex Department</p>	<p>LU1. Check the functions of roving frame</p> <p>LU2. Check the feeding sliver canes</p> <p>LU3. Check the doffing bobbin's quantity and quality</p> <p>LU4. Check the package size and shape</p> <p>LU5. Check the cleaning of various parts of simplex machine</p> <p>LU6. Check the winding tension_on_machine</p> <p>LU7. Check the waste of the combing machine</p> <p>LU 8. Check the electrical problems in Simplex machine</p> <p>LU 9. Check the start and stop system of machine and it's display panel</p> <p>LU 10. Check the running of Simplex with and without the material</p> <p>LU 11. Check the error messages and rectify them</p> <p>LU 12. Check the RH% of the department</p>	37	147	184	Completing Module# 1,2,3,4,5
<p>Module 7: Ring Frame</p> <p>Aim: Learner be able to supervise and monitor Ring Frame Department</p>	<p>LU 1. Check the operations of ring frame</p> <p>LU 2. Check the feeding of roving bobbins on hangers</p> <p>LU 3. Monitor the knotting of yarn on ring frame</p> <p>LU 4. Monitor the doffing</p> <p>LU 5. Check the cleaning of various parts of ring machine</p> <p>LU 6. Check the proper shape of ring package.</p>	51	202	253	Completing Module# 1,2,3,4,5,6

	<p>LU 7. Check the waste of the Ring machine</p> <p>LU 8. Check the electrical problems in ring machine</p> <p>LU 9. Check the start and stop system of machine and it's display panel</p> <p>LU 10. Check the running of ring frame with and without the material</p> <p>LU 11. Check the error messages and rectify them</p> <p>LU 12. Check the RH% of the department</p> <p>LU 13. Check the safety system of machine</p>				
<p>Module 8: Auto Cone</p> <p>Aim: Learner be able to supervise and monitor the Auto Cone Department</p>	<p>LU1. Check the different types of packages on auto-cone</p> <p>LU2. Check the functions of cone winder</p> <p>LU3. Check the electrical problems in ring machine</p> <p>LU4. Check the start and stop of machine and it's display panel</p> <p>LU5. Check the running of auto-cone with and without the material</p> <p>LU6. Check the error messages and rectify them</p> <p>LU7. Check the RH% of the department</p> <p>LU8. Check the yarn clearer error messages</p> <p>LU9. Check the errors on control panel</p> <p>LU10. Check the hard waste collection system</p>	44	175	219	
<p>Module 9: Conditioning & Packing</p> <p>Aim: Learner be able to supervise and monitor the Conditioning & Packing Department</p>	<p>LU1. check the feeding of cones</p> <p>LU2. Check the quality of feeding material (UV light)</p> <p>LU3. Check the functions of machine</p> <p>LU4. Check the machine parameters</p> <p>LU5. Check the condition packing of conditioned cones</p>	29	115	144	Completing Module# 1,2,3,4,5,6,8

(Spinning Operations Supervisor)Curriculum Contents (Teaching and Learning Guide)

Module 1: Title.....Supervise Blow Room

Objective of the Module: ..Learner be able to supervise and monitor the Blow Room Department...

Duration: ..146.....hours Theory:29..... hours Practice:...117.....hours

Learning Unit	Learning Outcomes	Learning Elements	Duration (hours)	Theory / hours	Practical /hours	Materials Required	Learning Place
LU1: Checking of Bales with respect to mixing plan	To ensure arrangement of bales with required characteristics according to the mixing plan	<p>Knowledge of: Characteristics of raw material (e.g cotton Bales from different crop stations) in their respective Godowns</p> <p>All types of bale opening machines e.g auto plucker, blendomate etc.</p> <p>Ability to: Collect cotton bales with required characteristics</p>	23	4	19	Spinning Raw Material (e.g Cotton Bales) Machine Manuals	Class/Workplace
LU2: Check the feeding bin of mixing machine	Checking of Multi chamber mixing machine in order to make a uniform mix	<p>Knowledge of: Multimixers working system</p> <p>Ability to: check that all the chambers are filled</p>	10	2	8		Class/Workplace
LU3: Check the types of machine	To ensure separate process lines for Carded and Combed Yarn Process	<p>Knowledge of: Carded and Combed Yarn Processflow chart</p> <p>Ability to: Check that raw material for Carded and</p>	14	3	11		Class

		Combed Yarn do not mix.					
LU4: Check the function of coarser and fine opening machine	To monitor cotton opening machines that cotton raw material is being converted into desired tuft size	Knowledge of: Porcupine Beater, Condensor, CVT1, CVT3 Ability to: Check that cotton is being divided from larger tuft size to smaller tufts	20	4	16		Class/Workplace
LU5: Check the function of cleaning machines	To check the cleaning machines are extracting waste material according to the set percentage	Knowledge of: CVT1,CVT3, CVT4 Ability to: determine the set waste percentage	20	3	17		Class/Workplace
LU6: Check the function of scutcher/ chute feed.	To know the lap/chute feedproduction system and its variation control	Knowledge of: Sctucher (Lap forming) Machines, Chute feed system Ability to: To check and control the lap weight and its tolerance limit To determine the required grains/yard of lap To check the continuous and uniform feed of the chute system	15	4	11		Class/Workplace
LU7: Check the start and stop	To determine all the start stop motion are working	Knowledge of: All the interlocking, start and stop sensors in the	<u>9</u>	<u>1</u>	<u>8</u>		Class/Workplace

motions (Sensor & Photocells)	according to the feeding in the blow room control panel	blow room Ability to: Read the blow room control panel and trace the machine stop reason					
LU8: Check the waste collection system (Filter Room)	To check that all the contamination bags are being cleaned timely also to check that waste collection system is cleaned and working properly.	Knowledge of: Waste Panels of all cleaning machines Piping system of blow room Total number of waste bags for each machine Ability to: Check that waste bags are not choked and are being replaced timely Air flow through waste bag is proper and there is no whole	5	1	4		Class/Workplace
LU9: Check the balance of feed and output of blow room.	To maintain balance of the material flow for optimum utilization of the machines with optimum quality	Knowledge of: Required production rate of blow room No.of bales required to achieve production rate Ability to: Determine the no. Of laps/shift and Kgs/ hour required.	5	1	4		Class
LU10: Monitor the lap weighting	To ensure exact weight of each yard of lap with	Knowledge of: Lap weighting machine	8	2	6		Class

	acceptable +_ limits	Ability to: Check the zero error of lap weighting machine					
LU11: Check machine errors, safety instructions.	Smooth running of blow room machine according to the standard operating procedure as mentioned in machine manuals	Knowledge of: Control Panels of all blow room machine Machine manuals Ability to: Understand the machine error codes and safety messages	10	2	8		Class/Workplace
LU12: Check the waste extraction quality and quantity of each machine	To monitor that each machine is extracting waste according to the set % and lint is not being wasted	Knowledge of: Required Total Waste % of blow room Waste % set for each cleaning machine Ability to: To determine that min.lint is being extracted with waste	7	2	5		Class/Workplace

Module 2: Title.....Control of Card

Objective of the Module: ..Learner be able to supervise and monitor the Carding Department...

