WEST BENGAL COUNCIL OF HIGHER SECONDARY EDUCATION SYLLABUS FOR CLASSES XI AND XII

SECTOR: Food Processing
JOB ROLE: Craft Baker

COURSE OVERVIEW:

COURSE TITLE: Food Processing – Craft Baker

A Baking Technician / Operative is responsible for baking of products, maintaining their consistency and quality, while meeting defined SOPs and leveraging his/ her skill to operate ovens in synchronization with proof box/ rest of the plant/ unit. A Baking Technician / Operative must have the ability to plan, organize, prioritize, calculate and handle pressure. S/he must possess reading, writing and communication skills. In addition, the individual must have stamina to be able to stand for long hours, have personal and professional hygiene and an understanding of food safety standards and requirements.

COURSE OUTCOMES: 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
- Do Preparation and maintain work area and equipment;
- Prepare baked products (breads, puffs, cookies, cakes/pastries, desserts, specialty baked products, etc.) in artisan bakeries and patisseries.;
- Demonstrate packaging of bakery products;
- Apply documentation and record keeping;
- Understand food quality, GMP and HACCP for bakery products

COURSE STRUCTURE

JOB ROLE: Craft Baker

SECTOR: Food Processing

			(Contact Hours				Marks	
Class	Semester	Employability Skills	Domain (Theory & Practical	Practical Exam/Writt en Test/ Viva	Project (Practical File/Student Portfolio/ Viva Voce)	Total		Theory	Practical
XI	I	70	82	-	-	152	25	Sum of Sem I &	NIL
Ai	II	40	83	10	15	148	25	Sem II = 50	50
	III	70	70	-	-	140	25	Sum of Sem III	NIL
XII	IV	40	95	10	15	160	25	& Sem IV = 50	50

JOB ROLE: Craft Baker Class XI [Total Theory Marks: 25]

Class XI SEMESTER I TOPICS: (MCQ) MARKS: 25 [1 MARK PER QUESTION]

SL No.	Торіс	Tuition Hours	Marks Allotted
	Part A: Employability Skills	70	
1	Unit 1: Communication Skill-III	25	2
2	Unit 2: Self-management Skill-III	25	2
3	Unit 3: Information and Communication	20	2
	Technology Skills – III		
	Part B: Vocational Skills	82	
4	Unit 1: Artisan Bakery and Patisserie	19	4
5	Unit 2: reparing and Maintaining Work Area and Machineries	19	5
6	Unit 3: Pre- preparation and Baking the Products in the Oven	44	10
	Total	152	25

Class XI SEMESTER II TOPICS: [Short Answer Question, Descriptive Question] MARKS: 25

SL No.	Topic & Sub-Topics	Tuition Hours	Short Answer Type Question (8 Marks)	Descriptive Type Question (17 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	83			
3	Unit 4: Bread Making Process	51	3	7	10
4	Unit 5: Process of Baking	32	3	6	9
	Part C: Practical Work	10]		
7	Practical Examination	06			
8	Written Test	01]		
9	Viva Voce	03			
	Part D: Project Work/ Field Visit	15]		
10	Practical File / Student Portfolio	10]		
11	Viva Voce	05]		
	Total	148	8	17	25

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JOB ROLE: Craft Baker Class XII [Total Theory Marks: 25]

Class XII SEMESTER III TOPICS: (MCQ) MARKS: 25 [1 MARK PER QUESTION]

SL No.	Торіс	Tuition Hours	Marks Allotted
	Part A: Employability Skills	70	
1	Unit 1: Communication Skills – IV	25	2
2	Unit 2: Self-management Skills – IV	25	2
3	Unit 3: Information and Communication	20	2
	Technology Skills – IV		
	Part B: Vocational Skills	70	
4	Unit 1: Food Safety Standards, Hygiene and Sanitation	30	9
5	Unit 2: Pastries, Cakes, Chocolates and Desserts	40	10
	Total	140	25

Class XII SEMESTER IV TOPICS: [Short Answer Question, Descriptive Question] MARKS: 25

SL No.	Topic & Sub-Topics	Tuition Hours	Short Answer Type Question (8 Marks)	Descriptive Type Question (17 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	95			
3	Unit 3: Pastry Craft	60	4	7	11
4	Unit 4: Documentation and Record Keeping	35	2	6	8
	Part C: Practical Work	10			
5	Practical Examination	06			
6	Written Test	01			
7	Viva Voce	03	1		
	Part D: Project Work/ Field Visit	15			
8	Practical File / Student Portfolio	10			
9	Viva Voce	05]		
	Total	160	8	17	25

