

Syllabus for the trade

Of

# **BAKER & CONFECTIONER**

(SEMESTER PATTERN)

UNDER

CRAFTSMAN TRAINING SCHEME

Redesigned in: 2014

By

Government of India

**CENTRAL STAFF TRAINING AND RESEARCH INSTITUTE**

Directorate General of Employment & Training

Ministry of Labour & Employment

EN 81, SECTOR – V, SALT LAKE CITY,

Kolkata, **West Bengal – 700 091.**

## GENERAL INFORMATION

1. **Name of the Trade** : BAKER & CONFECTIONER
2. **NCO Code No.** : 7412.10, 7412.20, 7412.90
3. **Duration of Craftsman Training** : One year (2 semesters)
4. **Power Norms** : 16.6 KW
5. **Space Norm** : a) Work shop: 96 Sq. Meter  
: b) Class Room : 30 Sq. Meter
6. **Entry Qualification** : Passed 10th class examination
7. **Unit Strength** : 20 Trainees
8. **Instructors/Trainer's Qualification** : a) NTC/NAC in the trade with three years experience in the relevant field.  

OR

: b) Diploma in Hotel Management / Catering Technology with two years experience in the relevant field.  

OR

: c) Degree in Hotel Management / Catering Technology with one years experience in the relevant field
9. **Desirable Qualification:** : Preference will be given to a candidate with Craft Instructor Certificate (CIC)

**Note: At least one Instructor must have degree /Diploma in the relevant field**

10. **Job Description** : After successful completion of training, the person will be able to: -
  - Check production schedule to determine variety and quantity of goods to bake.
  - Measure and mix ingredients to form dough or batter, following recipes.
  - Roll, cut, and shape dough to form rolls, pie crusts, tarts, cookies, and related products.
  - Cut, peel, and prepare fruit for pie fillings.
  - Place dough in pans, molds, or on sheets and bake in oven. Observe products while cooking and adjust controls.
  - Mix icings and other toppings and decorate cakes, pastries, and other baked goods.
  - Use a variety of kitchen tools, including electric mixers, pans, rolling pins, and cutting tools.

## Syllabus for the trade of “Baker & Confectioner” under CTS System

**Duration:** Six Month

**Semester:** First

**Semester Code:** BAC: SEM I

Week	Trade Practical	Trade Theory
<b>1</b>	<p>a) Introduction to Bakery &amp; Confectionery Section</p> <p>b) Video /Power Point Presentation on:</p> <ul style="list-style-type: none"> <li>➤ Grooming,</li> <li>➤ personal hygiene,</li> <li>➤ Dos &amp; don'ts as a baker &amp; confectioner.</li> </ul> <p>c) Bakery terms.</p> <p>d) Visit to the market for range of bakery products.</p> <p>e) Visit to Bakery industry.</p>	<p>a) Introduction to Baker &amp; Confectioner industry / Hotel industry.