Duration: ..180.....hours Theory:36..... hours Practice:...144.....hours

Learning Unit	Learning Outcomes	Learning Elements	Duration (Hours)	Theory hours	Work place hours	Materials Required	Learning Place
LU1:Check the chute/lap feed system	To know the feeding system of carding machine.	<p>Knowledge of: Chute feed pressure, pressure during lap making</p> <p>Ability to: Read the pressure of chute feed system</p>	10	3	7		Class/Workplace
LU2: Check the passage of material from feed roller to calendar rollers	To know the material transfer system	<p>Knowledge of: Calendar roller types, Taker In, Cylinder, Doffer, Flats</p> <p>Purpose of calendar rollers</p> <p>Feed table and its gauge</p> <p>Ability to: Determine that material is being properly/continuously fed to the carding machine without sticking</p>	24	5	19		Class/Workplace
LU3: Difference in carding machines	To segregate sliver cans of different materials/ratios with color coding	<p>Knowledge of: Machines designated for Carded and Combed Yarn process or carding machines with different raw materials/ratio</p>	24	4	20		Class/Workplace

		Ability to: To differentiate sliver cans of different carding machines with different color bands					
LU4: Check the stop and go on machine	To determine all the start and stop motion are working according to the feedingsyste mof carding machine control panel	Knowledge of: All the interlocking, start and stop sensors in the carding machine Ability to: Read the carding machine control panel and trace the machine stop reasons	15	3	12		Class/Workplace
LU5: Check the control panel and cleaning section on carding machine.	To monitor that waste material is being sucked at regular pressure without choking and the filter machine is working	Knowledge of: Carding Machine Control Panel Filter Room/filter mat and bags Flats Cleaning System Waste Suction points Machine Manual (Machine Parameters) Ability to: To read the waste pressure gauges (Pascal) Check delivery speed M/min. Or KGs/ hour	29	5	24		Class/Workplace

LU6: Check the error messages and rectify them.	To minimize the downtime of machine by clearing the error messages of machine. Read and understand the error messages on machine display	Knowledge of: machine frequent errors as mentioned in machine manual How to troubleshoot these error and clear messages	29	5	24	Machine Manuals	Class/Workplace
LU7: Check the card wires and daily cleaning.	To ensure quality sliver production by checking daily cleaning procedure and carding wires status	Knowledge of: Daily card wires Cleaning schedules Taker In wires, Cylinder Wires, Doffer Wires, Flatts Wires Ability to: Visualize the cleaning status of the machine and to determine the card wires wear and tear, sharp or blunt.	29	5	24		Class/Workplace
LU8: Check waste material.	To monitor that each waste extracting point is as per standards.	Knowledge of: Required Waste % in Carding process Lint/waste ratio Ability to: To determine that minimum lint is being extracted with waste	10	3	7		Class/Workplace
LU9: Check the condition of machine and material	Maintain the carding section under set RH% alongwith balanced	Knowledge of: Rejected Sliver (cut), Double Sliver etc. Set RH %	10	3	7		

	production rate of optimum quality	<p>Required carding production rate</p> <p>Ability to:</p> <p>Differentiate the normal and faulty sliver</p> <p>Know the RH% For optimum card production. Maintain material balance between Carding and Drawing Processes</p>					
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Module3: Title.....Monitor the Draw Frame

Objective of the Module: ..Learner be able to supervise and monitor the Draw frames Department..

Duration: ..145.....hours Theory:29..... hours Practice:...116.....hours

Learning Unit	Learning Outcomes	Learning Elements	Duration (Hours)	Theory hours	Work place hours	Materials Required	Learning Place
LU1: Check the drawing frame either it is breaker or finisher draw frame.	To monitor transportation of respective sliver cans to their drawing frames	Knowledge of: Difference between Breaker Drawing Frame & Finisher Drawing Frame Ability to: To transfer the relevant sliver cans to the related drawing frame	19	3	16		Class/Workplace
LU2: Check the functions of different parts of draw frame	To monitor the accurate functioning of drawing frame parts like Coiler, Autoleveler, Can Changer, rubber cots, drafting pressure	Knowledge of: Coiler, Autoleveler, Can Changer, rubber cots, drafting pressure Ability to: To monitor the functions of coiler, auto leveler, can changer, rubber cots, drafting pressure etc.	18	3	15		Class/Workplace
LU3: Check the display panel	To monitor the required Delivery Speed CV% Spectrogram from the display panel of the	Knowledge of: Delivery Speed CV% Spectrogram Ability to: To study and check the Delivery Speed	20	3	17		Class/Workplace

	drawing frame	CV% Spectrogram From display panel of drawing frame					
LU4: Check the feeding material	To check the feeding sliver cans that right material can is under the right drawing frame	Knowledge of: Carded Cans, Combed Cans, PC, CVC Cans Ability to: Segregate different sliver can types	14	3	11		Class/Workplace
LU5: Check the start and stop motion of machine	To monitor the start and stop motions on daily basis	Knowledge of: Sliver missing alarm, sliver guide alarm at delivery and drafting alarm. Ability to: To allocate the start stop reason of the drawing frame	14	3	11	Machine Manuals	Class/Workplace
LU6: Check the number of doubling for mixing and blending	To monitor the sliver cans arrangement for uniform doubling/blending and sliver piecing extraction method	Knowledge of: No. of doubling set for each drawing frame Required blending ratio (52:48, 65:35) and number of cans required for the blending and also extraction of piecing procedure. Ability to: To ensure arrangement of	15	4	11		Class/Workplace

		sliver cans as per doubling/blending plan					
LU7: Check the cleaning and running of machine	To check the cleaning status of the draw frames on daily basis for smooth running of machines	<p>Knowledge of: Sliver Guide Cleaning Drafting System Cleaning Coiler Cleaning</p> <p>Ability to: To check the cleaning of Sliver Guide ,Drafting System ,Coiler Cleaning</p>	20	4	16		Class/Workplace
LU8: Check the daily machine schedule	To monitor the maintenance schedule and to set the draw frames according to the spin plan changes	<p>Knowledge of: Periodic Preventive maintenance schedule</p> <p>Spin Plan Changes on drawframes</p> <p>Ability to: To adjust drawframes according to the spin plan</p> <p>To check maintenance of the machine as per schedule</p>	15	4	11		Class/Workplace
LU9: Check the humidity of the Department	To check the RH% from the Hygro meter	<p>Knowledge of: Dry Temperature Wet Temperature RH %</p> <p>Ability to: Read the dry and wet temperature as well as to calculate the RH%</p>	10	2	8		Class/Workplace

Module4: Title.....Lap Former

Objective of the Module: ..Learner be able to supervise and monitor the Lap Formers..

