

CURRICULUM

FOR THE TRADE OF

Food Production (Vegetarian)

UNDER

APPRENTICESHIP TRAINING SCHEME



Government of India
Ministry of Skill Development & Entrepreneurship
Directorate General of Training

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1. ACKNOWLEDGEMENT

The DGT sincerely express appreciation for the contribution of the Industry, State Directorate, Trade Experts and all others who contributed in revising the curriculum. Special acknowledgement to the following industries/organizations who have contributed valuable inputs in revising the curricula through their expert members:

1. Mr. Arul Mani
2. Dr D.C Sexana
3. DrVikas Nanda
4. Dr. D.S Sogi
5. Mr. JeevanJyoti panda
6. Mr. SriyaSumanPatro
7. Mrs. JasleenKaur
8. Ms. VarkhaGrewal
9. Mr. Sachin Kumar
- 10.Mr. Sandeep Kumar
- 11.Dr. Neeraj
- 12.Mr. Kuldeep Singh Sidhu
- 13.Mr. Pargat Singh
- 14.Mr. SaurabhSiddhu
- 15.Mr. PradeepAtri

Special acknowledgement is expended by DGT to the following expert members who had contributed immensely in this curriculum.

Co-ordinator for the course: Mr.Raminder Kumar (Food Technologist), V.I, R.V.T.I, Panipat.

Sl. No.	Name & Designation Sh./Mr./Ms.	Organization	Expert Group Designation
1.	Mr. Arul Mani	Taj Hotel Group, Mumbai (Training)	General Manager
2.	Dr. D.C Sexana	S.L.I.E.T ,Longowal,Punjab (Food Engineering and Tech. Dept)	Professor
3.	Dr. Vikas Nanda	S.L.I.E.T ,Longowal,Punjab (Food Engineering and Tech. Dept)	Professor
4.	Dr. D.S Sogi	Guru Nanak Dev University, Amritsar, Punjab (Department of Food Science and Technology)	Professor
5.	Mr. JeevanJyoti Panda	Govt Polytechnic, Berhampur, Odisha (H.M&C.T)	Lecturer
6.	Mr. SriyaSumanPatro	Govt Polytechnic, Berhampur, Odisha (Food Tech. and Engg.)	Lecturer
7.	Mrs. JasleenKaur	Lovely Professional University,	Assistant

		Jalandhar, Punjab (Food Technology and Nutritions)	Professor,
8.	Ms. VarkhaGrewal	Cremica food Industries Ltd, Phullar, Jalandhar, Punjab	Assistant Manager
9.	Mr. Sachin Kumar	R.V.T.I, Allahabad (Catering & Hospitality)	Vocational Instructor
10.	Mr. Sandeep Kumar	I.T.I Nabha, Punjab (Hotel Management)	Worked as Guest Faculty
11.	DrNeeraj	N.I.F.T.E.M, Sonipat, Haryana (Food Technology)	Assistant Professor,
12.	Mr. Kuldeep Singh Sidhu	I.T.C Ltd, Kolkata (Food Tech.)	Assistant Manager
13.	Mr. Pargat Singh	Rich Graviss products pvt. Ltd, Kala-Amb, DisttSirmour, Himachal Pradesh	Senior Quality Executive
14.	Mr. SaurabhSiddhu	HRD AIH&TM-ITDC, C-12/A, Qutub Institutional Area, New Delhi-110016.	Chef
15.	Mr. PradeepAtri	JW Marriott, SenapatiBapat Road , Pune	Senior Event Manager

2. Back-Ground

1.1 Apprenticeship Training under Apprentices Act 1961

The Apprentices Act, 1961 was enacted with the objective of regulating the programme of training of apprentices in the industry by utilizing the facilities available therein for imparting on-the-job training. The Act makes it obligatory for employers in specified industries to engage apprentices in designated trades to impart Apprenticeship Training on the job in industry to school leavers and person having National Trade Certificate(ITI pass-outs) issued by National Council for Vocational Training (NCVT) to develop skilled manpower for the industry. There are four categories of apprentices namely; **trade apprentice, graduate, technician and technician (vocational) apprentices.**

Qualifications and period of apprenticeship training of **trade apprentices** vary from trade to trade. The apprenticeship training for trade apprentices consists of basic training followed by practical training. At the end of the training, the apprentices are required to appear in a trade test conducted by NCVT and those successful in the trade tests are awarded the National Apprenticeship Certificate.

The period of apprenticeship training for graduate (engineers), technician (diploma holders and technician (vocational) apprentices is one year. Certificates are awarded on completion of training by the Department of Education, Ministry of Human Resource Development.

