

Model Curriculum

Sugarcane Cultivator

SECTOR: AGRICULTURE & ALLIED
SUB-SECTOR: AGRICULTURE CROP PRODUCTION
OCCUPATION: FIELD CROPS CULTIVATION (CASH CROPS)
REF ID: AGR/Q0203, V1.0
NSQF LEVEL: 4



Certificate

CURRICULUM COMPLIANCE TO QUALIFICATION PACK – NATIONAL OCCUPATIONAL STANDARDS

is hereby issued by the

AGRICULTURE SKILL COUNCIL OF INDIA

for the

MODEL CURRICULUM

Complying to National Occupational Standards of
Job Role/Qualification Pack: '**Sugarcane Cultivator**' QP No. '**AGR/Qo2o3 NSQF Level 4**'

Date of Issuance: February 20th, 2017

Valid up to: March 31st, 2020

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



Authorised Signatory
(Agriculture Skill Council of India)

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Sugarcane Cultivator

CURRICULUM / SYLLABUS

This program is aimed at training candidates for the job of a “Sugarcane Cultivator”, in the “Agriculture & Allied” Sector/Industry and aims at building the following key competencies amongst the learner

Program Name	Sugarcane Cultivator		
Qualification Pack Name & Reference ID.	AGR/Q0203, v1.0		
Version No.	1.0	Version Update Date	
Pre-requisites to Training	No entry barrier, 5 th standard pass preferable		
Training Outcomes	<p>After completing this programme, participants will be able to:</p> <ul style="list-style-type: none"> • Select & Procure the Sugarcane crop variety: Analyse the geographical conditions, resources available, select the crop variety-high yielding variety, pest and disease tolerant variety, hybrid varieties • Grow and manage Sugarcane crop: Inputs requirement, Preparation of field, setts preparation & planting, soil testing, application of fertilizer & nutrients, pest & disease management, irrigation management, harvesting of cane crop, ratooning • Maintain the quality of the produce: Time of Harvesting, Sucrose content of the produce, post harvest practices, storage & transportation • Undertake Basic Farm Management: Crop planning, maintaining crop calendar, financial management, analyze market demand & supply • Become well versed with Environment Health & Safety: Well versed with health and safety measures in terms of personal safety and others as well. 		

This course encompasses 11 out of 11 National Occupational Standards (NOS) of “Sugarcane Cultivator Qualification Pack issued by “Agriculture Skill Council of India”.

Sr. No.	Module	Key Learning Outcomes	Equipment Required
1	<p>Introduction</p> <p>Theory Duration (hh:mm) 05:00</p> <p>Practical Duration (hh:mm) 00:00</p> <p>Corresponding NOS Code Bridge Module</p>	<ul style="list-style-type: none"> Understand the General Discipline in the class room (Do’s & Don’ts) Understand and study the Scope and Opportunities of Sugarcane crop cultivation Understand the Role of a Sugarcane Cultivator Get acquainted with the agro-climatic conditions required for Sugarcane cultivation Enlist the varieties for high sugar formation & higher cane yield Understand State farmers’ right under PPV & FRA act 2001 (9 rights) 	White Board, Marker, Laptop, projector
2	<p>Prepare land for Sugarcane cultivation</p> <p>Theory Duration (hh:mm) 05:00</p> <p>Practical Duration (hh:mm) 05:00</p> <p>Corresponding NOS Code AGR / N0207</p>	<ul style="list-style-type: none"> Prepare the field for Sugarcane cultivation- ploughing, planking etc Apply manures and fertilizers in appropriate quantity Prepare & apply proper plant residues in right quantity and duration Maintain soil pH at appropriate level Ensure proper tilth & moisture in the field Form ridges & furrows at appropriate depth & distance Form proper drainage channels 	White Board, Marker, Laptop, projector, plough, disc harrow, sub- soiler, tiller, land leveler, cultivator
3	<p>Prepare and plant setts</p> <p>Theory Duration (hh:mm) 05:00</p> <p>Practical Duration (hh:mm) 10:00</p> <p>Corresponding NOS Code AGR / N0208</p>	<ul style="list-style-type: none"> Identify and select the appropriate variety to be vegetatively propagated (high yielding, pest & disease resistant, hybrid, sucrose content etc) based on the agro climatic conditions, climate, soil type and required yield Identify pest & disease free seed material taken from young plants and buds not covered with dry scales Prepare setts with appropriate instruments/machines Ensure appropriate number of budded setts are used Undertake setts treatment using appropriate methods- steam, heat therapy, saturated lime water solution, appropriate chemicals and compounds like organo-mercurial compounds 	Marker, Laptop, projector, S’cane bud cutter/chipper, S’cane planter, Chemicals, lime solution

