

WEST BENGAL COUNCIL OF HIGHER SECONDARY EDUCATION
SYLLABUS FOR CLASSES XI AND XII
JOB ROLE: JAM, JELLY AND KETCHUP PROCESSING TECHNICIAN

COURSE OVERVIEW

A Jam, Jelly and Ketchup Processing Technician is responsible for processing fruits and vegetables to make jam, jelly and ketchup. He/she is responsible for receiving fruits, checking raw material quality, sorting, pulping, pasteurizing, cooking, juice extracting, clarifying, filtering, sampling for quality analysis, cooling, packaging and storing. He/she should possess the ability to plan, organize, prioritize, calculate and handle pressure.

COURSE OUTCOME:

On completion of the course, students should be able to:

- Apply effective oral and written communication skills to interact with people and customers; □
Identify the principal components of a computer system;
- Demonstrate the basic skills of using computer;
- Demonstrate self-management skills;
- Demonstrate the ability to provide a self-analysis of entrepreneurial skills and abilities;
- Demonstrate the knowledge of the importance of green skills in meeting the challenges of sustainable development and environment protection;
- Identify and control hazards in the workplace that pose a danger or threat;
- Prepare and maintain work area and equipment for food processing;
- Prepare Jam, Jelly and Ketchup as per the standards and standard operating procedures and methods;
- Demonstrate packaging of Jam, Jelly and Ketchup;
- Maintain documents and perform record keeping;
- Understand food quality and sanitation laws for processed food products

COURSE STRUCTURE

JOB ROLE: JAM, JELLY AND KETCHUP PROCESSING TECHNICIAN

SECTOR: FOOD PROCESSING

Class	Semester	Contact Hours						Marks		
		Employability Skills	Domain Theory	Domain Practical	Practical Exam	Project	Total	Theory		Practical
XI	I	70	40	55	-	-	165	30	Average of Sem I & Sem II = 30	NIL
	II	40	25	45	10	15	135	30		50 + 20 = 70
XII	III	70	33	52	-	-	155	30	Average of Sem III & Sem IV = 30	NIL
	IV	40	46	34	10	15	145	30		50 + 20 = 70

JOB ROLE: JAM, JELLY AND KETCHUP PROCESSING TECHNICIAN**Class XI [Total Theory Marks 30]****Class XI SEMESTER 1 TOPICS: (MCQ) MARKS: 30 [1 MARK PER QUESTION]**

SL No.	Topic	Tuition Hours	Marks Allotted
	Part A: Employability Skills	70	
1	Unit 1: Communication Skills – III	25	2
2	Unit 2: Self-management Skills – III	25	2
3	Unit 3: Information and Communication Technology Skills – III	20	2
	Part B: Vocational Skills	95	
4	Unit 1: Introduction to Food Processing	35	8
5	Unit 2: Fruit and Vegetable Processing	60	16
	Total	165	30

Class XI SEMESTER 2 TOPICS: [Short Answer Question, Descriptive Question] MARKS: 30

SL No.	Topic & Sub-Topics	Tuition Hours	Short Answer Type Question (10 Marks)	Descriptive Type Question (20 Marks)	Total
	Part A: Employability Skills	40			
1	Unit 4: Entrepreneurial Skills - III	25	1	2	3
2	Unit 5: Green Skills - III	15	1	2	3
	Part B: Vocational Skills	70			
3	Unit 3: Introduction to Food Microbiology	25	3	6	9
4	Unit 4: Prepare and Maintain Work Area	45	5	10	15
	Part C: Practical Work	10			
5	Practical Examination	06			
6	Written Test	01			
7	Viva Voce	03			
	Part D: Project Work/Field Visit	15			
8	Practical File/ Student Portfolio	10			
9	Viva Voce	05			
	Total	135	10	20	30

JOB ROLE: BUSINESS CORRESPONDENT AND BUSINESS FACILITATOR**Class XII [Total Theory Marks 30]****Class XII SEMESTER 3 TOPICS: (MCQ) MARKS: 30 [1 MARK PER QUESTION]**

