

Model Curriculum

Packing Machine Worker- Food Processing

SECTOR: FOOD PROCESSING

SUB-SECTOR: FRUIT & VEGETABLE, FOOD GRAIN MILLING (INCLUDING OILSEEDS), DAIRY PRODUCTS, MEAT & POULTRY, FISH & SEAFOOD, BREAD & BAKERY, ALCOHOLIC BEVERAGES, AERATED WATER/ SOFT DRINKS, SOYA FOOD, PACKAGED FOOD

OCCUPATION: PACKAGING

REF ID: FIC/Q7002, V1.0

NSQF LEVEL: 3

 <p>Skill India शिक्षण-सहाय-प्रारंभ-सिखा</p>	 <p>FICSI Food Industry Capacity and Skill Initiative</p>	 <p>N-S-D-C National Skill Development Corporation Transforming the skill landscape</p>
<h2>Certificate</h2>		
<h3>CURRICULUM COMPLIANCE TO QUALIFICATION PACK – NATIONAL OCCUPATIONAL STANDARDS</h3>		
is hereby issued by the		
FOOD INDUSTRY CAPACITY AND SKILL INITIATIVE (FICSI)		
for the		
MODEL CURRICULUM		
Complying to National Occupational Standards of		
Job Role/Qualification Pack: Packing Machine Worker-Food Processing QP No: FIC/Q7002, NSQF Level 3		
Date of Issuance: January, 2016	_____	
Valid up to: January, 2018		Authorised Signatory (Food Industry Capacity and Skill Initiative)
* Valid up to the next review date of the Qualification Pack		

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Packing Machine Worker- Food Processing

CURRICULUM / SYLLABUS

This program is aimed at training candidates for the job of a “Packing Machine Worker-Food Processing”, in the “Food Processing” Sector/Industry and aims at building the following key competencies amongst the learner

Program Name	Packing Machine Worker-Food Processing		
Qualification Pack Name & Reference ID. ID	FIC/Q7002, v1.0		
Version No.	1.0	Version Update Date	15/01/2016
Pre-requisites to Training	Preferably Class 5		
Training Outcomes	<p>After completing this programme, participants will be able to:</p> <ul style="list-style-type: none"> • Perform various packing related activities • Monitor the packaging production line • Perform post packaging activities • Understand and carry out safe working practice • Understand the importance of working safely in an industry • Understand the norms for working in a team 		

This course encompasses 3 out of 3 National Occupational Standards (NOS) of “Packing Machine Worker-Food Processing” Qualification Pack issued by “Food Industry Capacity and Skill Initiative”.

Sr. No.	Module	Key Learning Outcomes	Equipment Required
1	Introduction to the training program Theory Duration (hh:mm) 01:00 Practical Duration (hh:mm) 00:00 Corresponding NOS Code Bridge Module	<ul style="list-style-type: none"> Introduce each other and build rapport with fellow participants and the trainer. 	White board/Chart papers, marker
2	Overview of the “Packing Machine worker” Role Theory Duration (hh:mm) 01:00 Practical Duration (hh:mm) 00:00 Corresponding NOS Code	<ul style="list-style-type: none"> Understanding the roles and responsibilities of packing machine worker Awareness of the nature and availability of job opportunities 	Laptop/computer white board, marker, projector, chart papers
3	Introduction to the Food Processing Industry Theory Duration (hh:mm) 01:00 Practical Duration (hh:mm) 00:00 Corresponding NOS Code	<ul style="list-style-type: none"> Define food processing List the various sub sectors of food processing industry 	Laptop, white/black board, marker, chart papers, projector, Trainer's guide, Student manual
4	Organizational standards and norms Theory Duration (hh:mm) 04:00 Practical Duration (hh:mm)	<ul style="list-style-type: none"> State the roles and responsibilities of a packing machine worker State how to conduct yourself at the workplace State the personal hygiene and sanitation guidelines State the food safety hygiene standards to follow in a work environment 	Laptop, white board, marker, chart papers, projector, trainer's guide and student handbook, protective gloves, head caps, aprons, safety goggles, safety boots, mouth masks, sanitizer, safety manual