</p> <p>b) An orientation programme on the course and related job opportunities by the industry expert / instructor.</p> <p>c) Career opportunities in Bakery &amp; Confectionery.</p> <p>d) Organizational hierarchy of Baker &amp; Confectioner Department</p> <p>e) Attributes of Baker &amp; Confectioner services personals</p> <p>f) Duties and responsibilities of Baker &amp; Confectioner service personals</p>
<b>2</b>	<p>a) Identifications of Baker &amp; Confectioner equipment</p> <p>b) Its culture and ability.</p> <p>c) Basic concept of:</p> <ul style="list-style-type: none"> <li>➤ Tools and equipment used.</li> <li>➤ Safety equipment and their uses.</li> <li>➤ General occupational safety, health and hygiene.</li> </ul>	<p>a) Introduction to basic equipment and tools used in bakery &amp; confectionary.</p> <p>b) Safety rules for using different types of knives &amp; other equipment.</p> <p>c) Fire hazards, Contents of first aid.</p> <p>d) Personal hygienic &amp; Care of Skin, Hand, Feet, Food handlers hygienic protective clothing.</p> <p>e) Grooming and Etiquettes</p> <p>f) Working area hygiene &amp; its importance.</p>
<b>3</b>	<p>a) To check the:</p> <ul style="list-style-type: none"> <li>➤ Gluten content of flour</li> <li>➤ Moisture contents of flour</li> <li>➤ Water absorption power of flour</li> </ul> <p>b) Knowledge of bakery machines like:</p> <ul style="list-style-type: none"> <li>➤ Dough machine</li> <li>➤ Oven</li> <li>➤ Microwave oven etc.</li> <li>➤ Deep freezers</li> <li>➤ Hot cub boards</li> <li>➤ Juicer, Mixer &amp; Grinder</li> </ul>	<p>a) Structure of wheat grain.</p> <p>b) Different types of flour available.</p> <ul style="list-style-type: none"> <li>➤ Constituents of flour.</li> <li>➤ PH value of flour.</li> <li>➤ Water absorption power of flour.</li> <li>➤ Gluten formation.</li> <li>➤ Capacity of flour.</li> <li>➤ Grade by flour.</li> </ul> <p>c) Milling of wheat a role of bran and germs.</p> <p>d) Classification of Raw material seasoning &amp; flavouring agents.</p> <p>e) Basic Principle of food storage according to type flavouring agents of commodities.</p>
<b>4-6</b>	<p>a) Preparation of</p> <ul style="list-style-type: none"> <li>➤ Bread Rolls</li> <li>➤ Bread stick</li> <li>➤ Soft rolls</li> <li>➤ Hot cross Buns</li> <li>➤ Fruit Buns.</li> <li>➤ Chelsea Bun</li> </ul>	<p>a) Different cereal &amp; flour for the bakery products</p> <p>b) Quality of flour</p> <p>c) Starch:</p> <ul style="list-style-type: none"> <li>➤ Availability of starch in different cereals.</li> <li>➤ Uses of starch</li> <li>➤ Extraction of starch</li> <li>➤ Different products of grain starch</li> </ul>