Duration: ..163.....hours Theory: ...33..... hours Practice:....130.....hours

Learning Unit	Learning Outcomes	Learning Elements	Duration (Hours)	Theory hours	Workplace hours	Materials Required	Learning Place
LU1: Check the function of lap-former machine	To check the Lap changer Lap forming system Lap Pressure system, lap drum functioning	Knowledge of: Lap changer Lap forming system Lap Pressure system, Lap drum Ability to: To check the smooth running of Lap changer Lap forming system Lap Pressure, lap Drum	39	07	32		Class/Workplace
LU2: Check the number of doubling of sliver	To monitor the sliver cans arrangement for uniform doubling	Knowledge of: No.of doubling set for each lap former Ability to: To Ensure the arrangement of sliver cans as per doubling plan	23	4	19		Class/Workplace
LU3: Check the start and stop of machine and it's display panel	To monitor the start stop motions on daily basis To monitor the required Delivery Speed CV% Spectrogram from the display panel of the lap	Knowledge of: Sliver missing alarm, sliver guide alarm, sliver miss at delivery, Drafting alarm Delivery Speed CV% Spectrogram Ability to: allocate the stop	35	7	28	Machine Manuals	Class/Workplace

	former	reason of the lap former study and check the Delivery Speed CV% Spectrogram from display panel of lap former					
LU4: Check the running of lap-former with and without the material	To check the spools stress level at the lap former with and without material	Knowledge of: Spool Changer Spool Setting Ability to: Asses that no extra pressure is being exerted on the spools during lap forming and lap changing	25	6	19		Class/Workplace
LU5: Check the error messages and rectify them	To remove error messages as per methods mentioned in the machine manual	Knowledge of: Machine Manuals Frequent error codes and their remedy Ability to: Remove the error message of the machine according to the instructions mentioned in the machine manual	26	6	20	Machine Manuals	Class/Workplace
LU6: Check the RH% of the department	To check the RH% from the Hygrometer	Knowledge of: Dry Temperature Wet Temperature RH % Ability to: Read and calculate the RH%	15	3	12	Thermometers	Class/Workplace

Module5: Title.....Comber

Objective of the Module: ..Learner be able to supervise and monitor the function of Comber..

Duration: ..166.....hours Theory:33..... hours Practice:....133.....hours

Learning Unit	Learning Outcomes	Learning Elements	Duration Hours	Theory hours	Work place hours	Materials Required	Learning Place
LU1: Check the function of combing machine	To check the machine parameter for smooth running of combing machine	<p>Knowledge of: No. Of Lap doublings required. Feed tray Nips/min Coiler Miss lap stop motion Lap not licking/sticking</p> <p>Ability to: Check the smooth running of machine e.g. No. Of Lap doublings required. Feed tray Nips/min Coiler Miss lap stop motion Lap not licking/sticking</p>	28	4	24	Machine Manuals	Class/Workplace
LU2: Check the number of doubling of lap and output sliver	To monitor the laps arrangement for uniform doubling and preparation of combed sliver can	<p>Knowledge of: No.of lap doubling set for each combed sliver can</p> <p>Ability to: To ensure arrangement of laps as per doubling plan</p>	24	4	20		Class/Workplace
LU3: Check the start and stop system	To monitor the start and stop motions	<p>Knowledge of: Lap missing alarm, sliver</p>	25	5	20		Class/Workplace

of machine and it's display panel	on daily basis To monitor the required Delivery Speed CV% Spectrogram from the display panel of the Comber	guide alarm, sliver miss at delivery, Drafting alarm Delivery Speed CV% Spectrogram Ability to: To allocate the stop reason of the comber To study and check the Delivery Speed CV% Spectrogram From display panel of comber					
LU4: Check the running of comber with and without the material	To check the functioning of the comber machine with & without material for the set nipping action and feed system	Knowledge of: Back ward and Forward Nipping Action Ability to: To determine the nipping action mode	13	3	10		Class/Workplace
LU5: Check the error messages and rectify them	To remove error messages as per methods mentioned in the machine manual	Knowledge of: Machine Manuals Frequent error codes and their remedy Ability to: To remove the error message of the machine according to the instructions mentioned in the machine manual	20	5	15		Class/Workplace
LU6: Check the	To check the RH% from	Knowledge of: Dry Temperature	15	3	12		Class/Workplace

RH% of the department	the Hygrometer meter	Wet Temperature RH % Ability to: Read and calculate the RH%					
LU7: Check the waste of the combing machine	To monitor comber noil extraction on daily basis	Knowledge of: Noil Percentage Comber air filter Ability to: To monitor the noil weight according to set noil %	20	4	16		Class/Workplace
LU8: Check the electrical problems in comber machine	To monitor the working system of comber machine	Knowledge of: lap miss sensor Sliver miss sensor Drafting system pressure sensor Can Changer Sensor etc Ability to: Understand the functioning of each electrical sensor	21	5	16		Class/Workplace

Module6: Title.....Roving Frame

Objective of the Module: ..Learner be able to supervise and monitor the Simplex Department.

