

Model Curriculum

Carding Operator

SECTOR: TEXTILE
SUB-SECTOR: SPINNING
OCCUPATION: SPINNING
REF ID: TSC/Q 0102, VERSION 1.0
NSQF LEVEL: 4



Certificate

CURRICULUM COMPLIANCE TO QUALIFICATION PACK – NATIONAL OCCUPATIONAL STANDARDS

is hereby issued by the

TEXTILE SECTOR SKILL COUNCIL

for the

MODEL CURRICULUM

Complying to National Occupational Standards of
Job Role/ Qualification Pack: 'CARDING OPERATOR' QP No. 'TSC/ Q 0102' **NSQF Level 4'**

Date of Issuance: **January, 18th, 2016**

Valid up to: **January 17th, 2017**

* Valid up to the next review date of the Qualification Pack

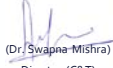

(Dr. Swapna Mishra)
Director (C&T)
(Textile Sector Skill Council)

TABLE OF CONTENTS

1. Curriculum	01
2. Trainer Prerequisites	05
3. Annexure: Assessment Criteria	06

Carding Operator

CURRICULUM / SYLLABUS

This program is aimed at training candidates for the job of a “Carding Operator”, in the “Textile” Sector/Industry and aims at building the following key competencies amongst the learner

Program Name	Carding Operator		
Qualification Pack Name & Reference ID.	Carding Operator TSC/Q0102, version 1.0		
Version No.	1.0	Version Update Date	30-12-2015
Pre-requisites to Training	Preferably equivalent to 5th (Normal literacy of reading, writing and understanding)		
Training Outcomes	<p>After completing this programme, participants will be able to:</p> <ul style="list-style-type: none"> • Become well verse with taking charge of shift and handing over shift • Learn and operate carding machine • Perform piecing and doffing activities • Maintain work area, tools and machines • Gain behavioural skill for team working • Maintain health, safety and security at work place • Comply with industry and organisational requirement 		

This course encompasses 7 out of 7 National Occupational Standards (NOS) of “Carding Operator” Qualification Pack issued by “TSC: Textile Sector Skill Council”

Sr. No.	Module	Key Learning Outcomes	Equipment Required
1	<p>Taking charge of shift and handing over shift to the operator</p> <p>Theory Duration (hh:mm) 17:00</p> <p>Practical Duration (hh:mm) 29:30</p> <p>Corresponding NOS Code TSC/N 0104</p>	<ul style="list-style-type: none"> • Learning general discipline • Become well verse with basic skills of communication • Understand the role of carding operator • Perform tasks while taking charge of shift and handing over shift • Become familiar in faults identification 	<p><u>Class room requirements:</u> a batch of 25 people seating capacity with a screen and projector</p>
2	<p>Operating the carding machine</p> <p>Theory Duration (hh:mm) 19:30</p> <p>Practical Duration (hh:mm) 49:00</p> <p>Corresponding NOS Code TSC/N 0105</p>	<ul style="list-style-type: none"> • Gain knowledge on machine parts & its function • Gain knowledge on control switches and display board operation • Starting, inching and stopping machine • Gain knowledge on control buttons and signal lights used for attending malfunctions and doffing • Perform operations of open/close doors, dismantle/assemble parts, etc. • Perform carding machine cleaning and maintenance activities • Perform cleaning operations of flat strip, blower waste, pit/droppings waste, etc. 	<p><u>1. common for every batch:</u> poster/video visuals for work method</p> <p><u>2. Class room requirements:</u> a batch of 25 people seating capacity with a screen and projector</p>
3	<p>Piecing the sliver and doffing the sliver can in card</p> <p>Theory Duration (hh:mm) 21:00</p> <p>Practical Duration (hh:mm) 48:30</p> <p>Corresponding NOS Code TSC/N 0106</p>	<ul style="list-style-type: none"> • Gain knowledge on machine parts & its function related to the respective module • Gain knowledge on count, can content, colour coding, etc. • Well verse in handling full/empty sliver cans (castor & non castor cans) • Piecing sliver ends • Attending sliver break • Knowing piecing quality • patrolling and check sliver can doff • reserving empty can in carding machine • cleaning can caster wheels • attending can doffing • become familiar in post doffing responsibilities 	<p><u>1. common for every batch:</u> poster/video visuals for work method</p> <p><u>2. Class room requirements:</u> a batch of 25 people seating capacity with a screen and projector</p>