7-9	<p><b>a)</b> Preparation of</p> <ul style="list-style-type: none"> <li>➤ Croissants.</li> <li>➤ Brioche &amp; fermented dough nuts.</li> <li>➤ Russian stouten basic bun dough</li> <li>➤ Savarin dough.</li> </ul>	<p><b>a)</b> Calculation:</p> <ul style="list-style-type: none"> <li>➤ Simple table,</li> <li>➤ Weight &amp; measures,</li> <li>➤ Measurements of liquid.</li> <li>➤ Different measures used in the bakery &amp; confectionary.</li> </ul> <p><b>b)</b> Aims and objective of baking food.</p> <p><b>c)</b> Raw material required for Bread making.</p> <p><b>d)</b> Role of flour, Water, Yeast, Salt, Sugar, Milk &amp; fats.</p>
10-11	<p><b>a)</b> Preparation of</p> <ul style="list-style-type: none"> <li>➤ White Bread (400 gms. &amp; 800 gms.)</li> <li>➤ Brown Bread.</li> <li>➤ Vienna Bread</li> <li>➤ Fancy Bread</li> <li>➤ French Bread</li> </ul>	<p><b>a)</b> Principles involved for bread preparation</p> <ul style="list-style-type: none"> <li>➤ Different types of breads and their properties,</li> <li>➤ ingredients used</li> </ul> <p><b>b)</b> Method of Bread Making.</p> <ul style="list-style-type: none"> <li>➤ Straight dough method.</li> <li>➤ No-time dough method.</li> <li>➤ Sponge and dough method.</li> </ul>
12-13	<p><b>a)</b> Preparation of</p> <ul style="list-style-type: none"> <li>➤ Whole meal Bread</li> <li>➤ Masala Bread</li> </ul>	<p><b>a)</b> Characteristic of Good Bread.</p> <p><b>b)</b> External Characteristics.</p> <p><b>c)</b> Internal Characteristic</p> <p><b>d)</b> Bread faults &amp; their remedies.</p>
14	<p><b>a)</b> Preparation of</p> <ul style="list-style-type: none"> <li>➤ Milk Bread</li> <li>➤ Raisin Bread.</li> <li>➤ Fruit Bread</li> </ul>	<p><b>a)</b> Yeast: - An elementary knowledge of Baker's yeast.</p> <p><b>b)</b> Role of yeast in the fermentation of dough a conditions influencing it's working.</p> <p><b>c)</b> Effect of over &amp; under fermentation and under proofing of dough &amp; other fermented products.</p>
15-16	<p><b>a)</b> Evolution characteristics of bread:</p> <ul style="list-style-type: none"> <li>➤ Volume of bread.</li> <li>➤ Texture of bread.</li> </ul> <p><b>b)</b> Visualize spoilage of Bread:</p> <ul style="list-style-type: none"> <li>➤ Fungus spoilage</li> </ul>	<p><b>a)</b> Factors affecting the quality of the bread</p> <p><b>b)</b> Characteristic of Good Bread:</p> <ul style="list-style-type: none"> <li>➤ External Characteristics</li> <li>➤ Internal Characteristic</li> </ul> <p><b>c)</b> Bread diseases: -</p> <ul style="list-style-type: none"> <li>➤ Rope and Mold causes &amp; its prevention.</li> <li>➤ Staling of bread</li> </ul> <p><b>d)</b> Bread Improvers,</p> <p><b>e)</b> Improving physical quality.</p>
17-20	<p>On the job Training (OJT) (4 weeks)</p> <p><b>Note: - During OJT student have to maintain a log book on daily basis indicating activities performed during the day which shall also be countersigned by the section / department supervisor.</b></p>	
21	<p><b>a)</b> Preparation of</p> <ul style="list-style-type: none"> <li>➤ Pizza base.</li> <li>➤ Cheese straws</li> <li>➤ Burgers</li> <li>➤ Pau Buns</li> </ul>	<p><b>a) Oven Baking: -</b></p> <ul style="list-style-type: none"> <li>➤ Elementary Knowledge of oven</li> <li>➤ Types of oven</li> <li>➤ Temperature Chart</li> </ul>
22	<p><b>a)</b> Preparation of</p> <ul style="list-style-type: none"> <li>➤ Christmas Bread</li> <li>➤ Kulcha</li> </ul>	<p><b>a) Bakery Lay-out: -</b> The required approval for setting up a bakery.</p> <p><b>b)</b> Government Procedures &amp; e-bylaws.</p> <p><b>c)</b> Selection of Site.</p> <p><b>d)</b> Selection of equipment.</p>