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	02:00 Corresponding NOS Code		
5	Observe packing machines for various processed food products and identify non-standard output Theory Duration (hh:mm) 10:00 Practical Duration (hh:mm) 11:00 Corresponding NOS Code FIC/N7006	<ul style="list-style-type: none"> • obtain packing specifications from authorized source eg. supervisor, team lead, ERP system, etc • identify food product to be packed and its specification in terms of quantity and quality • ensure inflow of food product to be packed is suitable as per specifications • identify packing material to be obtained, their quantities and any quality criteria that is to be adhered to before packing Packing material: sheets, boxes, cans, or rolls made of plastic, paper, cardboard, cloth or metal; bottles, etc. • Demonstrate obtaining packing material as per the job specification received • Demonstrate checking of the packing material as per required quantity and quality standard • Demonstrate using of appropriate personal protective equipment (PPE) • Identify environmental requirements for packing of the particular food item are in place as per operational guidelines Environmental requirements: e.g. temperature requirements, moisture requirements, non-contamination requirements, cleanliness and hygiene requirements, ventilation requirements, etc. • Demonstrate loading, positioning, or feeding the food product in the packing machine as per manufactures guidelines and packing specifications Packing machine: in continuation with the food processing line, separate machine from the food processing line • Demonstrate loading, positioning, or feeding the packing materials in the packing machine as per manufactures guidelines and packing specifications 	Laptop, white board, marker, chart papers, projector, trainer's guide and student handbook, coats and aprons; ear plugs or muffs; eye and facial protection; head-wear; lifting assistance; mesh aprons; protective boot covers; protective hand and arm covering ; protective head and hair covering; work uniforms; safety and waterproof footwear, containers, utensils, hand tools, lifting aids, stacking equipment, processing unit, conveyor and processing belts

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> • Demonstrate operating parameters as per the production requirements given in the packing specification • Demonstrate producing sample packing and checking of the packing as per specifications • Demonstrate adjustment of operating parameters to correct the faults identified in the samples till the packing is as per acceptable standards • Monitor equipment to identify any discrepancy in operating conditions • Demonstrate how to report the discrepancies identified to the supervisor or maintenance staff as per operational guidelines • Demonstrate production as per workplace procedures, taking all safety and hygiene related precautions • Monitor the packing production line to ensure that there are no discrepancies as per standard • Identify non-standard output product by visual inspection • Perform integrity testing on the packed items as per operational guidelines • Demonstrate segregation and labelling the non-standard materials and packages which do not meet the specification • Demonstrate handing over standard and non-standard packed products as per operational guidelines, with minimum damage • Demonstrate maintaining the supply of packing materials throughout the run • Demonstrate ensure that the required output rates are maintained • Identify discrepancies, non-standard out-put, problems and immediately report to the supervisor to ensure immediate resolution of the problem • Demonstrate shutting down the packing production line in case of emergencies • Demonstrate following of correct procedures for the removal of waste • Demonstrate cleaning of machine after use as per operational guidelines and manufacture's guidelines 	

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> Identify and report equipment faults as per operational guidelines Demonstrate storing re-usable materials and equipment in designated area in a condition ready for re use Demonstrate performing relevant documentation like production details, quality details, maintenance details, etc. Demonstrate complying with relevant legislation for food processing and packaging norms Norms: Food Safety and Standards Act, 2006 - Packaging and Labeling Regulations, relevant HACCP guidelines, relevant ISO 22000 guidelines, regulations with respect to the food item being packed, etc. Demonstrate adhering to organizational and FSSAI standards, policies and procedures with respect to operation of the food item packing machine 	
6	<p>Use basic health and safety practices at a food processing workplace</p> <p>Theory Duration (hh:mm) 08:00</p> <p>Practical Duration (hh:mm) 14:00</p> <p>Corresponding NOS Code FIC/N9002</p>	<ul style="list-style-type: none"> State the need to use protective clothing/equipment for specific tasks and work conditions State the name and location of people responsible for health and safety in the workplace Identify job-site hazardous work and state possible causes of risk or accident in the workplace Carry out safe working practices while dealing with hazards to ensure the safety of self and others State methods of accident prevention in the work environment of the job role State location of general health and safety equipment in the workplace Demonstrate working safely in and around trenches, elevated places and confined areas Demonstrate handling all food and related materials safely using correct procedures Demonstrate application of good housekeeping practices at all times Identify common hazard signs displayed in various areas State relevant food safety policies such as propriety product policy, 	Laptop, white board, marker, chart papers, projector, trainer's guide and student handbook, coats and aprons; ear plugs or muffs; eye and facial protection; head-wear; lifting assistance; mesh aprons; protective boot covers; protective hand and arm covering ; protective head and hair covering; work uniforms; safety and waterproof footwear, containers, utensils, hand tools, lifting aids, stacking equipment, processing unit, conveyor and processing belts