Duration: ..184.....hours Theory:37..... hours Practice:...147.....hours

Learning Unit	Learning Outcomes	Learning Elements	Duration (Hours)	Theory hours	Work place hours	Materials Required	Learning Place
LU1. Check the functions of roving frame	To check the machine parameters for smooth running of Roving frame	<p>Knowledge of:</p> <ul style="list-style-type: none"> Sliver Guides Building motion Differential Flyer settings Drafting System Rubber Cots Drafting System Cleaning Cloth, Simplex overhead Blower <p>Ability to:</p> <ul style="list-style-type: none"> Check the smooth running of machine e.g. Sliver Guides Building motion Differential Flyer settings Drafting System Rubber Cots Drafting System Cleaning Cloth, Simplex overhead Blower 	24	6	18	Machine Manuals	Class/Workplace
LU2. Check the feeding sliver cans	To change the feeding cans in groups to minimize the downtime of the roving frame	<p>Knowledge of:</p> <ul style="list-style-type: none"> Empty/ fill cans and sliver piecing extraction <p>Ability to:</p> <ul style="list-style-type: none"> Change the maximum of sliver cans collectively during each change over 	28	5	23		Class/Workplace
LU3. Check the doffing bobbin's	To manage the bobbin color	<p>Knowledge of:</p> <ul style="list-style-type: none"> No. Of doffing bobbins 	7	2	5		Class/Workplace

quantity and quality	difference and to prepare empty bobbins for each doffing	<p>available for each machine</p> <p>Bobbin Colors and bands color for differenttation of different materials</p> <p>Ability to:</p> <p>To timely collect the empty simplex bobbins from ring department and to distribute full packages to the ring department</p>					
LU4. Check the package size and shape	To perform screening of the simple full bobbins for quality yarn production in ring department	<p>Knowledge of: Package weight of required size</p> <p>Correct shape of Package</p> <p>De-shape packages</p> <p>Ability to: To eliminate the transfer of faulty bobbins to the ring department</p>	15	3	12		Class/Workplace
LU5. Check the cleaning of various parts of simplex machine	To monitor the cleaning schedule of roving frame	<p>Knowledge of: Clearing Cloth, Drafting System Flyer Sliver Guides</p> <p>Ability to: to determine the cleaning staus of roving frame</p>	10	2	8		Class/Workplace

LU6. Check the winding tension on machine	To prepare simplex bobbins with adequate tension for easy unwinding in ring department	<p>Knowledge of: Building motion/ Differential</p> <p>No. Of Roving turns on flyer</p> <p>Electrical tension control</p> <p>Ability to: To determine the right tension required</p>	10	2	8		Class/Workplace
LU7. Check the waste of the Simplex machine	Accumulation of all short fiber of the simplex department and transport it the waste room	<p>Knowledge of: Dust Collector Over Head Air blower, Roving Waste Machine</p> <p>Ability to: To accumulate all the waste and transport it to the waste room</p>	15	3	12		Class/Workplace
LU 8. Check the electrical problems in Simplex machine	To monitor the electrical system of simplex machine	<p>Knowledge of: Sliver drop sensor Over Head blower sensors Doffing Sensors Roving break sensors</p> <p>Ability to: To determine the faulty sensor and contact electrical department</p>	18	3	15		Class/Workplace
LU 9. Check the start and stop of machine and it's display panel	To monitor the start and stop system motions on daily basis	<p>Knowledge of: Sliver drop sensor Over Head blower sensors Doffing Sensors Roving break sensors</p>	12	3	9		Class/Workplace

		Ability to: To allocate the start stop reason of the Simplex					
LU 10. Check the running of Simplex with and without the material	To check functions of the simplex machine as per recommended setting of the lab In-charge and to communicate with maintenance department	Knowledge of: Delivery Speed Hank Roving Spacer Rubber Cots Ability to: To take over charge of the machine from maintenance department after checking functions of the machine with and without material	15	3	12		Class/Workplace
LU 11. Check the error messages and rectify them	To remove error messages as per methods mentioned in the machine manual	Knowledge of: Machine Manuals Frequent error codes and their remedy Ability to: To remove the error message of the machine according to the instructions mentioned in the machine manual	20	3	17		Class/Workplace
LU 12. Check the RH% of the department	To check the RH% from hygrometer	Knowledge of: Dry Temperature Wet Temperature RH % Ability to: Read and calculate the RH%	10	2	8		Class/Workplace

Module 7: Title.....Ring Frame

Objective of the Module: ..Learner be able to supervise and monitor Ring Frame Department..

Duration: ..253.....hours Theory:51..... hours Practice:...202.....hours

Learning Unit	Learning Outcomes	Learning Elements	Duration Hours	Theory hours	Work place hours	Materials Required	Learning Place
LU 1. Check the operations of ring frame	To monitor the functions of ring frames	<p>Knowledge of: Rpm, TM, TPI, Hanks Roving, Ring Bobbin weight and shape, Doffing (Automatic and Manual) Lift, Ring rail, Lappet rail, Snail wire, Inverter Settings, Over head Blower, Doffing Time, Ring Bobbin Colors, Spacer Color, Roving Bobbins, travelers, Ring Cups</p> <p>Ability to: To check the above machine parameters regularly</p>	37	7	30	Machine Manuals, Operating manuals of Slub, Compact and Lycra attachments	Class/Workplace
LU 2. Check the feeding of roving bobbins on hangers	To examine the roving full bobbin quantity and condition in the ring department	<p>Knowledge of: Fixed Hangers Movable hanger Empty Roving Bobbins Full Roving Bobbins</p> <p>Ability to: To evaluate the need of roving</p>	16	6	10		Class/Workplace

		full bobbins and to communicate it to the Simplex Department					
LU 3. Monitor the knotting of yarn on ring frame	To examine ends down rate on each ring frame and to minimize breakage %	<p>Knowledge of: Yarn piecing Ends Down Standard Breakage %</p> <p>Ability to: To visit each machine and to calculate and minimize the ends down on each machine</p>	20	6	14		Class/Workplace
LU 4. Monitor the doffing	To manage the doffing timings of ring machine efficiently	<p>Knowledge of: No. of upcoming doffings</p> <p>Ability to: To distribute the doffing time equally so that each doffer can work efficiently and no machine stands idle</p>	25	4	21		Class/Workplace
LU 5. Check the cleaning of various parts of ring machine	To examine the cleaning status of the ring machine parts	<p>Knowledge of: Hangers, Roving Bobbins, Roving feed stand, Rubber Aprons, Rubber Cots, Spacers, Cradle, Snail Wire, Lappet Rail, Ring rail, Tin Pulley, Main Shaft, Doffing Beams, Machine heads, Drafting System</p> <p>Ability to:</p>	30	5	25		Class/Workplace