Sr. No.	Module	Key Learning Outcomes	Equipment Required
4	<p>Maintain work area, tools and machines</p> <p>Theory Duration (hh:mm) 06:30</p> <p>Practical Duration (hh:mm) 16:30</p> <p>Corresponding NOS Code TSC/N 9001</p>	<ul style="list-style-type: none"> gain knowledge on waste control activities Gain knowledge on Housekeeping system Identify and know unique functions of basic hand tools like cleaning hook, cleaning stick, bag, etc. Handling equipment Perform maintenance activities for handling equipment 	<p><u>1. common for every batch:</u> poster/video visuals for work method</p> <p><u>2. Class room requirements:</u> a batch of 25 people seating capacity with a screen and projector</p>
5	<p>Working in a team</p> <p>Theory Duration (hh:mm) 07:30</p> <p>Practical Duration (hh:mm) 15:30</p> <p>Corresponding NOS Code TSC/N 9002</p>	<ul style="list-style-type: none"> Understanding the team work and its importance Knowing the basic requirements for team working 	<p><u>Class room requirements:</u> a batch of 25 people seating capacity with a screen and projector</p>
6	<p>Maintain health, safety and security at work place</p> <p>Theory Duration (hh:mm) 20:30</p> <p>Practical Duration (hh:mm) 26:00</p> <p>Corresponding NOS Code TSC/N 9003</p>	<ul style="list-style-type: none"> Knowing the general safety Rules Knowing the importance of personal protective equipment like apron, cap, earplugs, nose mask etc. and their application under different working conditions. Gain knowledge on various health hazards relevant to workplace and basic first aid training. Identify and select right equipment such as fire extinguisher & based on type of fire. Become good practice on first aid, fire fighting etc. 	<p><u>1. A sample of following items for each trainee:</u> apron, head cap, nose mask, ear plug, shoe,</p> <p><u>2. common for every batch:</u> first aid materials, fire extinguisher, work method posters/pictures,</p> <p><u>3. Class room requirements:</u> 25 people seating capacity with a screen and projector</p>
7	<p>Comply with industry and organisational requirement</p> <p>Theory Duration (hh:mm) 08:00</p>	<ul style="list-style-type: none"> Know about organizational and industry standards Know the requirements for self-development Gain knowledge on Organizational & Industry standards 	<p><u>Class room requirements:</u> 25 people seating capacity with a screen and projector</p>

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	<p>Practical Duration (hh:mm) 15:00</p> <p>Corresponding NOS Code TSC/N 9004</p>		
<p>Total Duration:</p> <p>Theory Duration 100:00</p> <p>Practical Duration 200:00</p>	<p>Unique Equipment Required: Apron, head cap, nose mask, earplug, shoe, lap trolley, cleaning brush, cleaning stick, sweep stick, pen/pencil, lapping cleaning hook, and hip bag.</p>		

Grand Total Course Duration: 300 Hours, 0 Minutes

(This syllabus/ curriculum has been approved by TSC: Textile Sector Skill Council)

Trainer Prerequisites for Job role: “Carding Operator” mapped to Qualification Pack: “Carding Operator/TQ 0102, Version 1.0”