SL No.	Topic	Tuition Hours	Marks Allotted
	Part A: Employability Skills	70	
1	Unit 1: Communication Skills - IV	25	2
2	Unit 2: Self-management Skill - IV	25	2
3	Unit 3: Information and Communication Technology Skills - IV	20	2
	Part B: Vocational Skills	85	
4	Unit 1: Preparation of Jam, Jelly and Ketchup	65	16
5	Unit 2: Packaging of Jam, Jelly and Ketchup	20	8
	Total	155	30

Class XII SEMESTER 4 TOPICS: [Short Answer Question, Descriptive Question] MARKS: 30

SL No.	Topic & Sub-Topics	Tuition Hours	Short Answer Type Question (10 Marks)	Descriptive Type Question (20 Marks)	Total
	Part A: Employability Skills	40			
1	Unit 4: Entrepreneurial Skills - IV	25	1	2	3
2	Unit 5: Green Skills - IV	15	1	2	3
	Part B: Vocational Skills	80			
3	Unit 3: Documentation and Record Keeping	30	3	6	9
	Unit 4: Food Quality and Sanitation Laws for Processed Food Products	35	3	6	9
4	Unit 5: Occupational Health, Hygiene and First Aid Practices	15	2	4	6
	Part C: Practical Work	10			
5	Practical Examination	06			
6	Written Test	01			
7	Viva Voce	03			
	Part D: Project Work/Field Visit	15			
8	Practical File/ Student Portfolio	10			
9	Viva Voce	05			
	Total	145	10	20	30

DETAIL SYLLABUS
CLASS - XI
SEMESTER – I

Part A: Employability Skills			
Unit 1: Communication Skills – III			
Learning Outcome	Theory (10 Hours)	Practical (15 Hours)	Duration (25 Hrs)
1. Demonstrate knowledge of various methods of communication	1. Methods of communication – Verbal – Non-verbal – Visual	1. Writing pros and cons of written, verbal and non-verbal communication 2. Listing do's and don'ts for avoiding common body language mistakes	05
2. Identify specific communication styles	1. Communication styles- assertive, aggressive, passive- aggressive, submissive, etc.	1. Observing and sharing communication styles of friends, teachers and family members and adapting the best practices 2. Role plays on communication styles.	10
3. Demonstrate basic writing skills	1. Writing skills to the following: • Sentence • Phrase • Kinds of Sentences • Parts of Sentence • Parts of Speech • Articles • Construction of a Paragraph	1. Demonstration and practice of writing sentences and paragraphs on topics related to the subject	10
Unit 2: Self-management Skills – III			
Learning Outcome	Theory (10 Hours)	Practical (15 Hours)	Duration (25 Hrs)
1. Demonstrate impressive appearance and grooming	1. Describe the importance of dressing appropriately, looking decent and positive body language. 2. Describe the term grooming 3. Prepare a personal grooming checklist. 4. Describe the techniques of self- exploration.	1. Demonstration of impressive appearance and groomed personality. 2. Demonstration of the ability to self- explore.	10
2. Demonstrate team work skills	1. Describe the important factors that influence in team building. 2. Describe factors influencing team work.	1. Group discussion on qualities of a good team. 2. Group discussion on strategies that are adopted for team building and team work.	10

3. Apply time management strategies and techniques	1. Meaning and importance of time management – setting and prioritizing goals, creating a schedule, making lists of tasks, balancing work and leisure, using different optimization tools to break large tasks into smaller tasks.	1. Game on time management. 2. Checklist preparation. 3. To-do-list preparation.	05
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Unit 3: Information and Communication Technology Skills - III

Learning Outcome	Theory (08 Hours)	Practical (12 Hours)	Duration (20 Hrs)
1. Create a document on word processor	1. Introduction to word processing. 2. Software packages for word processing. 3. Opening and exiting the word processor. 4. Creating a document	1. Demonstration and practice of the following: <ul style="list-style-type: none"> • Listing the features of word processing, • Listing the software packages for word processing, • Opening and exit the word processor, • Creating a document 	10
2. Edit, save and print a document in word processor	1. Editing text 2. Wrapping and aligning the text 3. Font size, type and face. 4. Header and Footer 5. Auto correct 6. Numbering and bullet 7. Creating table 8. Find and replace 9. Page numbering. 10. Printing document. 11. Saving a document in various formats	1. Demonstration and practicing the following: <ul style="list-style-type: none"> • Editing the text • Word wrapping and alignment, • Changing font type, size and face, • Inserting header and footer, • Removing header and footer, 2. Using autocorrect option, 3. Insert page numbers and bullet 4. Save and print a document.	10