23	a) Preparation of ➤ Banana Bread	a) Quality Control of raw material. b) Quality Control of finished product.
24	Revision	
25	Examination	
26	Holiday	

**Note: -**

- *At least one industrial visit in every two weeks shall be arranged and the trainees will submit the activities learned there and 10 marks internal assessment will be awarded based on it.*
- *One hour soft skill classes to be arranged on daily basis.*

**Duration:** Six months

**Semester:** Second

**Semester Code:** BAC: SEM II

<b>Week</b>	<b>Trade Practical</b>	<b>Trade Theory</b>
<b>1</b>	<b>a)</b> Preparation of <ul style="list-style-type: none"><li>➤ Sponge Cake</li><li>➤ Madeira Cake</li><li>➤ Genoese Cake</li><li>➤ Fatless Cake</li><li>➤ Rock Cake</li><li>➤ Fruit Cake</li></ul>	<b>a)</b> Cakes: <ul style="list-style-type: none"><li>➤ Methods for the production of cakes.</li><li>➤ Raw Material required for cake Making</li><li>➤ Role of ingredients like flour, sugar, shortening and egg for cake production</li><li>➤ Machinery involved in cake production</li></ul>
<b>2-3</b>	<b>a)</b> Preparation of Various Icing: - <ul style="list-style-type: none"><li>➤ fondant,</li><li>➤ American,</li><li>➤ frosting</li><li>➤ Butter Cream,</li><li>➤ Cream icing</li><li>➤ Royal Icing,</li><li>➤ Marzipans,</li><li>➤ Marshmallow</li><li>➤ Lemon Meringue</li><li>➤ Fudge,</li><li>➤ Almond Paste</li><li>➤ Glace Icing</li></ul>	<b>a)</b> Types of icings. <b>b)</b> Various types of Ice cream bombe. <b>c)</b> Introduction to various icing equipment: <ul style="list-style-type: none"><li>➤ Piping bags</li><li>➤ Nozzles</li><li>➤ Platte knife</li><li>➤ Different types of designing cutters</li></ul>
<b>4-6</b>	<b>a)</b> Cakes & Gateaux <ul style="list-style-type: none"><li>➤ Queen Cake,</li><li>➤ Fruit Cake,</li><li>➤ Birthday Cake,</li><li>➤ Wedding Cakes</li><li>➤ Black Forest gateaux</li><li>➤ Easter eggs</li><li>➤ Chocolate dripping</li><li>➤ Fruit Gateaux.</li><li>➤ Baba au Rhum</li><li>➤ Swiss Rolls</li><li>➤ Strudel</li><li>➤ Doughnuts</li><li>➤ Meringues</li><li>➤ Madeline Cake</li><li>➤ Cheese Cake</li></ul>	<b>a)</b> Cake making method: <ul style="list-style-type: none"><li>➤ Sugar Batter Process,</li><li>➤ Flour batter Process,</li><li>➤ Genoese Method,</li><li>➤ Blending and Rubbing Method</li></ul> <b>b)</b> Correct temperatures for baking various varieties of cake. <b>c)</b> Factors affecting the quality of cake. <b>d)</b> Characteristic of Cakes- Internal & External. <b>e)</b> Balancing of Cake Formula. <b>f)</b> Cake faults and their remedies.
<b>7</b>	<b>a)</b> Preparation of <ul style="list-style-type: none"><li>➤ Pineapple Pastry</li><li>➤ Chocolate Pastry</li><li>➤ Truffle Pastry</li><li>➤ Black forest</li><li>➤ Mocha Pastry</li></ul>	<b>a)</b> Knowledge of Genoese making <b>b)</b> Correct temperature and time <b>c)</b> Proper knowledge of equipment <b>d)</b> Faults in pastry making – <ul style="list-style-type: none"><li>➤ Internal &amp; external</li></ul>
<b>8-9</b>	<b>a)</b> Preparation of <ul style="list-style-type: none"><li>➤ Plain Biscuits</li><li>➤ Salted Biscuits</li><li>➤ Piping Biscuits</li></ul>	<b>a)</b> Preparation of cookies and Biscuits. <b>b)</b> Factors affecting the quality of Biscuits & cookies. <b>c)</b> Raw material required for cookies