Sr. No.	Area	Details
1	Description	To deliver accredited training service, mapping to the curriculum detailed above, in accordance with the Qualification Pack “ <u>Carding Operator/TQ0102, Version 1.0</u> ”.
2	Personal Attributes	Aptitude for conducting training, and pre/ post work to ensure competent, employable candidates at the end of the training. Strong communication skills, interpersonal skills, ability to work as part of a team; a passion for quality and for developing others; well-organized and focused, eager to learn and keep oneself updated with the latest in the mentioned field.
3	Minimum Educational Qualifications	Preferably equivalent to 5th (Normal literacy of reading, writing and understanding)
4a	Domain Certification	Certified for Job Role: “ <u>Carding Operator</u> ” mapped to QP: “ <u>Carding Operator/TQ0102, Version 1.0</u> ”. Minimum accepted score 85%.
4b	Platform Certification	Required that the Trainer is certified for SSC/Q 1402 Job Role: “Trainer” with atleast 85% score
5	Experience	Minimum 2 years experience with Carding Operator

Annexure: Assessment Criteria

Assessment Criteria for Carding Operator	
Job Role	Carding Operator
Qualification Pack	Carding Operator: TSC/Q 0102
Sector Skill Council	Textile Sector Skill Council

Sr. No.	Guidelines for Assessment
1	Criteria for assessment for each qualification pack will be created by the Sector Skill Council. Each performance criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for theory & skill practical for each PC.
2	The assessment for the theory part will be based on knowledge bank of question created by the SSC.
3	Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training centre (as per assessment criteria below)
4	Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training centre based on these criteria.
5	To pass the qualification pack, every trainee should score a minimum of 75%.
6	In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack

National Occupational Standards (NOS)	Performance Criteria (PC)	Total Marks	Out Of	Marks Allocation		
				Theor y	Skills Practical	Viva
1. TSC/N0104 (Taking charge of shift and handing over shift to carding Machine Operator)	PC1. come at least 10 - 15 minutes earlier to the work spot	100	3	1	1	1
	PC2. bring the necessary operational tools to the department		4	1	2	1
	PC3. meet the previous shift operator and discuss with him/ her regarding the issues faced by them with respect to the quality or production or spare or safety or any other specific instruction etc.		7	3	2	2
	PC4. understand the count produced, colour coding, followed in the carding for his allocated number of machines		7	3	2	2
	PC5. ensure the technical details are mentioned in the display board in the card		4	2	1	1
	PC6. check for the availability of the empty sliver cans		4	1	2	1
	PC7. ensure all the cards are running properly and problems if any should be clarified with the supervisor and operator, idle machines should be enquired for the reason for stoppage and report to the superiors regarding the same		3	1	1	1
	PC8. ensure proper functioning of card machine parts		5	2	2	1
	PC9. check the cleanliness of the machines & other work areas		4	1	2	1
	PC10. Check whether any spare/raw material/ tool / yarn / any other material are thrown under the machines or in the other work areas.		4	1	2	1
	PC11. Should question the previous shift operator for any deviation in the above and should bring the same to the knowledge of his/ her shift superior as well that of the previous shift as well.		4	2	1	1
	PC12. ensure the wastes collection boxes are empty while taking charge of shift		4	1	2	1
	PC13. ensure the work spot is clean		3	1	1	1
	PC14. hand over the shift to the incoming shift operator in a proper manner		5	2	2	1
	PC15. ensure in providing the details regarding count produced, colour coding followed in the carding for his allocated number of machines		7	3	2	2

National Occupational Standards (NOS)	Performance Criteria (PC)	Total Marks	Out Of	Marks Allocation		
				Theory	Skills Practical	Viva
	PC16. provide all relevant information regarding the count produced, idle machines, damaged machine parts if any		7	3	2	2
	PC17. get clearance from the incoming counterpart before leaving the work spot		5	2	1	2
	PC18. report to his/ her shift superiors as well as that of the incoming shift operator in case his/ her counterpart doesn't report for the incoming shift		5	2	1	2
	PC19. ensure the shift has to be properly handed over to the incoming shift operator		4	1	2	1
	PC20. report to his/ her shift superior about the quality / production / safety issues/ any other issue faced in his/her shift and should leave the department only after getting concurrence for the same from his/ her superiors		4	1	1	2
	PC21. collect the wastes from waste collection bags, weigh them and transport to storage area		4	2	2	0
	PC22. ensure the work spot is clean		3	1	1	1
	Total		100	37	35	28
	Weightage %			37	35	2
2. TSC/N0105 (Operating a carding machine)	PC1. start the machine	150	3	1	1	1
	PC2. operate the control switches for starting and stopping the card		4	1	2	1
	PC3. follow the different signal lamps used in machines		3	1	1	1
	PC4. ensure proper functioning of card by verifying in the display panel		6	2	2	2
	PC5. check whether the cotton is proper fed in the carding machine via chute feed system		4	1	2	1
	PC6. piece the sliver during breakage		6	2	2	2
	PC7. doff the full sliver can		6	2	2	2
	PC8. view the display panel and identify the reasons for machine stoppages if any		5	2	2	1
	PC9. ensure the card is running in the set speed by viewing the display panel		4	1	2	1
	PC10. ensure the working area is clean		4	1	2	1
	PC11. ensure proper functioning of machine		5	2	2	1