Part B: Vocational Skills

Unit 1: Introduction to Food Processing

Learning Outcome	Theory (15 Hours)	Practical (20 Hours)	Duration (35 Hrs)
1. Describe the importance of food processing	1. Meaning of food processing 2. Importance and need of food processing and preservation 3. Fruit and vegetable in human nutrition	1. Identification of the proceed product from vegetable and fruits	10
2. Categorize different sub- sectors under food processing	1. Introduction to different sub-sector of food processing 2. Role and contribution of	1. Visit to a food processing industry and submit a report	15

	different sub-sectors in Indian economy		
3. Identify scope of food processing	1. Present scenarios of food processing in India 2. Scope and future prospects of food processing in India	--	10
Unit 2: Fruits and Vegetables Processing			
Learning Outcome	Theory (25 Hours)	Practical (35 Hours)	Duration (60 Hrs)
1. Describe the processing of fruits and vegetable	1. Importance of fruits and vegetable in human nutrition 2. Define fruits and vegetable processing 3. Identify quality parameters of fruit and vegetable processing	1. Identification of fruit and vegetable quality parameters for processing	10
2. Understand basic principle and methods of preservation	1. Principles of food preservation and processing 2. Methods of preservation 3. Advantages of low-cost technology for preservation and processing	1. Enlist the different processed products	15
3. State the use of preservatives	1. Define preservatives 2. Importance and types of the preservatives 3. Natural and chemical preservative	1. Demonstrate the use of preservatives	10
4. Understand minimal processing technology	1. Define minimal processing 2. Fruits and vegetable suitable for minimal processing 3. Preparation of fruits and vegetables for minimal processing 4. Care during minimal processing 5. Use of machinery in minimal processing	1. Demonstration of product preparation- cutting, slicing, shredding, cubing, dicing etc.	10
5. Execute drying and dehydration process	1. Drying, Dehydration and its importance 2. Selection of fruits and vegetables suitable for drying and dehydration 3. Sun drying, types of solar driers and dehydrators 4. Osmotic drying and dehydration	1. Demonstration of the drying process 2. Assessment of end point of dried products	05
6. Carry out canning	1. Define canning 2. Importance of canning 3. Fruits and vegetable	1. Enlist the Fruits and vegetables suitable for Canning 2. Visit industry and prepare	05

	suitable for canning 4. Process of canning 5. Precaution taken during canning 6. Testing of defects in canned products	report of canning process	
7. Execute process of fermentation	1. Define fermentation 2. Type of fermentation 3. Requirements of fermentation 4. Common fermented products 5. Merit and demerits of fermentation	1. Select fruits/ vegetable for fermentation 2. Demonstration fermentation process 3. Select proper culture for fermentation	05

DETAIL SYLLABUS**CLASS - XI****SEMESTER – II**

Part A: Employability Skills			
Unit 4: Entrepreneurial Skills – III			
Learning Outcome	Theory (10 Hours)	Practical (15 Hours)	Duration (25 Hrs)
1. Describe the significance of entrepreneurial values and attitude.	<ol style="list-style-type: none"> 1. Values in general and entrepreneurial values. 2. Entrepreneurial value orientation with respect to inattentiveness, independence, outstanding performance and respect for work. 	<ol style="list-style-type: none"> 1. Listing of entrepreneurial values by the students. 2. Group work on identification of entrepreneurial values and their roles after listing or reading 2-3 stories of successful entrepreneur. 3. Exhibiting entrepreneurial values in Ice breaking, rapport building, group work and home assignments. 	10
2. Demonstrate the knowledge of attitudinal changes required to become an entrepreneur.	<ol style="list-style-type: none"> 1. Attitudes in general and entrepreneurial attitudes 2. Using imagination/ intuition 3. Tendency to take moderate risk 4. Enjoying freedom of expression and action 5. Looking for economic opportunities 6. Believing that we can change the environment 7. Analyzing situation and planning action 8. Involving in activity 	<ol style="list-style-type: none"> 1. Preparing a list of factors that influence attitude in general and entrepreneurial attitude. 2. Demonstrating and identifying own entrepreneurial attitudes during the following micro lab activities like thematic appreciation test. 3. Preparing a short write-up on “who am I”. 4. Take up a product and suggest how its features can be improved. 5. Group activity for suggesting brand names, names of enterprises, etc. 	15
Unit 5: Green Skills – III			
Learning Outcome	Theory (07 Hours)	Practical (08 Hours)	Duration (15 Hrs)
1. Describe importance of main sector of green economy	<ol style="list-style-type: none"> 1. Main sectors of green economy- E-waste management, green transportation, renewal energy, green construction, water management. 2. Policy initiatives for greening economy in India. 	<ol style="list-style-type: none"> 1. Preparing a poster on any one of the sectors of green economy. 2. Writing a two-page essay on important initiatives taken in India for promoting green economy. 	08