Develop the curriculum (equivalent to the level 4 NSQF) for food production in the food service industry.

1.2 Changes in Industrial Scenario

There is a huge change in the Indian industry. The Indian Industry registered an impressive growth during the last decade and half. The number of industries in India have increased manifold in the last fifteen years especially in services and manufacturing sectors. It has been realized that India would become a prosperous and a modern state by raising skill levels, including by engaging a larger proportion of apprentices, will be critical to success; as will stronger collaboration between industry and the trainees to ensure the supply of skilled workforce and drive development through employment. Various initiatives to build up an adequate infrastructure for rapid industrialization and improve the industrial scenario in India have been taken.

1.3 Reformation

The Apprentices Act, 1961 has been amended and brought into effect from 22nd December, 2014 to make it more responsive to industry and youth. Key amendments are as given below:

- Prescription of number of apprentices to be engaged at establishment level instead of trade-wise.
- Establishment can also engage apprentices in optional trades which are not designated, with the discretion of entry level qualification and syllabus.
- Scope has been extended also to non-engineering occupations.
- Establishments have been permitted to outsource basic training in an institute of their choice.
- The burden of compliance on industry has been reduced significantly.

3. RATIONALE

(Need for Apprenticeship in Food Production (Vegetarian))

The revised Apprenticeship Training Scheme (ATS) shall make the students more adapt to industry requirement through latest theoretical & practical inputs as:

1. It offers a good synergy between Basic Training (Theoretical Inputs) & Practical Training (On the Job training) unlike earlier scheme where students need to complete two year's classroom training before undergoing PT (On the Job training).
2. It will enhance knowledge about scientific principles, familiarization with industrial culture, and basics of fitting and its need.

Further, the tourism industry has contributed Rs. 6.6 Trillion to the Indian Economy in 2013 and the Foreign Exchange Earnings (FEE) has been a little over 18 billion USD. This contribution is from the organized sector of transport, boarding and lodging.

With the economy expected to grow at an average of 5-7% each year for the next 4 years there would be a substantial increase in all related numbers.

Currently the food industry India in organized hotel & restaurants segments employs huge number of skilled, semi-skilled & unskilled personnel. There is already a supply / demand gap in the skills segment of this industry.

While other schemes like HSR & vocational training through NSDC have been initiated, it has met with limited success in retaining this labour within the industry i.e. infant mortality is high in this area across various sectors of the industry.

4. JOB ROLES:

After completion of the Apprenticeship Training in Food Production (Vegetarian) the trainees will be able to do/perform

- Identifying & selecting raw material
- Usage of kitchen related equipment
- Safely handling food (minimize, damage / loss) while processing
- Pre-prep of raw material for cooking
- Skilled with all cooking methods
- Food presentation & serving at the right temperatures
- Knowledge of nutrition & food allergies
- Basic usage of computers / tablets
- Basic planning & utilization of resources (Raw material, time, manpower)
- Knowledge & application of HACCP / ISO requirements Personality / Employability Knowledge & Skills
- Appropriate Personal Hygiene & Grooming practices
- Punctuality & Respect towards others' time
- Good interpersonal skills and respect all work colleagues (personal conduct)
- Good housekeeping of work area
- Safety practices while handling tools & machinery
- Basic verbal & written communication skills
- Practice basic arithmetic including basic commercial mathematics
- Wastage – practice Reuse, Recycle and Safe Disposal
- Optimum utilization and conservations of natural resources (water, heat, electricity, fuel)
- Knowledge & Demonstrate basic first aid (in case of emergency)
- Knowledge & Demonstrate basic fire safety (use of extinguishers)

Reference NCO & NOS:

NOS: - As on date no NOS has been developed for this sector by NSDC.

NCO: -520.20 (2004).

5. General Information

1. Name of the Trade : Food Production (Vegetarian) Trade

2. N.C.O./N.O.S. Code No. :NOS: - As on date no NOS has been developed for this sector by NSDC.

NCO: - 520.20- (2004)

**3. Duration of Apprenticeship Training (Basic Training + Practical Training):
6 + 18Months = 2 Years.**

Duration of Basic Training: -

- a) Block – I (3 months)
- b) Block – II (3 months)

Total duration of Basic Training (6 months)

Duration of Practical Training (On – job Training): -

- a) Block – I (9 months)
- b) Block – II(9months)

Total duration of Practical Training (18 months)

3.2 For ITI Passed: - Duration of Basic Training: - NIL

Duration of Practical Training (On -job Training): 12 months

4. Entry Qualification: Passed 10th Class with under 10+2 system of Education or its equivalent

At least 16 years of age on the day commencing the apprenticeship.