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<p>gloves policy, pest control policy, restrictions on harmful</p> <ul style="list-style-type: none"> • Use the various appropriate fire extinguishers on different types of fires correctly • Demonstrate rescue techniques applied during fire hazard • Demonstrate good housekeeping in order to prevent fire hazards • Demonstrate the correct use of a fire extinguisher • Demonstrate how to free a person from electrocution • Administer appropriate first aid to victims were required e.g. in case of bleeding, burns, choking, electric shock, poisoning, etc. • Demonstrate basic techniques of bandaging • Respond promptly and appropriately to an accident situation or medical emergency in real or simulated environments • Perform and organize loss minimization or rescue activity during an accident in real or simulated environments • Administer first aid to victims in case of a heart attack or cardiac arrest due to electric shock, before the arrival of emergency services in real or simulated cases • Demonstrate the artificial respiration and the CPR Process • Participate in emergency procedures • Complete a written accident/incident report or dictate a report to another person, and send report to person responsible • Demonstrate correct method to move injured people and others during an emergency 	
7	<p>Work effectively with others</p> <p>Theory Duration (hh:mm) 05:00</p> <p>Practical Duration (hh:mm) 03:00</p>	<ul style="list-style-type: none"> • Accurately receive information and instructions from the supervisor and fellow workers, getting clarification where required • Accurately pass on information to authorized persons who require it and within agreed timescale and confirm its receipt 	<p>Laptop, white board, marker, chart papers, projector, trainer's guide and student handbook, coats and aprons; ear plugs or muffs; eye and facial protection; head-wear; lifting assistance; mesh aprons; protective boot</p>

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	Corresponding NOS Code CSC/N1336	<ul style="list-style-type: none"> Give information to others clearly, at a pace and in a manner that helps them to understand Display helpful behaviour by assisting others in performing tasks in a positive manner, where required and possible Consult with and assist others to maximize effectiveness and efficiency in carrying out tasks Display appropriate communication etiquette while working Communication etiquette: do not use abusive language; use appropriate titles and terms of respect; do not eat or chew while talking (vice versa) etc. Display active listening skills while interacting with others at work Use appropriate tone, pitch and language to convey politeness, assertiveness, care and professionalism Demonstrate responsible and disciplined behaviours at the workplace Disciplined behaviours: e.g. punctuality; completing tasks as per given time and standards; not gossiping and idling time; eliminating waste, honesty, etc. Escalate grievances and problems to appropriate authority as per procedure to resolve them and avoid conflict 	covers; protective hand and arm covering ; protective head and hair covering; work uniforms; safety and waterproof footwear, containers, utensils, hand tools, lifting aids, stacking equipment, processing unit, conveyor and processing belts
8	Professional and Core Skills Theory Duration (hh:mm) 03:00 Practical Duration (hh:mm) 05:00 Corresponding NOS Code	<ul style="list-style-type: none"> Undertake a self-assessment test Identify personal strengths and weaknesses Plan and schedule the work order and manage time effectively to complete the tasks assigned Prevent potential problems from occurring Resolve issues and problems using acquired knowledge and realize the importance of decision making Identify potential problems and make sound and timely decision Improve your reading skills State the importance of listening 	Laptop, white/black board, marker, chart papers, projector ,Trainer's guide, Student manual
9	IT Skills Theory Duration (hh:mm) 05:00	<ul style="list-style-type: none"> Identify parts of the computer Use the computer keyboard effectively to type Use computer applications effectively to record day-to-day activities 	Laptop, white/black board, marker, chart papers, projector, Trainer's guide, Student manual