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> Ascertain & place setts using appropriate seed rate along appropriate locations & in correct numbers and at appropriate time Ascertain the planting system to be followed – ridges and furrows, trench, flat system, etc depending on the terrain, season and the location of planting Irrigate the prepared field with methods such as flood, micro irrigation surface-drip/sub-surface-drip/sprinkler etc prop the crop appropriately in the right time of cane growth Identify & select crops that can be used as an intercrop Practice intercropping & crop rotation to ensure higher yields and manage weeds Adopt integrated farming system for diversified income 	
4	<p>Macro and micro nutrient management for field crops</p> <p>Theory Duration (hh:mm) 05:00</p> <p>Practical Duration (hh:mm) 10:00</p> <p>Corresponding NOS Code AGR / N0108</p>	<ul style="list-style-type: none"> Understand the Nutrient requirement for the cultivation of Sugarcane Understand and perform the soil sampling for soil test Understand the Micro and Macro Nutrients in soil Understand the required fertilizer dosage for the nutrient enrichment in soil as per the soil health card Understand the various soil microorganisms beneficial for the nutrient enrichment in soil Use the bio fertilizer/organic manure in the cultivation of Sugarcane crop Estimate the quantity & apply fertilizer & micro-nutrients at various stages in appropriate dosage Maintain the record of application of fertilizers and intervals 	White Board, Marker, Laptop, projector, Sprayer, fertilizers, bio fertilizers, polythene/ cloth bags for soil samples, khurpa
5	<p>Curb weed in field crops</p> <p>Theory Duration (hh:mm) 05:00</p> <p>Practical Duration (hh:mm) 05:00</p> <p>Corresponding NOS Code</p>	<ul style="list-style-type: none"> Ascertain the type of weeds that afflict Sugarcane crop- annuals and perennials weed species, comprising of broad leaf weeds, grasses and sedges Understand the hazards of weed in Sugarcane crop cultivation Identify the stages of the crop need control (weeding) i.e. pre-emergence and at the time of earthing up. Understand the use of chemical herbicides and bio- herbicides 	White Board, Marker, Laptop, projector, chemicals, sprayer, weeder, hoe, sickle