	<ul style="list-style-type: none"> <li>➤ Marble Biscuits</li> <li>➤ Cheese Biscuits</li> </ul>	<p>making</p> <p><b>d)</b> Faults – Internal &amp; External causes of cookies &amp; Biscuits making &amp; their remedies</p>
<b>10-11</b>	<p><b>a)</b> Preparation of</p> <ul style="list-style-type: none"> <li>➤ Coconut Biscuits</li> <li>➤ Macaroons</li> <li>➤ Melting moment's short bread biscuit.</li> <li>➤ Tricolour Biscuits</li> <li>➤ Chocolate Biscuits</li> <li>➤ Non-Khatai</li> <li>➤ Cherry knobs nuts Biscuits</li> <li>➤ Lemon Torts</li> <li>➤ Jam Torts</li> </ul>	<p><b>a)</b> Role of flour, sugar, shortening &amp; eggs etc.</p> <p><b>b)</b> An elementary knowledge of properties and use of moistening agents</p>
<b>12-13</b>	<p><b>a)</b> Preparation of</p> <ul style="list-style-type: none"> <li>➤ Profiteroles</li> <li>➤ Chocolate Éclairs</li> <li>➤ Cream Buns</li> <li>➤ Cream Fingers</li> <li>➤ Patties (Veg., Cheese &amp; Chicken)</li> </ul>	<p><b>a)</b> Principles of Pastry making &amp; its various derivatives:</p> <ul style="list-style-type: none"> <li>➤ Short crust paste</li> <li>➤ Choux paste</li> <li>➤ Puff paste</li> <li>➤ Flaky paste</li> </ul>
<b>14-15</b>	<p><b>a)</b> Preparation of</p> <ul style="list-style-type: none"> <li>➤ Sugar boiled confectionery</li> <li>➤ Different types of sugar candies and zuzups &amp; jellies</li> <li>➤ Amorphous confectionery</li> <li>➤ Crystalline confectionery i.e. candy etc.</li> </ul>	<p><b>a)</b> Study of Confectionery Ingredients like Starch and its derivatives,</p> <p><b>b)</b> An Elementary knowledge of source, properties &amp; use of fats, oils used for confectionary products.</p> <p><b>c)</b> Characteristic of chemicals and leavening agents.</p> <p><b>c)</b> Study of sugar boiled confectionery like Amorphous confectionery &amp; Crystalline confectionery</p> <p><b>d)</b> Introduction to the confectionary work.</p> <p><b>e)</b> Confectionary terms.</p> <p><b>f)</b> Introduction to the basic tools used in the confectionary</p> <p><b>d)</b> Role of flour, sugar, shortening and egg</p>
<b>16</b>	<p><b>a)</b> Preparation of</p> <ul style="list-style-type: none"> <li>➤ Milk Toffee,</li> <li>➤ Chocolates,</li> </ul>	<p><b>a)</b> Knowledge of different sauces which are used in confectionery like:</p> <ul style="list-style-type: none"> <li>➤ Truffle sauce,</li> <li>➤ Cherry sauce,</li> <li>➤ Strawberry puree</li> </ul> <p><b>b)</b> knowledge of white chocolate &amp; cocoa powder</p> <p><b>c)</b> Storage of confectionary products</p>
<b>17-20</b>	<p>On the job Training (OJT) (4 weeks)</p> <p><i>Note: - During OJT student have to maintain a log book on daily basis indicating activities performed during the day which shall also be countersigned by the section / department supervisor.</i></p>	
<b>21-22</b>	<p><b>a) Puddings:-</b></p> <ul style="list-style-type: none"> <li>➤ Bavarois cold</li> <li>➤ lemon soufflé</li> <li>➤ chocolate mousse,</li> <li>➤ Ginger pudding,</li> </ul>	<p><b>a)</b> Protection of food &amp; contamination.</p> <p><b>b)</b> Common pest control in Bakery.</p> <p><b>c)</b> Safety: - Causes of Accidents in Bakery &amp; its prevention.</p>

	<ul style="list-style-type: none"> <li>➤ Soufflé Praline,</li> <li>➤ Fruit Trijjele</li> </ul>	
<b>23-24</b>	<b>a) Indian Sweets:-</b> <ul style="list-style-type: none"> <li>➤ Rasgulla,</li> <li>➤ Chamcham,</li> <li>➤ Rasmalai,</li> <li>➤ Gulabjamun,</li> <li>➤ Mysore Paok,</li> <li>➤ Kheer,</li> <li>➤ Rabri,</li> <li>➤ Bueji,</li> <li>➤ Chekki.</li> </ul>	<b>a)</b> Introduction of Indian Sweets prepared in halwai section & its ingredients, preparation procedures, uses & derivatives – <ul style="list-style-type: none"> <li>➤ Chenna,</li> <li>➤ Sugar syrups,</li> <li>➤ Khoya &amp; dry fruits</li> </ul> <b>b)</b> Co-ordination of Bakery & confectionary with other section of main kitchen. <b>c)</b> Difference between Indian & Western Confectionery
<b>25</b>	Revision	
<b>26</b>	Exams	

**Note: -**

- *At least one industrial visit in every two weeks shall be arranged and the trainees will submit the activities learned there and 10 marks internal assessment will be awarded based on it.*
- *One hour class on soft skill to be arranged on daily basis.*