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DETAIL SYLLABUS CLASS - XI SEMESTER – I

Unit 1: Communico	Unit 1: Communication Skill – III					
Learning Outcome	Theory	Practical	Duration (25 Hrs)			
Demonstrate knowledge of various methods of communication	Methods of communication Verbal Non-verbal Visual	Writing pros and cons of written, verbal and nonverbal communication Listing do's and don'ts for avoiding common body language mistakes	10			
Identify specific communication styles	Communication styles- assertive, aggressive, passive-aggressive, submissive, etc.	Observing and sharing communication styles of friends, teachers and family members and adapting the best practices Role plays on communication styles.	05			
3. Demonstrate basic writing skills	Writing skills to the following: Sentence Phrase Kinds of Sentences Parts of Sentence Parts of Speech Articles Construction of a Paragraph	Demonstration and practice of writing sentences and paragraphs on topics related to the subject	10			

Unit 2: Self-manag	Unit 2: Self-management - III				
Learning Outcome	Theory	Practical	Duration (25 Hrs)		
Demonstrate impressive appearance and grooming	Describe the importance of dressing appropriately, looking decent and positive body language Describe the term grooming Prepare a personal grooming checklist Describe the techniques of self- exploration	Demonstration of impressive appearance and groomed personality Demonstration of the ability to self- explore	07		
2. Demonstrate team work skills	Describe the important factors that influence in team building Describe factors influencing team work	Group discussion on qualities of a good team Group discussion on strategies that are adopted for team building and team work	08		
3. Apply time management strategies and techniques The strategies and techniques techn	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.	Game on time management Checklist preparation To-do-list preparation	10		

Unit 3: Information	Unit 3: Information and Communication Technology - III				
Learning Outcome	Theory	Practical	Duration (20 Hrs)		
Create a document on word processor	 Introduction to word processing. Software packages for word processing. Opening and exiting the word processor. Creating a document 	Demonstration and practice of the following: Listing the features of word processing Listing the software packages for word processing Opening and exit the word processor Creating a document	10		
Edit, save and print a	Editing text Wrapping and aligning	Demonstration and practising the following:	10		

document in word processor	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.	 Editing the text Word wrapping and alignment Changing font type, size and face Inserting header and footer Removing header and footer Using autocorrect option Insert page numbers and bullet Save and print a document 	
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Part B: Vocational Skills

UNIT 1: ARTISAN BAI	UNIT 1: ARTISAN BAKERY AND PATISSERIE					
Learning Outcome	Theory (07 Hrs)	Practical (12 Hrs)	Duration (19 Hrs)			
Describe the importance of Bakery sector	Artisan bakeries and Patisseries Categories of bakery and pastry products:	1.Draw a chart depicting the categories of patisseries products.	07			
Identify the equipment used for making bakery products	Equipment used in artisan bakeries and patisseries.	I. Identification of equipment through physical and audio visual aids.	06			
3. Identify and utilize theraw material (ingredients) used in bakery	Raw materials (ingredients) used in artisan bakeries and patisseries. Categories of ingredients used in bakery: (flour, sugar, fat, milk, shortening, leavening agents, starters) and their functions).	Identification of various ingredients and starters used in artisan bakeries and patisseries by sensory evaluation(taste, touch, smell and sight).	06			

Learning Outcome	Theory (07 hrs)	Practical (12 hrs)	Duration (19 hrs)
Describe the importance of personal hygiene and sanitation of the Craft Baker	1.Personal hygiene and sanitation 2.Food safety standards and regulations	1. Demonstration of how to wear uniform, including chef coat, apron, gloves, hair caps, socks, shoes, etc. 2. Demonstration of Hand washing technique 3. Video show on food safety practices	06
2. Describe the importance of workplace hygiene and sanitation	 Cleaning agents and equipment: Common detergents and sanitizers Procedure to disinfect tools and equipment Sections of working units and their functioning Hygiene and sanitation standards in processing unit Standard Operating Procedures (SOPs) for disposal of waste material. Cleaning and maintaining machinery and equipment 	1. Full day visit to a bakery unit/ plant to understand: • Cleaning, maintaining and handling bakery and patisseries equipment and tools. • Hygiene and sanitation standards in processing unit • Functioning of working equipment (e.g. Oven, planetary dough mixer etc.)	07
3. Prepare work area and equipment/ machinery for baking in oven	Preparing the work area Getting ready machines and tools for production Unit operations	Demonstrate preparation of the machines required for production. Demonstrate the unit operations.	06