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	AGR / N0109	<ul style="list-style-type: none"> Apply the herbicides Understand and perform the Manual/mechanized weeding 	
6	Integrated Pest & Disease management in field crops Theory Duration (hh:mm) 05:00 Practical Duration (hh:mm) 15:00 Corresponding NOS Code AGR / N0110	<ul style="list-style-type: none"> Understand the importance of Integrated Pest and Disease Management Identify major pests in Sugarcane crop viz., Termite, shoot borer, white grub, white fly, wooly aphid, mealy bug and rats etc Identify major diseases in sugarcane crop viz., red rot, wilt, smut, grassy shoot (albino), yellow leaf disease, leaf scaled, mosaic etc Understand the Characters & life cycle of different insect pests Get acquainted with the stages of crop when it is vulnerable to pests & diseases Understand the symptoms of and precaution measures for different diseases Prepare & apply biopesticides Apply suitable chemical for the insect pest and diseases attack Identify, select and place different insect traps according to the cultivar in the field Practice Integrated Pest and Disease Management- mechanical, biological & chemical methods Understand National and International standards on pesticide residues 	White Board, Marker, Laptop, projector, chemicals, sprayer, face mask, rubber gloves, pheromone traps, light traps, bird perches, sticky traps, trichogramma cards
7	Irrigation management for field crops Theory Duration (hh:mm) 05:00 Practical Duration (hh:mm) 05:00 Corresponding NOS Code AGR / N0111	<ul style="list-style-type: none"> Understand the Water requirement for the cultivation of Sugarcane Understand the soil texture, porosity etc Understand the effects of water clogging & poor drainage in the field Understand the required optimum moisture level in the field for Sugarcane cultivation Ascertain appropriate method of irrigation Ascertain critical growth stages of Sugarcane crops Prepare Irrigation Schedule as per the crop stage and ensure timely irrigation Undertake suitable irrigation method depending on the soil type, variety of Sugarcane & water availability 	White Board, Marker, Laptop, projector, irrigation equipments, spade

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> Understand water use efficiency concept 	
8	Manage harvest and Post-harvest in Sugarcane cultivation Theory Duration (hh:mm) 10:00 Practical Duration (hh:mm) 20:00 Corresponding NOS Code AGR / N0209	<ul style="list-style-type: none"> Understand Do's and Don'ts during crop harvesting Understand harvesting schedule for different planting season Apply cane ripeners Assess the maturity of the cane crops & judge age of the crop Assess the juice brix using hand refractometer for judging the cane maturity Harvest the crop at appropriate stage & time keeping in consideration crop maturity, sucrose content, climatic conditions etc using manual & mechanical techniques Understand and practice the proper method of harvesting and handling of harvested crop to reduce losses Understand the importance of Post harvest Management Understand various methods of storage and their influence on Sugarcane quality & cost dynamics Store the produce and ensure safety from storage pests Identify market & buyers for the produce Make arrangements for transportation of the produce 	White Board, Marker, Laptop, projector, hand refractometer, sickle, sugarcane harvester, Sugarcane De-topper cum Leaf Stripper, sprayer, fumigants
9	Manage ratoon in Sugarcane cultivation Theory Duration (hh:mm) 05:00 Practical Duration (hh:mm) 15:00 Corresponding NOS Code AGR / N0210	<ul style="list-style-type: none"> Understand the operations to be done before and just after harvesting of the main crop to get higher yield of ratoon crops Carry out ratooning at appropriate time post-harvest of cane Undertake appropriate ratoon operations like gap filling, stubble shaving and off barring Perform trash mulching after ratooning Use appropriate herbicides after ratooning Trash composting for the ratoon crops Irrigate appropriately for the ratoon crops Use appropriate nutrient management techniques for the ratoon crop Use newly developed equipment like ratooner, ratoon manager , trash 	White Board, Marker, Laptop, projector, ratooner, trash shedder, sprayer