National Occupational Standards (NOS)	Performance Criteria (PC)	Total Marks	Out Of	Marks Allocation		
				Theory	Skills Practical	Viva
	PC12. ensure the sliver produced is free from surface damages		5	2	2	1
	PC13. clean the wastes in the carding department		4	1	2	1
	PC14. segregate the wastes collected and deposit at the waste bins		4	1	2	1
	PC15. remove the defect in slivers		5	2	2	1
	PC16. support the mechanic while carryout cleaning maintenance activities		4	1	2	1
	PC17. use proper tools for cleaning		4	1	2	1
	PC18. ensure safety while carrying out cleaning		4	1	2	1
	PC19. ensure the wastes collected are deposited in the respective waste box		4	1	2	1
	PC20. ensure carding area is clean		4	1	2	1
	PC21. ensure the chute feed is working properly and cotton is uniformly fed into card		4	1	2	1
	PC22. support the fitter for carrying out maintenance activities		3	1	1	1
	PC23. Ensure the draft variation on CV% is within the limits and if it's abnormal report it to superiors.		4	2	1	1
	PC24. inform the supervisor and maintenance in charge in case of a jam		4	1	2	1
	PC25. support the fitter during minor breakdown		4	1	2	1
	PC26. ensure proper material handling of sliver, sliver can and empty can		4	1	2	1
	PC27. ensure using proper material handling of tools and equipment		3	1	1	1
	PC28. ensure safety while operating the card		5	2	2	1
	PC29. use safety gadgets like caps, masks and shoes and verifying the safety stop motions		4	1	2	1
	PC30. ensure the sliver produced is free from outside damages		4	1	2	1
	PC31. collected usable waste to be weighed at shift end and to be placed in the specified area		4	1	2	1
	PC32. inform superiors immediately, if any break down or fault in the machine is noticed		4	1	2	1

National Occupational Standards (NOS)	Performance Criteria (PC)	Total Marks	Out Of	Marks Allocation		
				Theory	Skills Practical	Viva
	PC33. ensure the proper functioning of signal lamps		3	1	1	1
	PC34. ensure that machine is always working properly, if any deviations inform superiors immediately		4	1	2	1
	PC35. collect the reusable wastes in card and weigh them at shift end and place them in specified area		4	1	2	1
	PC36. Provide all relevant information's of the current working process to the next shift operator before relieving.		4	1	2	1
	Total		150	45	66	39
	Weightage %			30	44	26
3. TSC/N0106 (Piecing the sliver and doffing the sliver can in card)	PC1. identify whether the machine stoppage by viewing the signal lamps and in display panel	150	5	2	2	1
	PC2. identify the reasons for sliver breakage		6	2	2	2
	PC3. ensure minimum time is taken for attending the sliver breakage in carding department		4	1	2	1
	PC4. open the calendaring zone of card using control switches		4	1	2	1
	PC5. collect the web from calendaring zone and condense through the calendaring rollers and trumpets for sliver formation		6	2	3	1
	PC6. ensure proper piecing		7	2	3	2
	PC7. draw the sliver through the conveyor rollers and pass it through the coiler rollers in delivery zone into the sliver can		7	2	3	2
	PC8. ensure proper functioning of card post piecing		6	2	2	2
	PC9. collect the wastes collected during piecing and store the waste at respective waste box		6	2	2	2
	PC10. segregate the reusable wastes and weigh and record them in a register		5	2	2	1
	PC11. transfer the reusable wastes to carding		4	1	2	1
	PC12. ensure standard piecing procedure is adopted and quality of piecing is as per standards		6	2	3	1
	PC13. ensure minimum time is taken for piecing the sliver		5	2	2	1
	PC14. ensure safety while carrying out piecing activity		4	1	2	1