2. Describe the major green Sectors/ Areas and the role of various stakeholder in green economy	<ol style="list-style-type: none"> 1. Stakeholders in green economy. 2. Role of government and private agencies in greening cities, buildings, tourism, industry, transport, renewable energy, waste management, agriculture, water, forests and fisheries. 	<ol style="list-style-type: none"> 1. Preparing posters on green Sectors/Areas: cities, buildings, tourism, industry, transport, renewable energy, waste management, agriculture, water, forests and fisheries. 	07
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Part B: Vocational Skills

Unit 3: Introduction to Food Microbiology

Learning Outcome	Theory (10 Hours)	Practical (15 Hours)	Duration (25 Hrs)
1. Understand importance of microbes in food processing	<ol style="list-style-type: none"> 1. Impotence of microbes in food industry 2. Define food spoilage 3. Primary source of microorganism in food 4. Important properties of enzymes in fruit and vegetable 5. Factors affecting microbial growth in food 	<ol style="list-style-type: none"> 1. Enlist and discuss beneficial microbes in food industry 	25

Unit 4: Prepare and Maintain Work Area

Learning Outcome	Theory (15 Hours)	Practical (30 Hours)	Duration (45 Hrs)
1. Prepare plan for jam, jelly and ketchup processing	<ol style="list-style-type: none"> 1. Types of various fruit and vegetables suitable for jam, jelly and ketchup 2. Chemical composition of fruit required for jam, jelly and ketchup preparation 	<ol style="list-style-type: none"> 1. Enlist the fruits and vegetable used for jam, jelly and ketchup 	10
2. Utilize the equipment for jam, jelly and ketchup preparation	<ol style="list-style-type: none"> 1. Types of machineries used in processing in the organization 2. Maintenance of process equipment 3. Unit operations 	<ol style="list-style-type: none"> 1. Enlist the tools and equipment used for jam, jelly and ketchup processing 	12
3. Maintain work area	<ol style="list-style-type: none"> 1. Identify various section of working unit and their functioning 2. Outline hygiene and sanitation standards in processing unit 3. Define SOPs for disposal of waste material. 	<ol style="list-style-type: none"> 1. Enlist various approved sanitation practice as per SOPs standard 	8
4. Maintain processing machineries and tools	<ol style="list-style-type: none"> 1. Identify type of tools and equipment and their functioning in processing unit 2. Describe the working and performance of machines and tools 	<ol style="list-style-type: none"> 1. Identification of installed equipments and tools used 2. Demonstration of chemical maintenance 	15

	<ol style="list-style-type: none">3. Types of chemicals, material for cleaning4. Procedure to disinfect tool and equipments5. Knowledge of food safety standard and regulation6. Regulation pertaining to work place like health and safety		
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DETAIL SYLLABUS
CLASS - XII
SEMESTER – III