		To evaluate the cleaning condition of the above machine parts					
LU 6. Check the proper shape of ring package.	To examine the ring bobbing shapes and to reject the faulty ring bobbins	<p>Knowledge of: Cop shapes and sizes according to the lift</p> <p>Ability to: To trace out the de-shape bobbins and communicate with foreman for its remedy</p>	15	3	12		Class/Workplace
LU 7. Check the waste of the Ring machine	To control the ring frame wastage and to transfer the waste to waste room	<p>Knowledge of: Pneumafil, Over Head blower</p> <p>Ability to: To accumulate all the ring waste for waste room and to minimize the lint wastage in the form of pnemafil</p>	25	4	21		Class/Workplace
LU 8. Check the electrical problems in ring machine	To rectify the frequent electrical errors	<p>Knowledge of: Main Motor, Drafting Motors, Ring rail Motor, Doffing Motors, Inverter, Machine manual, Safety Cord, Overhead Bloer Sensors, Slub error, Compact system error,</p>	30	5	25		Class/Workplace

		<p>Miss lycra Errors</p> <p>Ability to: To study the error code from display and rectify otherwise consult electrical department</p>					
LU 9. Check the start and stop system of machine and it's display panel	To monitor the start and stop motions on daily basis	<p>Knowledge of: Roving drop sensor Over Head blower sensors Doffing Sensors Roving break sensors, Safety Cord Sensors</p> <p>Ability to: To allocate the start stop reason of the Ring Frame</p>	15	3	12		Class/Workplace
LU 10. Check the running of ring frame with and without the material	To check functions of the Ring machine as per recommended setting of the lab Incharge and to communicate with maintenance department	<p>Knowledge of: Delivery Speed Hank Roving Spacer Rubber Cots Rubber Aprons, TPT, TM, Spindle Speed Slub system, Compact system, Lycra</p> <p>Ability to: To take over charge of the machine from maintenance department after checking functions of the machine with and without material</p>	10	2	8		Class/Workplace

LU 11. Check the error messages and rectify them	To remove error messages as per methods mentioned in the machine manual	<p>Knowledge of: Machine Manuals</p> <p>Frequent error codes and their remedy</p> <p>Ability to: To remove the error message of the machine according to the instructions mentioned in the machine manual</p>	20	4	16		Class/Workplace
LU 12. Check the RH% of the department	To check the RH% from the hygrometer	<p>Knowledge of: Dry Temperature Wet Temperature RH %</p> <p>Ability to: Read and calculate the RH%</p>	5	1	4		Class/Workplace
LU 13. Check the safety system of machine	To ensure that all the safety parameters adopted	<p>Knowledge of: Safety Cords, Sensors</p> <p>Ability to: To check that safety sensor, cords are working</p>	5	1	4		Class/Workplace

Module 8: Title.....Auto Cone

Objective of the Module:..Learner be able to supervise and monitor the Auto ConeDepartment..

Duration: ..219.....hours Theory:.....44..... hours Practice:....175.....hours

Learning Unit	Learning Outcomes	Learning Elements	Duration Hours	Theory hours	Work place hours	Materials Required	Learning Place
LU1. Check the different types of packages on auto-cone	To arrange cones according to their paper/plastic cone color, different weight cones/ different yarn type cones (Hosiery, Slub, Lycra, Multicount, Weaving etc)	Knowledge of: Cone Drums (1.5, 2.5 etc) Hosiery Wax Yarn Cone, Slub, Compact, Lycra, Cone types wrt weight (2.5 lbs, 4.16 lbs) Paper Cone Colors Ability to: Seggregate different cone types	22	7	15	Machine Manuals, Operating Manuals of Yarn Clearer	Class/Workplace
LU2. Check the functions of cone winder	To examine all the winding units for normal working	Knowledge of: Retie Pipe, Suction Mouth, Wax device, Yarn Clearer and its Types, Settings, Bal Cone guide, Splice unit Ability to: To determine that all parts of cone winder are working normal	35	7	28		Class/Workplace
LU3. Check the electrical problems in Auto Cone machine	To rectify the frequent electrical errors	Knowledge of: Inverter, main Motor temp, Overhead Blower, Thick , thin, FF and other yarn clear problems Machine and	22	6	16		Class/Workplace

		Yarn Clearer Manual Ability to: Trace the most frequent faults through error code on display and rectify it as per machine manual					
LU4. Check the start and stop system of machine and it's display panel	To monitor the start and stop motions on daily basis	Knowledge of: Over Head blower sensors Doffing Sensors , yarn clearer sensor Ability to: To allocate the stop reason of the Auto Cone	15	3	12		Class/Workplace
LU5. Check the running of auto-cone with and without the material	To check functions of the Auto Cone machine as per recommended setting of the lab In-charge and to communicate with maintenance department	Knowledge of: Delivery Speed Yarn Count Yarn Clearer settings Slub Settings, Compact system, Lycra settings Ability to: To take over charge of the machine from maintenance department after checking functions of the machine with and without material	18	3	15		Class/Workplace
LU6. Check the error messages and rectify	To remove error messages as per methods mentioned in	Knowledge of: Machine Manuals Frequent error	22	4	18		Class/Workplace

them	the machine manual	codes and their remedy Ability to: To remove the error message of the machine according to the instructions mentioned in the machine manual					
LU7. Check the RH% of the department	To check the RH% from the Hygro meter	Knowledge of: Dry Temperature Wet Temperature RH % Ability to: Read and calculate the RH%	5	1	4		Class/Workplace
LU8. Check the yarn clearer error messages	To remove yarn clearer error message in order to increase efficiency of Auto cone machine	Knowledge of: Yarn Clearer Types: Uster Quantum Clearer Loepfe yarn Clearer Ability to: To allocate the error message and to rectify it as per operating manual	30	5	25		Class/Workplace
LU9. Check the errors on control panel	To remove error messages as per methods mentioned in the machine manual	Knowledge of: Machine Manuals Frequent error codes and their remedy Ability to: To remove the error message of the machine	25	4	21		Class/Workplace

		according to the instructions mentioned in the machine manual					
LU10. Check the hard waste collection	To control the hard wastage and to transfer the waste to waste room	<p>Knowledge of: Hard wastage %, Over Head blower</p> <p>Ability to:</p> <p>To accumulate all the Auto cone waste for waste room and to minimize the hard waste %</p>	25	4	21		Class/Workplace

Module 9: Title.....Conditioning & Packing

Objective of the Module:..Learner be able to supervise and monitor theConditioning & Packing Department

Duration: ..144.....hours Theory:29..... hours Practice:...115.....hours

Learning Unit	Learning Outcomes	Learning Elements	Duration Hours	Theory hours	Work place hours	Materials Required	Learning Place
LU1. check the feeding of cones	To place yarn cone in conditioning machine as per standard procedure	Knowledge of: Yarn Conditioning machine types: Pozzi, Aquafix etc. Ability to: To arrange the yarn cones on yarn trolleys according to the machine capacity	20	5	15	Machine Manuals	Class/Workplace
LU2. Check the quality of feeding material (UV light)	To screen the yarn cones in shade room for any defects	Knowledge of: Ultra Violet Light, Shade room Ability to: To detect the faulty cones in shade room	25	5	20		Class/Workplace
LU3. Check the functions of machine	To examine all the part of Yarn conditioning machine for normal working	Knowledge of: Trolley Stand Movement, Lid Opening, Boiler/Steam Condition, Required Temperature and pressure settings, Water PH level Ability to: To determine that all parts of	37	6	31		Class/Workplace