Learning Outcome	Theory (15 hrs)	Practical (29 hrs)	Duration (44 hrs)
1. Utilize oven for baking products	Types of oven, oven baking process and maintenance Fuels used to fire the oven Basic temperature, conversion and calculating time in baking (As per size and volume)	Baking product with and without pre heating and at different temperatures.	6
Perform prerequisite tasks required to prepare the bakery products	Work plan Baker's math vis a vis raw material quantities, temperatures, and weight conversions. Pre - production Sequence getting ready with the Mise-en-place for the recipe cleaning the machinery setting the oven temperature	Scale the raw material as per the recipe provided. Depict the flow chart of process of baking	06

3. Perform the important steps involved before baking the final product in the oven	 Bread making steps and methods Mixing process in various products Types of dough (lean dough, rich dough, laminated dough, sweet dough, short crust, pie dough etc.) Preparation of products out of each type of dough Handling common faults in bread due to: measurement of ingredients temperature, (overheating and underheating) time (over baking and under-baking) Proofing (under proofing and over proofing) Faults arising due to the above factors Preventing microbial infection in breads and pastries 	1. Mix the ingredients as per the ingredients, time and speed mentioned in the recipe 2. Identify the following steps to achieve the final baked bread:	32

DETAIL SYLLABUS CLASS - XI SEMESTER – II

Unit 4: Entrepreneurship Development – III			
Learning Outcome	Theory	Practical	Duration (25 Hrs)
Describe the significance of entrepreneurial values and attitude	Values in general and entrepreneurial values Entrepreneurial value orientation with respect to innovativeness, independence, outstanding performance and respect for work	Listing of entrepreneurial values by the students. Group work on identification of entrepreneurial values and their roles after listing or reading 2-3 stories of successful entrepreneur 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	 Attitudes in general and entrepreneurial attitudes Using imagination/intuition Tendency to take moderate risk Enjoying freedom of expression and action Looking for economic opportunities Believing that we can change the environment Analyzing situation and planning action Involving in activity 	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, etc.	15

Unit 5: Green Skill	Unit 5: Green Skills – III			
Learning Outcome	Theory	Practical	Duration (15 Hrs)	
Describe importance of main sector of green economy	Main sectors of green economy- E-waste management, green transportation, renewal energy, green construction, water management Policy initiatives for greening economy in India	Preparing a poster on any one of the sectors of green economy 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	Stakeholders in green economy Role of government and private agencies in greening cities, buildings, tourism, industry, transport, renewable energy, waste management, agriculture, water, forests and fisheries	Preparing posters on green Sectors/Areas: cities, buildings, tourism, industry, transport, renewable energy, waste management, agriculture, water, forests and fisheries	07	

Part B: Vocational Skills

Learning Outcome	Theory	Practical	Duration
	(11hrs)	(40 hrs)	(51hrs)
Prepare the various types of breads using different methods	 Ingredients and their role in bread making Bread Making methods straight dough method no time method salt delay method ferment and dough method Types of Bread dough: sliced bread/ breakfast bread including white, brown/ whole wheat, 	1.Identify different ingredients used in baking 2. Different bread making methods: • straight dough method • no time method • salt delay method • ferment and dough method	17

	multigrain sour dough (leaven/mother/starter, biga) Types of bread: ciabatta french Baguette focaccia pita and khubus lavash pizza base sour dough breadshard roll, rye		34
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UNIT 5: PROCESS OF BAKING (PASTRY DOUGH) (Eagless versions to be included in the training sessions wherever possible)

Learning Outcome	Theory	Practical	Duration
	(12 hrs)	(20 hrs)	(32hrs)
1. Describe and prepare the Pastry products	 Baked Pastry products Basic ingredients of Pastry Products Types of Baked pastry short crust pastry cookies/ tarts/ flan/pie laminated pastry puff Pastry- vol-en-vent/ patties danish pastry/ croissant choux Paste profitroles and eclairs Faults in Pastries short crust- Under baked/over baked/ mis calculation of ingredients laminated Pastry- Under laminate/ over laminate/ Under or over proving/ mis-calculation of ingredients choux Paste- under cooking/ under mixing/ over and under baking 	1. Prepare basic • Pie/ Tart • Choux pastry • Puff pastry • Éclair and profit role	20