Part A: Employability Skills			
Unit 1: Communication Skills – IV			
Learning Outcome	Theory (10 Hours)	Practical (15 Hours)	Duration (25 Hrs)
1. Describe the steps to active listening skills	<ol style="list-style-type: none"> Importance of active listening at workplace Steps to active listening. 	<ol style="list-style-type: none"> Demonstration of the key aspects of becoming active listener. Preparing posters of steps for active listening. 	10
2. Demonstrate basic writing skills	<ol style="list-style-type: none"> Writing skills to the following: <ul style="list-style-type: none"> Sentence Phrase Kinds of Sentences Parts of Sentence Parts of Speech Articles Construction of a Paragraph 	<ol style="list-style-type: none"> Demonstration and practice of writing sentences and paragraphs on topics related to the subject. 	15
Unit 2: Self-management Skills – IV			
Learning Outcome	Theory (10 Hours)	Practical (15 Hours)	Duration (25 Hrs)
1. Describe the various factors influencing self-motivation	<ol style="list-style-type: none"> Finding and listing motives (needs and desires); Finding sources of motivation and inspiration (music, books, activities); expansive thoughts; living fully in the present moment; dreaming big. 	<ol style="list-style-type: none"> Group discussion on identifying needs and desire. Discussion on sources of motivation and inspiration. 	10
2. Describe the basic personality traits, types and disorders	<ol style="list-style-type: none"> Describe the meaning of personality. Describe how personality influence others. Describe basic personality traits. Describe common personality disorders- paranoid, antisocial, schizoid, borderline, narcissistic, avoidant, dependent and obsessive. 	<ol style="list-style-type: none"> Demonstrate the knowledge of different personality types. 	15
Unit 3: Information and Communication Technology Skills-IV			
Learning Outcome	Theory (08 Hours)	Practical (12 Hours)	Duration (20 Hrs)
1. Perform tabulation using spreadsheet application	<ol style="list-style-type: none"> Introduction to spreadsheet application, Spreadsheet applications, 	<ol style="list-style-type: none"> Demonstration and practice on the following: <ul style="list-style-type: none"> Introduction to the 	10

	<ol style="list-style-type: none"> 3. Creating a new worksheet, 4. Opening workbook and entering text, 5. Resizing fonts and styles, 6. Copying and moving, 7. Filter and sorting, 8. Formulas and functions, 9. Password protection, 10. Printing a spreadsheet, 11. Saving a spreadsheet in various formats. 	<p>spreadsheet application,</p> <ul style="list-style-type: none"> • Listing the spreadsheet applications, • Creating a new worksheet, • Opening the workbook and enter text, • Resizing fonts and styles, • Copy and move the cell data, • Sorting and Filter the data, • Applying elementary formulas and functions, • Protecting the spreadsheet with password, • Printing a spreadsheet, • Saving the spreadsheet in various formats. 	
2. Prepare presentation using presentation application	<ol style="list-style-type: none"> 1. Introduction to presentation, 2. Software packages for presentation, 3. Creating a new presentation, 4. Adding a slide, 5. Deleting a slide, 6. Entering and editing text, 7. Formatting text, 8. Inserting clipart and images, 9. Slide layout, 10. Saving a presentation, 11. Printing a presentation document. 	<ol style="list-style-type: none"> 1. Demonstration and practice on the following: <ul style="list-style-type: none"> • List the software packages with features for presentation, • Creating a new presentation, • Adding a slide to presentation, • Deleting a slide, • Entering and edit text, • Formatting text, • Inserting clipart and images, • Sliding layout, • Saving a presentation, • Printing a presentation. 	10

Part B: Vocational Skills

Unit 1: Preparation of Jam, Jelly and Ketchup

Learning Outcome	Theory (25 Hours)	Practical (40 Hours)	Duration (65 Hrs)
1. Select the suitable fruits for Jam, Jelly and Ketchup	<ol style="list-style-type: none"> 1. Quality of fruits and vegetables based on appearance, colour, texture, flavour maturity etc 2. Explain fruit and vegetable washing 3. Sorting of fruit and vegetable on the basis of fruit size, shape, colour and texture etc. 	<ol style="list-style-type: none"> 1. Demonstrate physical parameters to know quality of fruit and vegetables for preparation of jam, jelly and ketchup 2. Depict the flowchart of washing and sorting 	10
2. Carry out peeling, de-seeding/de-stoning of fruits	<ol style="list-style-type: none"> 1. Apply procedure to peel out by peeler depending upon the types of fruits and vegetables 2. Understand types of peeling 	<ol style="list-style-type: none"> 1. Demonstrate peel out and de-seed/de-stone of the fruits 	10
3. Extract the fruit pulp and juice	<ol style="list-style-type: none"> 1. Apply procedure to make pulp by pulper refiner to sort 	<ol style="list-style-type: none"> 1. Demonstrate function of pulper and Juicer 	10