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	Practical Duration (hh:mm) 07:00 Corresponding NOS Code	<ul style="list-style-type: none"> Use the word processor effectively Use the spreadsheet application effectively Use the computer to document day-to-day activities 	
10	Field Visits Theory Duration (hh:mm) 04:00 Practical Duration (hh:mm) 30:00 Corresponding NOS Code	<ul style="list-style-type: none"> Observe the factory location, layout and safety aspects of food processing Observe the storage facilities for raw materials and finished products Observe the various machineries used in process Observe the various machineries used in process Observe the cleaning methods and processes followed to maintain the process machineries and tools Observe the raw materials used and their storage procedures Observe the packaging and storage processes of raw material and finished product Observe the post-production cleaning and maintenance process followed in the industry 	All the tools and equipment listed above must be available at the site of field visit
11	Revision Theory Duration (hh:mm) 02:00 Practical Duration (hh:mm) 02:00 Corresponding NOS Code	<ul style="list-style-type: none"> Revised the knowledge gained so far 	All the tools and equipment listed above must be available at the time of revision
12	Evaluation Theory Duration (hh:mm) 08:00 Practical Duration (hh:mm) 19:00 Corresponding NOS Code	<ul style="list-style-type: none"> Assess the knowledge and skills acquired by the participants 	All the tools and equipment listed above must be available for evaluation
13	On-the-job Training Theory Duration	<ul style="list-style-type: none"> Apply the skills and knowledge acquired in the training program in the field 	All the tools and equipment listed above

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	(hh:mm) 30:00 Practical Duration (hh:mm) 65:00 Corresponding NOS Code		must be available on the site at the time of OJT
	Total Duration 240:00 Theory Duration 82:00 Practical Duration 158:00	Unique Equipment Required: coats and aprons; ear plugs or muffs; eye and facial protection; head-wear; lifting assistance; mesh aprons; protective boot covers; protective hand and arm covering ; protective head and hair covering; work uniforms; safety and waterproof footwear, containers, utensils, hand tools, lifting aids, stacking equipment, processing unit, conveyor and processing belts	

Grand Total Course Duration: **240Hours, 0 Minutes**

(This syllabus/ curriculum has been approved by SSC: Food Industry Capacity and Skill Initiative)

Trainer Prerequisites for Job role: “Packing Machine Worker-Food Processing” mapped to Qualification Pack: “FIC/Q7002, v1.0”

Sr. No.	Area	Details
1	Description	To deliver accredited training service, mapping to the curriculum detailed above, in accordance with the Qualification Pack “FIC/Q7002”, Version 1.0
2	Personal Attributes	An aptitude for conducting training, and pre/ post work to ensure competent, employable candidates at the end of the training, and pre/post work to ensure competent, employable candidates at the end of the training. Strong communication 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 fields.
3	Minimum Educational Qualifications	<ul style="list-style-type: none"> • M.Sc/M.Tech/ME in Food Technology or Food Engineering with 1-2 years of hands on experience in packaging unit of a food industry • B.Sc (home Sc) /B.Tech/BE in Food Technology or Food Engineering with 2-3 years of hands on experience in packaging unit of a food industry • Diploma in food Technology or Food Engineering with 4 years of hand on experience in packaging unit of a food industry
4a	Domain Certification	Certified for Job Role: “ <u>Packing Machine Worker</u> ” mapped to QP: “FIC/Q7002, v1.0”. Minimum accepted score is 80%
4b	Platform Certification	Recommended that the Trainer is certified for the Job Role: “Trainer”, mapped to the Qualification Pack: “MEP/Q0102”. Minimum accepted SCORE IS 80 % as per FICSI guidelines.
5	Experience	<ul style="list-style-type: none"> • M.Sc/M.Tech/ME in Food Technology or Food Engineering with 1-2 years of hands on experience in packaging unit of a food industry • B.Sc (home Sc) /B.Tech/BE in Food Technology or Food Engineering with 2-3 years of hands on experience in packaging unit of a food industry • Diploma in food Technology or Food Engineering with 4 years of hand on experience in packaging unit of a food industry