2. Describe and prepare basic cakes	 Sponge cakes (Genoise cake, Fatless sponge, swiss roll sponge and eggless sponge) Cream cakes Tea cake/ pound cake (Banana bread, chocolate pound cake, fruit cake, muffins and cupcakes) Faults in cakes: Sunken cake Over risen cake Lack of volume 	 Preparation of basic cakes sponge cakes genoise cake tea cake/pound cake banana bread, chocolate pound cake, fruit cake, muffins and cupcakes 	12
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DETAIL SYLLABUS CLASS - XII SEMESTER – III

Unit 1: Communic	Unit 1: Communication Skills – IV		
Learning Outcome	Theory	Practical	Duration (25 Hrs)
Describe the steps to active listening skills	Importance of active listening at workplace Steps to active listening	Demonstration of the key aspects of becoming active listener Preparing posters of steps for active listening	15
Demonstrate basic writing skills	 Writing skills to the following: Sentence Phrase Kinds of Sentences Parts of Sentence Parts of Speech Articles Construction of a Paragraph 	Demonstration and practice of writing sentences and paragraphs on topics related to the subject	10

Unit 2: Self-manag	Unit 2: Self-management Skills – IV			
Learning Outcome	Theory	Practical	Duration (25 Hrs)	
Describe the various factors influencing self-motivation	Finding and listing motives (needs and desires); Finding sources of motivation and inspiration (music, books, activities);think expansive thoughts; living fully in the present moment; Dreaming big	Group discussion on identifying needs and desire Discussion on sources of motivation and inspiration	10	
Describe the basic personality traits, types and disorders	 Describe the meaning of personality Describe how personality influence others Describe basic personality traits Describe common personality disordersparanoid, antisocial, schizoid, borderline, narcissistic, avoidant, dependent and obsessive 	Demonstrate the knowledge of different personality types	15	

Unit 3: Information	Unit 3: Information and Communication Technology Skills – IV		
Learning Outcome	Theory	Practical	Duration (20 Hrs)
Perform tabulation using spreadsheet application	 Introduction to spreadsheet application Spreadsheet applications Creating a new worksheet Opening workbook and entering text Resizing fonts and styles Copying and moving Filter and sorting Formulas and functions Password protection. Printing a spreadsheet. Saving a spreadsheet in 	Demonstration and practice on the following: Introduction to the spreadsheet application Listing the spreadsheet applications Creating a new worksheet Opening the workbook and	10

	various formats.	enter text Resizing fonts and styles Copying 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	 Introduction to presentation Software packages for presentation Creating a new presentation Adding a slide Deleting a slide Entering and editing text Formatting text Inserting clipart and images Slide layout Saving a presentation Printing a presentation document. 	1. Demonstration and practice on the following: • Listing the software packages for presentation • Explaining the features of 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 document	10

UNIT 1: FOOD SAFETY STANDARDS, HYGIENE AND SANITATION

Learning Outcome	Theory (15 hrs)	Practical (15 hrs)	Duration (30 hrs)
Explain and follow hygiene and sanitation practices in the work area	 Maintaining Food quality in a Patisserie Hygiene sanitation in a patisserie Prevention of contamination in patisserie Storage of raw, semi processed and finished products 	Video demonstration on the importance of food quality standards and measures. Identification of stale or spoilt food	08
Following food quality standard, acts and legislation	Food safety, laws and standards Importance of HACCP Food standardization and regulatory agency (FSSAI) with regard to patisseries Good manufacturing practices (GMP)	2. Draw the flow diagram of HACCP, GMP and QMS 3. Video demonstration on HACCP	12
3. Explain safety practices and undertake physical and biological methods of treating waste materials	Potential safety hazards at work place. Safety signs and symbols Procedure for treating waste materials using physical and biological methods Waste segregation	Disposing waste safely and correctly in a designated area	10