National Occupational Standards (NOS)	Performance Criteria (PC)	Total Marks	Out Of	Marks Allocation		
				Theory	Skills Practical	Viva
	PC15. verify the quality of piecing done in the sliver		5	2	2	1
	PC16. ensure sliver tension in the creeling section is appropriate		5	2	2	1
	PC17. ensure proper functioning of the machine		4	1	2	1
	PC18. collect the empty cans from combing preparatory or drawing department for feeding the empty cans in card		4	1	2	1
	PC19. keep the can castors clean before putting to the card		4	1	2	1
	PC20. ensure whether the sliver can is ready for doffing by viewing the details in display panel		4	1	2	1
	PC21. keep the empty cans at coiler for automatic can change		4	1	2	1
	PC22. keep the empty sliver can near the doffing machine in manual doffing		4	1	2	1
	PC23. doff the full sliver can in case of manual doffing		5	1	3	1
	PC24. ensure proper doffing procedure is followed		7	2	4	1
	PC25. ensure doffing is carried out properly in auto doffing		6	2	3	1
	PC26. move the sliver can to storage area		4	1	2	1
	PC27. ensure the card is properly restarted after doffing		5	2	2	1
	PC28. ensure proper functioning of card post doffing		5	2	2	1
	PC29. ensure proper material handling of sliver, sliver can and empty can		4	1	2	1
	PC30. ensure proper material handling of tools and equipment		5	2	2	1
	Total		150	47	68	35
	Weightage %			31	46	23
4. TSC/N9001 (Maintain work area, tools and machines)	PC1. handle materials, machinery, equipment and tools with care and use them in the correct way	50	4	1	2	1
	PC2. use correct lifting and handling procedures		4	1	2	1
	PC3. use materials to minimize waste		3	1	1	1
	PC4. maintain a clean and hazard free working area		3	1	1	1
	PC5. maintain tools and equipment		4	2	1	1

National Occupational Standards (NOS)	Performance Criteria (PC)	Total Marks	Out Of	Marks Allocation		
				Theory	Skills Practical	Viva
	PC6. carry out running maintenance within agreed schedules		4	1	2	1
	PC7. carry out maintenance and/or cleaning within one's responsibility		4	1	2	1
	PC8. report unsafe equipment and other dangerous occurrences		4	1	2	1
	PC9. ensure that the correct machine guards are in place		3	1	1	1
	PC10. work in a comfortable position with the correct posture		3	1	1	1
	PC11. use cleaning equipment and methods appropriate for the work to be carried out		3	1	1	1
	PC12. dispose of waste safely in the designated location		4	1	2	1
	PC13. store cleaning equipment safely after use		3	1	1	1
	PC14. carry out cleaning according to schedules and limits of responsibility		4	1	2	1
	Total		50	15	21	14
	Weightage%			30	42	28
5. TSC/N9002 (Working in a team)	PC1. be accountable to the own role in whole process	50	4	2	1	1
	PC2. perform all roles with full responsibility		4	2	1	1
	PC3. be effective and efficient at workplace		4	1	2	1
	PC4. properly communicate about company policies		4	1	1	2
	PC5. report all problems faced during the process		4	1	1	2
	PC6. talk politely with other team members and colleagues		4	1	1	2
	PC7. submit daily report of own performance		5	2	2	1
	PC8. adjust in different work situations		3	1	1	1
	PC9. give due importance to others' point of view		3	1	1	1
	PC10. avoid conflicting situations		3	1	1	1
	PC11. collaborate with colleagues performing the pre-required and post-required duty of carding tenter		4	2	1	1
	PC12. develop new ideas for work procedures		4	1	2	1