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		shredder etc.	
10	Basic Farm Management Theory Duration (hh:mm) 10:00 Practical Duration (hh:mm) 10:00 Corresponding NOS Code AGR /N9901	<ul style="list-style-type: none"> Estimate the cost of production of Sugarcane crop Estimate the required investment Practice Farm management- Soil testing, selection of crop variety, Crop Calendar, Crop rotation, intercrops, schedule for fertilizer, pesticide/chemical application, irrigation schedule, harvesting schedule etc Identify the near market area and keep update on the market prices Keep record on the investment and expenditures Understand various uses of Sugarcane crop by-products- Sugarcane straw etc 	White Board, Marker, Laptop, projector, record keeping book
11	Assimilating Market Information Theory Duration (hh:mm) 05:00 Practical Duration (hh:mm) 05:00 Corresponding NOS Code AGR /N9902	<ul style="list-style-type: none"> Understand the suitable market platform for Sugarcane crop including e-procurement platform Collect the Market information from the reliable sources Analyze the market information Understand the right time, place for the market of the produce Get acquainted with Agro advisory services facility available through SMS mobile, Radio, TV, etc. 	White Board, Marker, Laptop, projector
12	Maintain health & safety at the workplace Theory Duration (hh:mm) 05:00 Practical Duration (hh:mm) 10:00 Corresponding NOS Code AGR /N9903	<ul style="list-style-type: none"> Perform General safety Rules Gain Knowledge of various health hazards relevant to workplace and basic first aid training Understand the basic safety checks and other common reported hazards before all farm operation Understand, identify and study the use of equipment ,processing machine and materials safely and correctly Understand and handle the emergency situation in workplace and during any farm operation 	White Board, Marker, Laptop, projector, safety mask, rubber gloves, safety boots, first aid kit
	Total Duration: Theory Duration (hh:mm)	Unique Equipment Required: White Board, Marker, Laptop, projector, Record Keeping Book, chemicals, plough, disc harrow, sub-soiler, tiller, land leveler, cultivator, polythene/ cloth bags for soil samples, khurpa, weeder,	

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	70:00 Practical Duration (hh:mm) 110:00	hoe, sickle, pheromone traps, light traps, bird perches, sticky traps, irrigation equipments, spade, harvester, fumigants,	

Grand Total Course Duration: **180 Hours, 0 Minutes**

(This syllabus/ curriculum has been approved by Agriculture Skill Council of India)

Trainer Prerequisites for Job role :“Sugarcane Cultivator” mapped to Qualification Pack:“AGR/Q0203, v1.0”

Sr. No.	Area	Details
1	Description	Trainer is responsible for providing the education and skills development training on Sugarcane cultivation from selection of crop variety to harvesting (includes land preparation, setts preparation & planting, cultivation and intercultural operations, harvesting, ratooning, marketing, etc)
2	Personal Attributes	Trainer should be Subject Matter Specialist. He/ She should have good communication and observation skill, leadership skill, practical oriented skill
3	Minimum Educational Qualifications	Diploma in Agriculture
4a	Domain Certification	Certified for Job Role: “Sugarcane Cultivator” mapped to QP: “AGR/Q0203, v1.0”. Minimum accepted score is 80%.
4b	Platform Certification	Certified for the Job Role: “Trainer”, mapped to the Qualification Pack: “MEP/Q0102”. Minimum accepted score is 80%
5	Experience	<ul style="list-style-type: none"> • M Sc (Agriculture / Horticulture / Botany/Forestry) • B.Sc. (Agriculture / Horticulture / Botany / Forestry) with 1 year of relevant experience • B.Sc. with 3 years of relevant experience • Any graduate (other than B. Sc.) with 4 years of relevant experience • Diploma in Agriculture with 4 years of relevant experience • 10+2 with 5 years of relevant experience

Annexure: Assessment Criteria

Assessment Criteria	
Job Role	Sugarcane Cultivator
Qualification Pack	AGR/Q0203, v1.0
Sector Skill Council	Agriculture

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	Assessment will be conducted for all compulsory NOS, and where applicable, on the selected elective/option NOS/set of NOS
4	Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (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 criterion.
5	To pass the Qualification Pack , every trainee should score a minimum of 70% of aggregate marks to successfully clear the assessment.
6	In case of <i>unsuccessful completion</i> , the trainee may seek reassessment on the Qualification Pack.