	<p>out inert material like stone, bark, vegetable seeds, clog etc</p> <p>2. Check the quality of fruit pulp/ fruit juice through physical parameters like appearance, colour, odour etc.</p>	<p>2. Understand the sampling procedure for analysis of physical parameters of fruit pulp and juice</p>	
4. Prepare Jam and Jelly	<p>1. Apply approved procedure to prepare jam and Jelly</p> <p>2. Role of sugar, salt, Pectin and acid in jelly formation</p> <p>3. Determining the end point of jam and jelly</p> <p>4. Cause of failure jelly</p> <p>5. Precautions taken during preparation of jam and jelly</p>	<p>1. Demonstrate preparation of jam and jelly</p> <p>2. Demonstrate tests for end point determination</p>	15
5. Prepare Ketchup	<p>1. Understand the Ketchup</p> <p>2. Desirable physical parameters for fruit selection</p> <p>3. Desirable quality parameters of ingredients</p> <p>4. Recipe for tomato ketchup</p> <p>5. Discuss the preservative used in tomato ketchup</p> <p>6. Point to be taken care during preparation of ketchup</p>	<p>1. Demonstrate preparation of tomato ketchup</p> <p>2. Determine the end point of tomato ketchup</p>	10
6. Utilize the fruit and vegetable waste	<p>1. Identify various waste material from fruits and vegetables</p> <p>2. Importance of waste disposal, methods of waste disposal and Treatment of waste.</p>	<p>1. Visit the fluent plant and prepare report on waste dispose</p>	10

Unit 2: Packaging of Jam, Jelly and Ketchup

Learning Outcome	Theory (08 Hours)	Practical (12 Hours)	Duration (20 Hrs)
1. Understand Packaging	<p>1. Define Packaging</p> <p>2. Types of packaging material used fruits and vegetable products</p> <p>3. Define de-aeration, sterilization and aseptic packaging</p> <p>4. Suitable packing materials for Jam, Jelly and Ketchup</p>	<p>1. Enlist and discuss on basic quality standard for packaging materials</p> <p>2. Identification of different packing material</p>	20

DETAIL SYLLABUS
CLASS - XII
SEMESTER – IV

Part A: Employability Skills			
Unit 4: Entrepreneurial Skills – IV			
Learning Outcome	Theory (10 Hours)	Practical (15 Hours)	Duration (25 Hrs)
1. Identify the general and entrepreneurial behavioral competencies	<ol style="list-style-type: none"> 1. Barriers to becoming entrepreneur. 2. Behavioral and entrepreneurial competencies – adaptability/decisiveness, initiative/perseverance, interpersonal skills, organizational skills, stress management, valuing service and diversity. 	<ol style="list-style-type: none"> 1. Administering self-rating questionnaire and score responses on each of the competencies. 2. Collect small story/ anecdote of prominent successful entrepreneurs. 3. Identify entrepreneurial competencies reflected in each story and connect it to the definition of behavioral competencies. 4. Preparation of competency profile of students. 	10
2. Demonstrate the knowledge of self-assessment of behavioral competencies	<ol style="list-style-type: none"> 1. Entrepreneurial competency in particular: self-confidence, initiative, seeing and acting on opportunities, concern for quality, goal setting and risk taking, problem solving and creativity, systematic planning and efficiency, information seeking, persistence, influencing and negotiating, team building. 	<ol style="list-style-type: none"> 1. Games and exercises on changing entrepreneurial behavior and development of competencies for enhancing self-confidence, problem solving, goal setting, information seeking, team building and creativity. 	15
Unit 5: Green Skills – IV			
Learning Outcome	Theory (05 Hours)	Practical (10 Hours)	Duration (15 Hrs)
1. Identify the role and importance of green jobs in different sectors	<ol style="list-style-type: none"> 1. Role of green jobs in toxin-free homes. 2. Green organic gardening, public transport and energy conservation, 3. Green jobs in water conservation. 4. Green jobs in solar and wind power, waste reduction, reuse and recycling of wastes, 5. Green jobs in green tourism 6. Green jobs in building and construction. 7. Green jobs in appropriate technology. 	<ol style="list-style-type: none"> 1. Listing of green jobs and preparation of posters on green job profiles. 2. Prepare posters on green jobs. 	15