National Occupational Standards (NOS)	Performance Criteria (PC)	Total Marks	Out Of	Marks Allocation		
				Theory	Skills Practical	Viva
	PC13. improve upon the existing techniques to increase process efficiency		4	1	2	1
	Total		50	17	17	16
	Weightage %			34	34	32
6.TSC/N9003 (Maintain health, safety and security at work place)	PC1. comply with health and safety related instructions applicable to the workplace	100	5	2	2	1
	PC2. use and maintain personal protective equipment such as “ ear plug” “ nose mask “ “ head cap” etc., as per protocol		5	2	2	1
	PC3. carry out own activities in line with approved guidelines and procedures		4	2	1	1
	PC4. maintain a healthy lifestyle and guard against dependency on intoxicants		4	2	1	1
	PC5. follow environment management system related procedures		4	2	1	1
	PC6. identify and correct (if possible) malfunctions in machinery and equipment		4	2	2	0
	PC7. report any service malfunctions that cannot be rectified		4	2	1	1
	PC8. store materials and equipment in line with organizational requirements		4	1	2	1
	PC9. safely handle and remove waste		4	1	2	1
	PC10. minimize health and safety risks to self and others due to own actions		5	2	2	1
	PC11. seek clarifications, from supervisors or other authorized personnel in case of perceived risks		4	2	0	2
	PC12. monitor the workplace and work processes for potential risks and threat		4	2	2	0
	PC13. carry out periodic walk-through to keep work area free from hazards and obstructions, if assigned		4	2	2	0
	PC14. report hazards and potential risks/ threats to supervisors or other authorized personnel		4	1	2	1
	PC15. participate in mock drills/ evacuation procedures organized at the workplace		4	2	2	0
	PC16. undertake first aid, fire-fighting and emergency response training, if asked to do so		5	2	2	1
	PC17. take action based on instructions in the event of fire, emergencies or accidents		4	2	2	0

National Occupational Standards (NOS)	Performance Criteria (PC)	Total Marks	Out Of	Marks Allocation			
				Theory	Skills Practical	Viva	
	PC18. follow organization procedures for shutdown and evacuation when required		4	2	1	1	
	PC19. identify different kinds of possible hazards (environmental, personal, ergonomic, chemical) of the industry		4	2	1	1	
	PC20. recognize other possible security issues existing in the workplace		4	2	1	1	
	PC21. recognize different measures to curb the hazards		4	2	1	1	
	PC22. communicate the safety plan to everyone		4	2	1	1	
	PC23. attach disciplinary rules with the implementation		4	2	1	1	
	PC24. ensure that all revolving parts come to a halt before attending to the machine manually		4	2	2	0	
	Total			100	45	36	19
	Weightage %				45	36	19
7.TSC/N9004 (Comply with industry and organizational requirement)	PC1. perform own duties effectively	50	4	1	2	1	
	PC2. take responsibility for own actions		4	1	2	1	
	PC3. be accountable towards the job role and assigned duties		4	2	1	1	
	PC4. take initiative and innovate the existing methods		3	1	1	1	
	PC5. focus on self-learning and improvement		4	1	2	1	
	PC6. co-ordinate with all the team members and colleagues		4	1	2	1	
	PC7. communicate politely		4	1	1	2	
	PC8. avoid conflicts and miscommunication		4	1	2	1	
	PC9. know the organizational standards		4	2	1	1	
	PC10. implement them in your performance		4	1	2	1	
	PC11. motivate others to follow them		3	1	1	1	
	PC12. know the industry standards		4	3	1	0	
	PC13. align them with organization standards		4	2	1	1	
	Total			50	18	19	13
Weightage %			36	38	26		
Total			650	224	262	164	
Grand Total				650			



Textile Sector Skill Council

15th Floor, Nirmal Tower, 23, Barakhamba Road, New Delhi-110001