Assessable Outcome	Assessment Criteria	Total Marks (600)	Out Of	Marks Allocation	
				Theory	Skills Practical
1.AGR/N0207 Prepare land for Sugarcane cultivation	PC1.plough the field to bring soil to fine tilth	30	4	2	2
	PC2. level the field for ease of irrigation		3	1	2
	PC3. form ridges and furrows at appropriate depth and distance		2	1	1
	PC4. form drainage channels at appropriate depths and intervals		2	1	1
	PC5. apply compost or filter press at appropriate quantities and at the right locations in the prepared fields		4	2	2
	PC6. prepare past crop residues in the correct proportions		5	2	3
	PC7. apply past crop residues at right quantities and levels		4	2	2
	PC8. maintain the past crop residues for the correct duration		2	2	0
	PC9. maintain the soil pH in appropriate level		4	2	2
			30	15	15
2.AGR/N0208 Prepare and plant setts	PC1. identify the appropriate variety of the sugarcane to be vegetatively propagated depending on the area of cultivation, resistance to smut, red rot, drought tolerance, yield , sucrose /fiber content, etc	60	4	2	2
	PC2. take the seed material from young crop		2	1	1
	PC3. ascertain if the seed material is free from pests and other diseases		4	3	1
	PC4. ensure that the bud is not covered with too many dry scales		2	1	1
	PC5. ensure that appropriate number of budded setts are used		2	1	1
	PC6. prepare setts with appropriate instruments/machines		4	2	2
	PC7. soak setts in saturated lime water		2	1	1
	PC8. ascertain healthy setts for planting		2	1	1
	PC9. prepare the sett treatment mixture with the appropriate chemicals and measurements		6	3	3
	PC10. soak the setts in appropriate mixture for the prescribed duration		4	2	2
	PC11. treat setts with appropriate		6	2	4

	methods like steam, heat therapy, etc for prescribed duration and temperature				
	PC12. treat setts with appropriate chemicals and compounds like oregano-mercurial compounds		6	3	3
	PC13. ascertain the appropriate seed rate for planting the setts		2	1	1
	PC14. ascertain the planting system to be followed – ridges and furrows, trench, flat system, etc depending on the terrain and the location of planting		4	2	2
	PC15. irrigate the prepared field with methods such as flood, micro irrigation surface-drip/sub-surface-drip/sprinkler etc		4	2	2
	PC16. place setts along appropriate location in the prepared land		2	1	1
	PC17. ascertain the correct number of setts to be placed		2	1	1
	PC18. prop the crop appropriately in the right time of cane growth		2	1	1
			60	30	30
3.AGR/ N0108 Macro and micro nutrient management for field crops	PC1. take sample as per the recommended sampling procedure from the field	90	10	5	5
	PC2. dry the soil and prepare samples as per procedure		10	5	5
	PC3. pack, label and submit to nearby soil testing laboratory for analysis		10	5	5
	PC4. collect the soil analysis report from the lab		5	2	3
	PC5. collect the recommended organic and inorganic fertilizer dosage from Agriculture Department based on the soil analysis report		5	3	2
	PC6. ascertain the right organic and inorganic fertilizers to be applied		10	5	5
	PC7. prepare the fields appropriately for the fertilizer application		8	4	4
	PC8. mix the fertilizers in appropriate quantities		10	5	5
	PC9. apply the fertilizers in right dosage, time and intervals of crop growth		22	11	11
			90	45	45
4. AGR/N0109 Curb weed in field crops	PC1. ascertain the type of weeds that will afflict the field crop	60	15	7	8
	PC2. regulate the chemicals during soil preparation so that the land does not become congenial to weeds		10	5	5
	PC3. plant appropriate intercrops varieties that will smother the weed growth		10	5	5