		Yarn Conditioning machine are working normal					
LU4. Check the machine parameters	To run the Yarn conditioning machine according to the recommended settings	<p>Knowledge of: No.of Cycles, Steam Temperature, Duration (Min.)</p> <p>Ability to: Match the machine parameter with settings recommended by the laboratory Incharge</p>	32	5	27		Class/Workplace
LU5. Check the condition of packing of conditioned cones	To supervise packing of yarn cone as per customer needs	<p>Knowledge of: Stack Arrangements, Polythene Bags, Pallet Packing, Cartoons, Brand Name Printing</p> <p>Ability to: To monitor packing of Yarn cones according to the respective lot wise requirements</p>	30	8	22		Class/Workplace

4. Assessment

Module 1 (Supervise Blow Room)

Learning Units	Theory Days/hours	Workplace Days/hours	Recommended formative assessment	Recommended Methodology	Scheduled Dates
LU1: Check of Bales with respect to mixing plan	1	4	Demonstrate Bales mixing plan	Direct observation from practical demonstration by trainee in the workplace whilst being safety conscious.	As decided by the Instructor/Teacher
LU2: Check the feeding bin of mixing machine	1	2	Explain feeding bin of mixing machine	Direct observation from practical demonstration by trainee in the workplace whilst being safety conscious.	As decided by the Instructor/Teacher
LU3: Check the types of machine	1	3	Explain the types of machine	Multiple Choice Questions	As decided by the Instructor/Teacher
LU4: Check the function of coarser and fine opening machine	1	4	explain the function of coarser and fine opening machine	Direct observation from practical demonstration by trainee in the workplace whilst being safety conscious.	As decided by the Instructor/Teacher
LU5: Check the function of cleaning machines	1	4	Explain the function of cleaning machines	Short answer questions test.	As decided by the Instructor/Teacher
LU6: Check the function of scutcher/ chute feed.	1	3	Define the function of scutcher/ chute feed	Short answer questions test.	As decided by the Instructor/Teacher
LU7: Check the start and stop motions	1	1	Explain the start and stop motions	Short answer questions test.	As decided by the Instructor/Teacher
LU8: Check the waste panels/bags	1	1	Explain the checking of waste panels/bags	Direct observation from practical demonstration by trainee in the workplace whilst being safety conscious.	As decided by the Instructor/Teacher

LU9: Check the balance of feed and output of blow room.	1	1	Explain the balance of feed and output of blow room.	Multiple Choice Questions Numeric Problem	As decided by the Instructor/Teacher
LU10: Monitor the lap weighting	1	2	explain the lap weighting	Multiple Choice Questions Numeric Problem	As decided by the Instructor/Teacher
LU11: Check machine errors, safety instructions.	1	1	explain machine errors, safety instructions.	Multiple Choice Questions	As decided by the Instructor/Teacher
LU12: Check the wastage of each machine	1	1	Monitor the wastage of each machine	Multiple Choice Questions Numeric Problem	As decided by the Instructor/Teacher

Module 2 (Control of Card)

Learning Units	Theory Days/hours	Workplace Days/hours	Recommended formative assessment	Recommended Methodology	Scheduled Dates
LU1: Check the chute/lap feed system.	1	2	explain the chute/lap feed system	Direct observation from practical demonstration by trainee	As decided by the Instructor/Teacher
LU2: Check the passage of material from feed roller to calendar rollers	1	2	explain the passage of material from feed roller to calendar rollers	Direct observation from practical demonstration by trainee in the workplace	As decided by the Instructor/Teacher
LU3: Difference in carding machines	1	1	Explain Difference in carding machines	Short answer questions test. MCQs	As decided by the Instructor/Teacher
LU4: Check the stop and go on machine	1	2	Demonstrate the stop and go on machine	Direct observation from practical demonstration by trainee in the workplace	As decided by the Instructor/Teacher
LU5: Check the control panel and cleaning section on carding machine.	1	4	Monitor the control panel and cleaning section on carding machine	Direct observation from practical demonstration by trainee in the workplace whilst being safety conscious.	As decided by the Instructor/Teacher

LU6: Check the error messages and rectify them.	1	2	Explain the error messages and rectify them.	Direct observation from practical demonstration by trainee in the workplace	As decided by the Instructor/Teacher
LU7: Check the card wires and daily cleaning.	2	4	Monitor the card wires and daily cleaning.	Direct observation from practical demonstration by trainee in the workplace whilst being safety conscious. Short answer questions test.	As decided by the Instructor/Teacher
LU8: Check waste material.	1	2	Monitor waste material.	Short answer questions test Numeric Problem	As decided by the Instructor/Teacher
LU9: Check the condition of machine and material	1	2	Describe the condition of machine and material	Direct observation from practical demonstration by trainee in the workplace	As decided by the Instructor/Teacher

Module # 3 (Monitor the Draw Frame)

Learning Units	Theory Days/hours	Workplace Days/hours	Recommended formative assessment	Recommended Methodology	Scheduled Dates
LU1: Check the drawing frame either it is breaker or finisher draw frame.	1	2	Explain drawing frame either it is breaker or finisher draw frame	Direct observation from practical demonstration by trainee in the workplace	As decided by the Instructor/Teacher
LU2: Check the functions of different parts of draw frame	1	3	Describe the functions of different parts of draw frame	Short answer questions test.	As decided by the Instructor/Teacher
LU3: Check the display panel	1	3	Monitor the display panel	Direct observation from practical demonstration by trainee in the workplace	As decided by the Instructor/Teacher

LU4: Check the feeding material	1	2	Monitor the feeding material	Direct observation from practical demonstration by trainee in the workplace	As decided by the Instructor/Teacher
LU5: Check the start and stop motion of machine	1	2	Check the start and stop motion of machine	Short answer questions test.	As decided by the Instructor/Teacher
LU6: Check the number of doubling for mixing and blending	1	1	Monitor the number of doubling for mixing and blending	Multiple Choice Questions Numeric Problems	As decided by the Instructor/Teacher
LU7: Check the cleaning and running of machine	1	3	Demonstrate the cleaning and running of machine	Direct observation from practical demonstration by trainee in the workplace	As decided by the Instructor/Teacher
LU8: Check the daily machine schedule	1	3	Monitor the daily machine schedule	Short answer questions test.	As decided by the Instructor/Teacher
LU9: Check the humidity of the department	1	2	Monitor the humidity of the department	Short answer questions test. Numeric Problem	As decided by the Instructor/Teacher