Annexure: Assessment Criteria

Assessment Criteria	
Job Role	Packing Machine Worker- Food Processing
Qualification Pack	FIC/Q7002, v1.0
Sector Skill Council	Food Industry Capacity & Skill Initiative

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 and Skills Practical for each PC.
2	The assessment for the theory part will be based on knowledge bank of questions 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 center based on this criteria
5	To pass the Qualification Pack, every trainee should score a minimum of 70% (overall) in every QP
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.

Assessable Outcome	Assessment Criteria	Total Mark (600)	Out Of	Marks Allocation	
				Theory	Skills Practical
1. FIC/N7006: Observe packing machines for various processed food products	PC1. obtain packing specifications from authorized source eg. supervisor, team lead, ERP system, etc.	100	2	0	2
	PC2. identify food product to be packed and its specification in terms of quantity and quality		3	1	2
	PC3. ensure inflow of food product to be packed is suitable as per specifications		3	1	2
	PC4. identify packing material to be obtained, their quantities and any quality criteria that is to be adhered to before packing		3	1	2
	PC5. obtain packing material as per the job specification received		2	0	2
	PC6. check if the packing material is as per required quantity and quality standard		3	1	2
	PC7. ensure the packing machine is in operating condition		2	0	2
	PC8. use the appropriate personal protective equipment (PPE)		4	1	3

Assessable Outcome	Assessment Criteria	Total Mark (600)	Out Of	Marks Allocation	
				Theory	Skills Practical
	PC9. ensure environmental requirements for packing of the particular food item are in place as per operational guidelines		3	1	2
	PC10. load, position, or feed the food product in the packing machine as per manufactures guidelines and packing specifications		4	1	3
	PC11. load, position or feed the packing materials in the packing machine as per manufactures guidelines and packing specifications		4	1	3
	PC12. enter the operating parameters as per the production requirements given in the packing specification		3	1	2
	PC13. produce sample packing and check if the packing is as per specifications		4	1	3
	PC14. adjust operating parameters to correct the faults identified in the samples till the packing is as per acceptable standards		4	1	3
	PC15. monitor equipment to identify any discrepancy in operating conditions		3	1	2
	PC16. report the discrepancies identified to the supervisor or maintenance staff as per operational guidelines		2	0	2
	PC17. start production as per workplace procedures, taking all safety and hygiene related precautions		4	1	3
	PC18. monitor the packing production line to ensure that there are no discrepancies as per standard		3	1	2
	PC19. identify non-standard output product by visual inspection		2	0	2
	PC20. perform integrity testing on the packed items as per operational guidelines		4	1	3
	PC21. segregate and label the non-standard materials and packages which do not meet the specification		4	2	2
	PC22. hand over standard and non-standard packed products as per operational guidelines, with minimum damage		3	1	2
	PC23. maintain the supply of packing materials throughout the run		2	0	2
	PC24. ensure that the required output rates are maintained		2	0	2
	PC25. identify discrepancies, non-standard out-put, problems and immediately report to the supervisor to ensure immediate resolution of the problem		4	1	3