Learning Outcome	Theory (16 hrs)	Practical (24 hrs)	Duration (40 hrs)
Describe the parameters important to maintaining quality of pastry products	 Quality parameters of raw ingredients: Flour Sugar Fat Egg Leavening agents Flavors and	Identify half-baked, baked and over baked products. Identify different ingredients via video and hands on demo	12
 Explain types of mixers, dough sheeter and other pastry equipment and tools 	 Types of mixers used in pastry production Machines and tools used in patisseries Cooling procedures for different cold products. 	1. Visit to nearby baking facility to see the difference between different machine, tools and equipment	15
3. Describe processes, importance and parameters of checking quality, packing and storage of bakery products	1. Packaging of Bakery and Patisseries 2. First in First out (FIFO) and First expiry first out (FEFO) 3. Storage of raw material 4. Storage and shelf life of finished products	Demonstrate cooling, packing and storage process of desserts and chocolates	07
4. Enumerate the steps of Post Production Cleaningand Maintenance of process equipment	 1. Cleaning methods for machinery and tools 2. Cleaning procedures Clean in place (CIP) and Clean out of place (COP) 	Demonstrate the differences between CIP and COP. Enlist the items cleaned through COP.	06

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CLASS - XII SEMESTER – IV

Unit 4: Entreprene	Unit 4: Entrepreneurship Skill – IV		
Learning Outcome	Theory	Practical	Duration (25 Hrs)
Identify the general and entrepreneurial behavioural competencies	Barriers to becoming entrepreneur Behavioural and entrepreneurial competencies – adaptability/ decisiveness, initiative/perseverance, interpersonal skills, organizational skills, stress management, valuing service and diversity	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 behavioural competencies 4. Preparation of competencies profile of students	10
Demonstrate the knowledge of self-assessment of behavioural competencies	Entrepreneurial competencies 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, influencing and negotiating	1. Games and exercises on changing entrepreneurial behaviour 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	Practical	Duration (15 Hrs)
Identify the role and importance of green jobs in different sectors	Role of green jobs in toxin-free homes Green organic gardening, public transport and energy conservation, Green jobs in water conservation, solar and wind power, waste	Listing of green jobs and preparation of posters on green job profiles Prepare posters on green jobs.	15
	reduction, reuse and recycling of wastes, 4. Green jobs in green tourism 5. Green jobs in building and construction and appropriate technology 6. Role of green jobs in Improving energy, raw materials use, limiting greenhouse gas emissions, minimizing waste and pollution		

Part B: Vocational Skills

Learning	Theory	Practical	Duration
Outcome	(20 hrs)	(40 hrs)	(60 hrs)
Describe and prepare basic desserts bases and desserts	1. Preparation of dessert bases: Creams (whipped cream, Chantilly and butter cream) Custards (egg based and eggless) Dessert sauces: (Vanilla, chocolate, fruit compote and coulis) Pie/ Tart crust Choux pastry (éclair, sponge) 2. Preparation and garnishing of Desserts: Mousse (Chocolate, vanilla, pineapple etc.) Souffle (hot and cold) Crème brulee Crème caramel Apple Pie Chocolate/ vanilla éclair Pineapple upside down cake Choco lava cake Fruit tart 3. Preparation of garnishes/	1. Prepare basic Choux pastry (Éclair, profiteroles and swans) Tart ((Fruit tart, lemon Meringue tart, Apple Pie) Mousse (Tiramisu, chocolate mousse and cold soufflé) 2. Preparation of garnishes/ decorations Chocolate	25

	decorations	garnishes Tuille Fruits Nuts Cream Meringue	
2. Describe and prepare basic cakes	cakes Sponge cakes Genoise cake Cream cakes Butter cream cake Mousse cake Preparation of classic cakes Butterscotch cake Pineapple cake Chocolate/ Truffle cake Mousse cake- Chocolate	sponges for cake Sponge cakes Genoise cake Swiss cake Cream cakes Preparing Sponge cakes Layering with cream/ butter cream and flavor complimenting Covering cake with cream and butter cream Finishing and garnishing Portioning of the cakes	20
3. Prepare Chocolates	1. Chocolates Types of Chocolates:	Demonstration of types of chocolates Compound Couverture Preparing Chocolate Ganache Reparing Moulded chocolate	15

Learning Outcome	Theory (15 hrs)	Practical (20 hrs)	Duration (35 hrs)
1. Keep record of raw material	 Record keeping Documentation of raw material Requisitioning raw material for daily production) Enterprise resource planning (ERP) 	1. Visit to any food industry/ audio visual demonstration of record keeping. 2. Creating an inventory management of raw materials. (material in, material out, opening stock and remaining stock)	15
2. Assess the details to be documented at production schedule and process chart	Maintaining records of production schedule Maintaining records production process	Demonstration of record maintenance process at production schedule and process stages	10
3. Assess the details to be maintained and documented at finished product stages.	Record maintenance of finished products Using ERP for finished product	2. Demonstrate the record maintenance process of finished product.	10