Module # 4 (Lap Former)

Learning Units	Theory hours	Workplace hours	Recommended formative assessment	Recommended Methodology	Scheduled Dates
LU1: Check the function of lap-former machine	2	4	Explain the function of lap-former machine	Direct observation from practical demonstration by trainee in the workplace . Short answer questions test.	As decided by the Instructor/Teacher
LU2: Check the number of doubling of sliver	1	2	Monitor the number of doubling of sliver	Multiple Choice Questions Short test	As decided by the Instructor/Teacher
LU3: Check the start and stop of	1	3	Explain the start and stop of machine and it's	Direct observation from practical	As decided by the Instructor/Teacher

machine and it's display panel			display panel	demonstration by trainee in the workplace whilst being safety conscious.	
LU4: Check the running of lap-former with and without the material	1	3	Monitor the running of lap-former with and without the material	Direct observation from practical demonstration by trainee in the workplace	As decided by the Instructor/Teacher
LU5: Check the error messages and rectify them	2	3	Explain the error messages and rectify them	Short answer questions test.	As decided by the Instructor/Teacher
LU6: Check the conditioning of the department	1	2	Monitor the conditioning of the department	Multiple Choice Questions Numeric Problem	As decided by the Instructor/Teacher

Module # 5 (Comber)

Learning Units	Theory Days/hours	Workplace Days/hours	Recommended formative assessment	Recommended Methodology	Scheduled Dates
LU1: Check the function of combing machine	2	3	Explain the function of combing machine	Short answer questions test. Numeric Problems	As decided by the Instructor/Teacher
LU2: Check the number of doubling of lap and output sliver	1	1	Monitor the number of doubling of lap and output sliver	Direct observation from practical demonstration by trainee in the workplace	As decided by the Instructor/Teacher
LU3: Check the start and stop of machine and it's display panel	1	1	Monitor the start and stop of machine and it's display panel	Short answer questions test.	As decided by the Instructor/Teacher
LU4: Check the running of comber with and without the material	1	2	Demonstrate running of comber with and without the material	Direct observation from practical demonstration by trainee in the	As decided by the Instructor/Teacher
LU5: Check	1	1	explain the error	Short answer	As decided

the error messages and rectify them			messages and rectify them	questions test.	by the Instructor/Teacher
LU6: Check the RH% of the department	1	1	Monitor the RH% of the department	Multiple Choice Questions Numeric Problem	As decided by the Instructor/Teacher
LU7: Check the waste of the combing machine	1	2	Monitor the waste of the combing machine	Multiple Choice Questions Numeric Problem	As decided by the Instructor/Teacher
LU8: Check the electrical problems in comber machine	1	2	Monitor electrical problems in comber machine	Direct observation from practical demonstration by trainee in the workplace whilst being safety conscious.	As decided by the Instructor/Teacher

Module # 6 (Roving frame)

Learning Units	Theory Days/hours	Workplace Days/hours	Recommended formative assessment	Recommended Methodology	Scheduled Dates
LU1. Check the functions of roving frame	1	3	Explain the functions of roving frame	Direct observation from practical demonstration by trainee in the workplace whilst being safety conscious.	As decided by the Instructor/Teacher
LU2. Check the feeding sliver cans	1	1	Explain the feeding sliver cans	Direct observation from practical demonstration by trainee in the workplace whilst being safety conscious.	As decided by the Instructor/Teacher
LU3. Check the doffing bobbin's quantity and quality	1	1	Describe the doffing bobbin's quantity and quality	Direct observation from practical demonstration by trainee in the workplace whilst being safety conscious.	As decided by the Instructor/Teacher
LU4. Check the package size and	1	1	Explain the package size and shape	Short answer questions test. MCQs	As decided by the Instructor/Teacher

shape					Teacher
LU5. Check the cleaning of various parts of simplex machine	1	2	Explain the cleaning of various parts of simplex machine	Direct observation from practical demonstration by trainee in the workplace whilst being safety conscious.	As decided by the Instructor/Teacher
LU6. Check the winding tension of machine	1	1	Explain the winding tension of machine	Direct observation from practical demonstration by trainee in the workplace whilst being safety conscious.	As decided by the Instructor/Teacher
LU7. Check the waste of the Simplex machine	1	1	Demonstrate the collection of waste of the Simplex machine	Direct observation from practical demonstration by trainee in the workplace whilst being safety conscious.	As decided by the Instructor/Teacher
LU 8. Check the electrical problems in Simplex machine	1	2	Explain the electrical problems in Simplex machine	Direct observation from practical demonstration by trainee in the workplace whilst being safety conscious.	As decided by the Instructor/Teacher
LU 9. Check the start and stop of machine and it's display panel	1	2	Explain the start and stop of machine and it's display panel	Short answer questions test.	As decided by the Instructor/Teacher
LU 10. Check the running of Simplex with and without the material	1	2	Explain the running of Simplex with and without the material	Direct observation from practical demonstration by trainee in the workplace whilst being safety conscious.	As decided by the Instructor/Teacher
LU 11. Check the error messages and rectify them	1	1	Explain the error messages and rectify them	Direct observation from practical demonstration by trainee in the workplace whilst being safety conscious.	As decided by the Instructor/Teacher

LU 12. Check the RH% of the department	1	1	Define the RH% of the department	Multiple Choice Questions Numeric Problem	As decided by the Instructor/Teacher
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Module # 7 (Ring Frame)