Assessable Outcome	Assessment Criteria	Total Mark (600)	Out Of	Marks Allocation	
				Theory	Skills Practical
	PC26. shut down the packing production line in case of emergencies		2	0	2
	PC27. follow the correct procedures for the removal of waste		3	1	2
	PC28. clean the machine after use as per operational guidelines and manufacture's guidelines.		3	1	2
	PC29. identify and report equipment faults as per operational guidelines		2	0	2
	PC30. store re-usable materials and equipment in designated area in a condition ready for re use		2	0	2
	PC31. perform relevant documentation like production details, quality details, maintenance details, etc.		2	0	2
	PC32. comply with relevant legislation for food processing and packaging norms		3	0	3
	PC33. adhere to organizational standards, policies and procedures with respect to operation of the food item packing machine		4	2	2
	Total		100	25	75
FIC/N9002 Use basic health and safety practices at a food processing workplace	PC1.use protective clothing/equipment for specific tasks and work conditions		5	2	3
	PC2.state the name and location of people responsible for health and safety in the workplace		3	1	2
	PC3.identify job-site hazardous work and state possible causes of risk or accident in the workplace		3	1	2
	PC4.carry out safe working practices while dealing with hazards to ensure the safety of self and others		5	2	3
	PC5.state methods of accident prevention in the work environment of the job role		3	0	3
	PC6.state location of general health and safety equipment in the workplace		3	0	3
	PC7.work safely in and around trenches, elevated places and confined areas		5	2	3
	PC8.handle all food and related materials safely using correct procedures		5	2	3
	PC9.apply good housekeeping practices at all times		5	2	3
	PC10.identify common hazard signs displayed in various areas		5	2	3
	PC11.adhere to relevant food safety policies such as propriety product policy, gloves policy, pest control policy, restrictions on harmful chemicals inside work area during production		5	2	3

Assessable Outcome	Assessment Criteria	Total Mark (600)	Out Of	Marks Allocation	
				Theory	Skills Practical
	PC12.use the various appropriate fire extinguishers on different types of fires correctly		4	1	3
	PC13.demonstrate rescue techniques applied during fire hazard		4	1	3
	PC14.demonstrate good housekeeping in order to prevent fire hazards		4	1	3
	PC15.demonstrate the correct use of a fire extinguisher		3	1	2
	PC16.demonstrate how to free a person from electrocution		4	1	3
	PC17.administer appropriate first aid to victims where required e.g. in case of bleeding, burns, choking, electric shock, poisoning, etc.		4	1	3
	PC18.demonstrate basic techniques of bandaging		4	1	3
	PC19.respond promptly and appropriately to an accident situation or medical emergency in real or simulated environments		4	1	3
	PC20.perform and organize loss minimization or rescue activity during an accident in real or simulated environments		4	1	3
	PC21.administer first aid to victims in case of a heart attack or cardiac arrest due to electric shock, before the arrival of emergency services in real or simulated cases		3	1	2
	PC22.demonstrate the artificial respiration and the CPR Process		3	1	2
	PC23.participate in emergency procedures		4	1	3
	PC24.complete a written accident/incident report or dictate a report to another person, and send report to person responsible		4	2	3
	PC25.demonstrate correct method to move injured people and others during an emergency		4	2	3
			100	32	68
CSC/N1336: Use basic health and safety	PC1. accurately receive information and instructions from the supervisor and fellow workers, getting clarification where required	100	10	3	7
	PC2. accurately pass on information to authorized persons who require it and within agreed timescale and confirm its receipt		10	3	7

Assessable Outcome	Assessment Criteria	Total Mark (600)	Out Of	Marks Allocation	
				Theory	Skills Practical
practices at a food processing workplace	PC3. give information to others clearly, at a pace and in a manner that helps them to understand		10	3	7
	PC4. display helpful behavior by assisting others in performing tasks in a positive manner, where required and possible		10	3	7
	PC5. consult with and assist others to maximize effectiveness and efficiency in carrying out tasks		10	3	7
	PC6. display appropriate communication etiquette while working		10	3	7
	PC7. display active listening skills while interacting with others at work		10	3	7
	PC8. use appropriate tone, pitch and language to convey politeness, assertiveness, care and professionalism		10	3	7
	PC9. demonstrate responsible and disciplined behaviors at the workplace		10	3	7
	PC10. escalate grievances and problems to appropriate authority as per procedure to resolve them and avoid conflict		10	3	7
			100	30	70
	Total		100	30	70
	Grand Total	300	300	100	200
	Percentage Weightage		100	40%	60%
	Minimum Pass% to qualify (aggregate):			70%	