	PC4. use appropriate herbicides in the appropriate time		15	8	7
	PC5. use mechanical weeding equipments like hoes, where applicable		10	5	5
			60	30	30
5.AGR/N0110 Integrated pest and disease management in field crops	PC1. identify the various pests for the field crops	90	5	2	3
	PC2. identify the stage of crop growth when the pests attack		5	2	3
	PC3. identify the part of the crop where the specific pests will attack		5	2	3
	PC4. identify and document the pest behavior		4	2	2
	PC5. prepare a pest calendar with all pest characteristics for field crop		4	2	2
	PC6. document the preventive measures for the pests		3	2	1
	PC7. adopt direct pest control methods		8	4	4
	PC8. adopt promotion of natural enemies to the various pests that can control the same naturally		8	4	4
	PC9. identify the various diseases for the field crops		4	2	2
	PC10. identify the stage of crop when it is vulnerable to disease		4	2	2
	PC11. identify the part on the crop where the specific disease will occur		4	2	2
	PC12. identify the symptoms for the diseases		4	2	2
	PC13. identify the mode of disease transfer		4	2	2
	PC14. ascertain the appropriate integrated pest management techniques like trash mulching, de-trashing, egg destruction, bund freeing, water draining, usage of bio-control agents, etc		8	4	4
	PC15. use appropriate pest and disease management chemicals in right quantities		8	4	4
	PC16. use pest and disease resistant varieties		6	3	3
	PC17. practice preventive techniques like pheromone traps, light traps, bird perches, sticky traps, etc. according to the cultivar		6	4	2
			90	45	45
6. AGR/N0111 Irrigation management for field crops	PC1. ascertain the right amount of water required based on the physiological need of the crops, soil moisture and climate of the place of cultivation	60	15	7	8
	PC2. ascertain the right amount of water for the field crops in various stages of		15	8	7

	critical growth				
	PC3. use appropriate micro irrigation systems wherever possible and applicable		20	10	10
	PC4. avoid excessive watering		10	5	5
			60	30	30
7.AGR/ N0209 Manage harvest and post harvest in Sugarcane cultivation	PC1. apply cane reopeners	90	10	5	5
	PC2. assess the of maturity of the cane crop either calculating the time expected for harvest or by using appropriate methods to judge the maturity		15	7	8
	PC3. judge age of crop		10	5	5
	PC4. harvest the crop at the appropriate stage using appropriate tools		10	5	5
	PC5. harvest crop using manual/mechanical techniques		10	5	5
	PC6. dry the harvested produce to remove moisture		10	5	5
	PC7. maintain ideal storage conditions		10	5	5
	PC8. manage storage pests		15	8	7
			90	45	45
8.AGR/ N0210 Manage ratoon in Sugarcane cultivation	PC1. carry out ratooning within a week after the harvest of the cane crops	30	2	1	1
	PC2. use appropriate ratoon operations like gap filling, stubble shaving and off barring		3	2	1
	PC3. perform trash mulching after ratooning		4	2	2
	PC4. use appropriate herbicides after ratooning		5	2	3
	PC5. trash composting for the ratoon crops		3	1	2
	PC6. irrigate appropriately for the ratoon crops		5	2	3
	PC7. use appropriate nutrient management techniques for the ratoon crop		6	3	3
	PC8. use newly developed equipment like ratooner, ratoon manager , trash shredder etc.,		2	2	0
			30	15	15
9.AGR/N9901 Basic farm management	PC1. choose the crop based on agro-climatic condition of the region	30	2	1	1
	PC2. take sample of the soil for testing		1	0	1
	PC3. perform intercropping with suitable and recommended crops (as per the main crop cultivated)		2	1	1
	PC4. perform crop rotation with suitable crops		2	1	1

	PC5. interact with agriculture / extension expert for crop planning		1	1	0
	PC6. choose crop based on the economic advantage		2	1	1
	PC7. maintain crop production activity record		1	1	0
	PC8. maintain crop calendars		1	1	0
	PC9. maintain calendars of weed		1	1	0
	PC10. maintain insect and pest calendar		2	1	1
	PC11. ascertain total cost of production (land, production practices, labour, equipment , fuel, administrative cost etc.)		2	1	1
	PC12. maintain records of investment and expenditure		2	1	1
	PC13. maintain necessary books of accounts		2	1	1
	PC14. identify government schemes and their eligibility for availing themselves of the same		2	1	1
	PC15. identify the nearest market		2	1	1
	PC16. identify local traders, mandis in the villages and nearby and compare the rates		2	1	1
	PC17. identify market rates of the produce season wise		2	1	1
	PC18. arrange cost-effective transportation of produce to the market		1	0	1
			30	16	14
10.AGR/N9902 Assimilating market information	PC1. understand the different sources of information at village-level through other farmers, neighbors, relatives, agricultural extension workers, agriculture specialists, concerned government and private departments like gram panchayat, co-operative societies and SHGs etc.	30	1	1	0
	PC2. identify different sources of information at market level through commission agents, mandis and input dealers		1	1	0
	PC3. identify different sources of information through media sources like radio, newspapers, television, magazine internet, SMS in mobile phones etc.		1	0	1
	PC4. identify the appropriate sources of specific market information and proper ways to collect the required information		1	0	1
	PC5. identify the reliable source of information		1	0	1
	PC6. ascertain methods of collecting information through personal visit,		2	1	1