## Trade: Baker & Confectioner

### List of Tools & Equipments Trainees Tool Kit for 20 Trainees + One Instructor

S. No.	Description	Quantity
1.	Rolling Pin 12"	2 Nos.
2.	Table Spoons	2 Nos.
3.	Tea Spoons	2 Nos.
4.	Forks	2 Nos.
5.	Cutting Knives	2 Nos.
6.	Wooden Spoons	2 Nos.
7.	Rolling Pins 22"	2 Nos.
8.	Sandwich Pins 7"	2 Nos.
9.	Check Cake Tins	2 Nos.
10.	Pastry Cutters	2 Nos.
11.	Measuring Jug	2 Nos.
12.	Palette Knives	2 Nos.
13.	Egg Beater	2 Nos.
14.	Cup Enamel or Glass	2 Nos.
15.	Soup Plate	2 Nos.
16.	Plate (Large) .	2 Nos.
17.	Plate(Large)	2 Nos.
18.	Side Plate	2 Nos.
19.	Swiss Roll Tins	2 Nos.
20.	Petty Tins in Sheet of Six	2 Nos.
21.	Small Flan Tins	2 Nos.
22.	Large Flan Tins	2 Nos.
23.	Enamel Bowls (5 Pins)	2 Nos.
24.	Thais (Brass or Steel)	2 Nos.
25.	Degachis (Small)(Stainless Steel)	2 Nos.
26.	Flour Sieves 7"	2 Nos.
27.	Rubbish Bowl (Basin)	1 No.
28.	Food Cover	1 No.
29.	Marble Slab	1 No.
30.	Measuring Spoons	1 Set
31.	Cake Tins 6"Loose Bottom	2 Nos.
32.	Trays for Ingredients	2 Nos.
33.	Graters	6 Nos.
34.	Lime Squeezer	2 Nos.
35.	Small Scale	1 No.
36.	Large Scale	1 No.
37.	Palette Knife 18" Blade for Icing	1 No.
38.	Large Cutting Knives	2 Nos.
39.	Biscuit cutter	24 Nos.
40.	Boat Tins	8 Nos.
41.	Madeline Tins	12 Nos.
42.	Icing Gun	3 Nos.
43.	Cream Horn Tins	2 Nos.
44.	Large Egg Beater(wire stings)	4 Nos.
45.	Moulds and Nozzles with star Shape	6 Nos.
46.	Moulds and Nozzles for Royal Icing Roses	2 Nos.
47.	All Types of Nozzles with star shape	6 Nos.

S. No.	Description	Quantity
48.	Scissors	1 No.
49.	Tin Opener	1 No.
50.	Pastry Brushes (Different Sizes)	6 Nos.
51.	Piping Bags	6 Nos.
52.	Scoopers	6 Nos.
53.	Pastry Tongs	6 Nos.
54.	Cake cutters	2 Nos.
55.	Strip cutters	6 Nos.
56.	Turn Tables	3 Nos.
57.	Thermometers	3 Nos.
58.	Set of Cake Tins: - <ul style="list-style-type: none"> <li>➤ 3' loose Bottom</li> <li>➤ 6" Loose Bottom</li> <li>➤ 8" Loose Bottom</li> <li>➤ 10" Loose Bottom</li> <li>➤ 12" Loose Bottom</li> </ul>	1 Set
59.	Bread Tins	100 Nos.
60.	Slab Cake Tins: - <ul style="list-style-type: none"> <li>➤ 15 x 11</li> <li>➤ 10x 10</li> <li>➤ 9 x 7</li> <li>➤ 11 x9</li> </ul>	2 each
61.	Peelers	2 Nos.
62.	Large Enamel-Bowls	2 Nos.
63.	Large Sugar Sieve	1 No.
64.	Large Flour Sieve	1 No.
65.	Small Nut Grinder	1 No.

### **B. Basic Equipment for Setting up of Bakery**

S. No.	Description	Quantity
1.	Heavy Duty Electric Oven	2 Nos.
2.	Heavy Duty Gas Oven	2 Nos.
3.	Set of Scales(Avery Big One)	2 Nos.
4.	Small Bakery Oven with Stove tops	2 Nos.
5.	Refrigerator	1 No.
6.	Deep Fridge	1 No.
7.	Dry Powder	1 No.
8.	Standing Shelving Racks with Trays	4 Nos.
9.	Bin Containers	4 Nos.
10.	Weighing Scale (Small)	1 No.
11.	Cup Boards	2 Nos.
12.	Wash Basins	2 Nos.
13.	Garbage Bin with Foot Rest	2 Nos.
14.	Swill Bins(Big)	2 Nos.
15.	Dough Mixer	2 Nos.
16.	Demonstration Table with Marble Top	3 Nos.
17.	Grinding Machine	1 No.
18.	Cooling Racks with Trays	1 No.
19.	Kneading Table	1 No.
20.	Stock Pots	3 Nos.