Learning Units	Theory hours	Workplace hours	Recommended formative assessment	Recommended Methodology	Scheduled Dates
LU 1. Check the operations of ring frame	2	4	Define the operations of ring frame	Direct observation from practical demonstration by trainee in the workplace whilst being safety conscious.	As decided by the Instructor/Teacher
LU 2. Check the feeding of roving bobbins on hangers	1	1	Explain the feeding of roving bobbins on hangers	Direct observation from practical demonstration by trainee in the workplace whilst being safety conscious.	As decided by the Instructor/Teacher
LU 3. Monitor the knotting of yarn on ring frame	1	1	Describe the knotting of yarn on ring frame	Short answer questions test.	As decided by the Instructor/Teacher
LU 4. Monitor the doffing	1	2	Describe the doffing process	Direct observation from practical demonstration by trainee in the workplace whilst being safety conscious.	As decided by the Instructor/Teacher
LU 5. Check the cleaning of various parts of ring machine	1	1	Explain the cleaning of various parts of ring machine	Direct observation from practical demonstration by trainee in the workplace whilst being safety conscious.	As decided by the Instructor/Teacher
LU 6. Check the proper shape of ring package.	1	2	Demonstrate the proper shape of ring package.	Short answer questions test. MCQs	As decided by the Instructor/Teacher
LU 7. Check the waste of the Ring machine	1	2	Explain the waste of the Ring machine	Multiple Choice Questions Numeric problem	As decided by the Instructor/Teacher

LU 8. Check the electrical problems in ring machine	1	1	explain the electrical problems in ring machine	Illustrative test requiring diagrams	As decided by the Instructor/Teacher
LU 9. Check the start and stop of machine and it's display panel	1	1	explain the start and stop of machine and it's display panel	Direct observation from practical demonstration by trainee in the workplace whilst being safety conscious.	As decided by the Instructor/Teacher
LU 10. Check the running of ring frame with and without the material	1	1	Demonstrate the running of ring frame with and without the material	Direct observation from practical demonstration by trainee in the workplace whilst being safety conscious.	As decided by the Instructor/Teacher
LU 11. Check the error messages and rectify them	1	2	Explain the error messages and rectify them	Direct observation from practical demonstration by trainee in the workplace whilst being safety conscious.	As decided by the Instructor/Teacher
LU 12. Check the RH% of the department	1	1	Check the RH% of the department	Multiple Choice Questions Numeric Problem	As decided by the Instructor/Teacher
LU 13. Check the safety system of machine	1	1	Explain the safety system of machine	Direct observation from practical demonstration by trainee in the workplace whilst being safety conscious.	As decided by the Instructor/Teacher

Module # 8 (Auto Cone)

Learning Units	Theory Days/hours	Workplace Days/hours	Recommended formative assessment	Recommended Methodology	Scheduled Dates
LU1. Check the different types of packages on auto-cone	1	2	Explain the different types of packages on auto-cone	Direct observation from practical demonstration by trainee in the workplace whilst being safety conscious.	As decided by the Instructor/Teacher
LU2. Check the functions of cone winder	7	33	Explain the functions of cone winder	Direct observation from practical demonstration by trainee in the workplace whilst being safety conscious.	As decided by the Instructor/Teacher
LU3. Check the electrical problems in Auto Cone machine	1	2	Explain the electrical problems in Auto Cone machine	Direct observation from practical demonstration by trainee in the workplace whilst being safety conscious.	As decided by the Instructor/Teacher
LU4. Check the start and stop of machine and it's display panel	1	2	Define the start and stop motions of machine and it's display panel	Direct observation from practical demonstration by trainee in the workplace whilst being safety conscious.	As decided by the Instructor/Teacher
LU5. Check the running of auto-cone with and without the material	1	1	Demonstrate the running of auto-cone with and without the material	Direct observation from practical demonstration by trainee in the workplace whilst being safety conscious.	As decided by the Instructor/Teacher
LU6. Check the error messages and rectify them	1	1	Explain the error messages and rectify them	Direct observation from practical demonstration by trainee in the workplace whilst being safety conscious.	As decided by the Instructor/Teacher
LU7. Check the RH% of	1	1	Demonstrate the RH% of the	Short answer questions test	As decided by the

the department			department	Numeric Problems	Instructor/Teacher
LU8. Check the yarn clearer error messages	1	2	Explain the yarn clearer error messages	Direct observation from practical demonstration by trainee in the workplace whilst being safety conscious.	As decided by the Instructor/Teacher
LU9. Check the errors on control penal	1	2	Explain the errors on control penal	Direct observation from practical demonstration by trainee in the workplace whilst being safety conscious.	As decided by the Instructor/Teacher
LU10. Check the hard waste collection system	1	1	Demonstrate the hard waste collection system	Direct observation from practical demonstration by trainee in the workplace whilst being safety conscious.	As decided by the Instructor/Teacher

Module # 9 (Conditioning & Packing)

Learning Units	Theory hours	Workplace hours	Recommended formative assessment	Recommended Methodology	Scheduled Dates
LU1. check the feeding of cones	1	2	Explain the feeding of cones	Direct observation from practical demonstration by trainee in the workplace whilst being safety conscious.	As decided by the Instructor/Teacher
LU2. Check the quality of feeding material (UV light)	1	3	Demonstrate the quality of feeding material (UV light)	Illustrative test requiring diagrams	As decided by the Instructor/Teacher
LU3. Check the functions of machine	1	1	Explain the functions of machine	Direct observation from practical demonstration by trainee in the workplace whilst being safety conscious.	As decided by the Instructor/Teacher
LU4. Check	1	1	Demonstrate the	Direct	As decided by

the machine parameters			machine parameters	observation from practical demonstration by trainee in the workplace whilst being safety conscious.	the Instructor/Teacher
LU5. Check the condition of packing of conditioned cones	1	2	Explain the condition of packing of conditioned cones	Direct observation from practical demonstration by trainee in the workplace whilst being safety conscious.	As decided by the Instructor/Teacher

Supportive notes

- **Assessment context**
The assessment should be focusing on hands on experience of the trainees, therefore 80 % of the curriculum contents are practical jobs
- **Resources required for assessment**
There should be strong collaboration with private/public spinning factories so that Instructor/trainees can have frequent visits for quality learning.

5. List of Tools, Machinery & Equipment

Name of Trade	Spinning Operations Supervisor
Duration	1 Year

Sr. No.	Name of Item/ Equipment / Tools	Qty.
1.	Blow Room Line	1 set
2.	Carding Machines	2
3.	Draw Frames	4
4.	Lap Former	1
5.	Comber Machine	2
6.	Simplex	2
7.	Ring Frame(with compact, slub, lycra systems	4
8.	Auto Cone Machine (with yarn clearer of different types	2
9.	Air Conditioning Unit	1
10.	Yarn Conditioning Machine	1

Note:It is an intensive practical oriented training course and the machinery, equipment involved in it should be provided in the institute. It is also recommended that machines should be of different types.

6. List of Consumable Supplies

Name of Trade	Spinning Operations Supervisor
Duration	1 Year

Sr. No.	Name of Consumable Supplies
1.	Spinning Raw Material Bales (Cotton, Polyester etc)

Contributions for Development of This Curriculum

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