	8. Role of green jobs in Improving energy and raw materials use 9. Role of green jobs in limiting greenhouse gas emissions 10. Role of green jobs minimizing waste and pollution 11. Role of green jobs in protecting and restoring ecosystems 12. Role of green jobs in support adaptation to the effects of climate change		
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Part B: Vocational Skills

Unit 3: Documentation and Record Keeping

Learning Outcome	Theory (20 Hours)	Practical (10 Hours)	Duration (30 Hrs)
1. Keep record of raw material	1. Importance of record keeping 2. Assess the details to be document at raw material collection stages 3. Understand loading process of raw material details in enterprise resource planning (ERP).	1. Enlist the importance of record keeping	10
2. Maintain record of production schedule and process	1. Assess the details to be document at production schedule and process 2. Understand record loading process of production schedule and process detail in enterprise resource planning (ERP).	1. Demonstration of record maintenance process at production schedule and process stages	10
3. Maintain record of finished product	1. Assess the details to be maintain and document at finished product stages 2. Understand loading the finished product detail in enterprise resource planning (ERP) for future reference		10

Unit 4: Food Quality and Sanitation Laws for Processed Food Products

Learning Outcome	Theory (20 Hours)	Practical (15 Hours)	Duration (35 Hrs)
1. Explain the food quality	1. Meaning and importance of food quality 2. Food quality control measures 3. Factor affecting food quality	1. Enlist and discuss the food quality standards and measures	10
2. Recognize the	1. Quality assurance and international trades	1. Enlist and discuss the food	15

food quality control standard, acts and legislation	2. Food safety, laws and standards 3. Basic principles of HACCP 4. Benefits of HACCP 5. Food standardization and regulatory agencies in India 6. Food Adulteration Act	quality control standard on flow chart	
3. Describe food additive	1. Define food additive 2. Permitted limit of food colour, flavour and preservative used food industry	1. Prepared flow chart on international acceptance limit of various food additive	10
Unit 5: Occupation Health, Hygiene and First Aid Practices			
Learning Outcome	Theory (06 Hours)	Practical (09 Hours)	Duration (15 Hrs)
1. Recognize and adopt strategies for preventing hazardous conditions and work practices	1. Types of hazards 2. Common hazards at Processing unit/Industry 3. Principles of safety and health 4. Procedure and steps to be taken to report any accident, incident or problem without delay to an appropriate person 5. Applicable hygiene and safety standards, regulations, and codes for Processing unit/Industry	1. Reading of the manuals for tools, equipment and materials used at Processing unit/Industry 2. Demonstration of the correct and safe use of tools, equipment and materials 3. Demonstration of the correct and safe storage of tools, equipment and materials 4. Discussion on the procedure for reporting any accident, incident or problem without delay to an appropriate person and taking action to reduce further danger	05
2. Administer first aid or undertake most important action in a life-threatening emergency	1. Procedure for providing first aid in case of medical emergency – cut, burns, bites, grazes, bruises electric shock, external bleeding, etc.	1. Demonstration of basic first aid practices adopted for cut, burns, snake bites, grazes, bruises, external bleeding, dog bites, bee bites, and other injuries 2. Demonstration of first aid care for a conscious and an unconscious victim with an obstructed airway	05
3. Undertake physical and biological methods of treating waste materials	1. Procedure for treating waste materials using physical and biological methods	1. Disposing waste safely and correctly in a designated area	05

ORGANISATION OF FIELD VISITS

In a year, at least 3 field visits/educational tours should be organised for the students to expose them to the activities in the workplace.

Visit a Food processing industry and observe the following: Location, Site, Office building, Store, Washing chamber, weighing room, packaging material, Packing Yard, storage chamber etc. During the visit, students should obtain the following information from the owner or the supervisor of the industry/processing unit:

1. Types of processed foods at the industry
2. Types of packaging material used
3. Types of products prepared
4. Total input and output handled annually
5. Manpower engaged
6. Total expenditure of the packhouse
7. Total annual income
8. Profit/Loss (Annual)
9. Any other information