	telephone, internet and published reports, magazines and articles, workshops, attending seminars and training by agriculture extension service providers				
	PC7. ascertain periodicity and cost of assessing market information		2	1	1
	PC8. ascertain availability and non-availability of specific market information		1	0	1
	PC9. perform documentation for analyzing market information		1	0	1
	PC10. evaluate the authenticity of information received		2	1	1
	PC11. analyze the information for taking decision		2	1	1
	PC12. utilize market information for taking cost effective production decisions		2	1	1
	PC13. understand quality-wise and variety-wise prices of different products such as seeds, pest, fertilizer, etc		2	1	1
	PC14. use market information and decide on crop and area to be sown which could result in better productivity for the season		2	1	1
	PC15. utilize market information for taking effective pre harvesting decisions like seed preparation, land preparation, nutrition management, weed management, pest and diseases management and irrigation management		2	1	1
	PC16. utilize market information for appropriate post-harvesting decision like drying, grading, bagging, transportation, processing and storage		2	1	1
	PC17. decide on marketing parameters like where to sell, when to sell, to whom to sell and what quantity to sell etc. which leads to profit		2	1	1
	PC18. understand benefits derived from market information		1	0	1
	PC19. make projections/future price movements through information sources		1	1	0
	PC20. understand price fluctuations in markets and take appropriate decision		1	1	0
			30	14	16
11.AGR/N9903 Maintain health and safety at the workplace	PC1. undertake basic safety checks before operation of all machinery and vehicles and hazards are reported to the appropriate supervisor	30	2	1	1

PC2. work for which protective clothing or equipment is required is identified and the appropriate protective clothing or equipment is used in performing these duties in accordance with workplace policy.		2	1	1
PC3. read and understand the hazards of use and contamination mentioned on the labels of pesticides/fumigants etc		2	1	1
PC4. assess risks prior to performing manual handling jobs, and work according to currently recommended safe practice.		2	1	1
PC5. use equipment and materials safely and correctly and return the same to designated storage when not in use		2	1	1
PC6. dispose of waste safely and correctly in a designated area		2	1	1
PC7. recognize risks to bystanders and take action to reduce risk associated with jobs in the workplace		3	2	1
PC8. perform your work in a manner which minimizes environmental damage all procedures and work instructions for controlling risk are followed closely.		2	1	1
PC9. report any accidents, incidents or problems without delay to an appropriate person and take necessary immediate action to reduce further danger.		1	0	1
PC10. follow procedures for dealing with accidents, fires and emergencies, including communicating location and directions to emergency.		2	1	1
PC11. follow emergency procedures to company standard / workplace requirements		2	1	1
PC12. use emergency equipment in accordance with manufacturers' specifications and workplace requirements		2	1	1
PC13. provide treatment appropriate to the patient's injuries in accordance with recognized first aid techniques		2	1	1
PC14. recover (if practical), clean, inspect/test, refurbish, replace and store the first aid equipment as appropriate		2	1	1
PC15. report details of first aid administered in accordance with workplace procedures.		2	1	1
		30	15	15
	600	600	300	300

TOTAL				
Percentage Weightage:			50%	50%
Minimum Pass% to qualify (aggregate):			70%	