5. Selection of Apprentices:The apprentices will be selected as per Apprenticeship Act amended from time to time.

6. Rebate for ITI passed trainees : i) One year in the trade of Food Production.

Note: Industry may impart training as per above time schedule for different block, however this is not fixed. The industry may adjust the duration of training considering the fact that all the components under the syllabus must be covered. However the flexibility should be given keeping in view that no safety aspects is compromised.

6. COURSE STRUCTURE

Time (in months)	1-3	4-12	13-15	16-24
Basic Training & Employability Skill	Block – I	-----	Block – II	-----
Practical Training (On - job training)	-----	Block – I	-----	Block – II

7. Syllabus

7.1 Basic Training (Block – I & II)

Duration: 6 months

GENERAL INFORMATION

- | | |
|------------------------------------|---|
| 1) Name of the Trade | : Food Production (Vegetarian) |
| 2) Hours of Instruction | : 24 weeks (920Hrs). |
| 3) Batch size | : 20 apprentices (Maximum per batch) |
| 4) Power Norms | : 4 kw |
| 5) Space Norms | : 4sq.m. of classroom space per apprentice |
| 6) Examination | : The examination will be held on completion of each block. |
| 7) Relevance MES Course | : NO |
| 8) Instructor Qualification | : |

i) Degree or equivalent in cooking or catering services, Hotel and Hospitality Administration/Hotel Management with minimum 3 years working experience in the relevant field.

OR

ii) NTC/NAC/Diploma in Food production or catering technology with minimum 5 years working experience in the relevant field.
Craft Instructor Certificate (CIC) is desirable

- 9) Tools, Equipment & Machinery required:** As per Annexure – I

7.1.1 Detailed Syllabus of Core Skill

Block – I Basic Training

Topic No.	Vocational Calculation & Science	Duration (in hours)
1	Percentage: Introduction, Simple calculation. Changing percentage to decimal and fraction and vice-versa.	50 hrs
	Unit: Systems of unit- FPS, CGS, MKS/SI unit, unit of length, Mass and time, Conversion of units	
2	Material Science: properties – Physical & Mechanical, Types – Ferrous & Non-Ferrous, Difference between Ferrous and Non-Ferrous metals, Introduction of Iron, Types; Steel, Types Introduction to Copper, Brass, Aluminum, Alloys Properties of Food grade materials particularly Stainless steel (SS), SS types and uses, Introduction to corrosion and control	
	Mass, Weight and Density: Mass, Unit of Mass, Weight, difference between mass and weight, Density, unit of density, specific gravity.	
	Basic of Work, Power and Energy	

Block – II**Basic Training**

Topic No.	b) Vocational Calculation & Science	Duration(in hours)
1	Algebra: Algebraic formula, Linear equations (with two variables).	50 hrs
2	Menstruation:Area and perimeter of square, rectangle, parallelogram, triangle, circle, semi circle, Volume of solids - cube, cuboid, cylinder and sphere. Surface area of solids -cube, cuboid, cylinder and sphere.	
3	Heat &Temperature: Heat and temperature,Types of heat- sensible and latent heat their units, difference between heat and temperature;Temperature scales- Celsius, Fahrenheit and Absolute: their interrelations boiling point, melting point, and freezing point; Instruments - thermometer, pyrometer, Modes of heat transfer/transmission- conduction, convection and radiation	
4	Basic Electricity: Introduction, use of electricity, Production, Types of current_ AC, DC, their comparison, Terminology - voltage, resistance, their units; Conductors and insulators Types of connections - series, parallel, electric power, Horsepower, energy, unit of electrical energy.	

Topic No.	b) Vocational Calculation & Science	Duration (in hours)
1	Introduction to Accountancy	50hrs
2	Income, Expense, recording income & expenses	
3	Credit & Debit – basic concepts & rules of accounting principles	
4	Principle, Interest – concepts of simple & compound interest	
5	Profit & Loss – basic concepts, interpret a statement	
6	Taxes – Income, Sales, VAT,	

7.1.2 Detail Syllabus of Professional Skill & Professional Knowledge
Block –I
Basic Training

Week No.	Professional Skills	Professional Knowledge
	Practical	Theory
1	LPG Stove /Cooking range, Operation of oven set the temperature requirement, Electric Toaster Mixer/Grinder Care and Cleaning Mixer Grinder, Food Processor and Water Purifier set care and maintenance.	Introduction to Catering/Food Industry. History of Modern Cookery. Farm to Table – The entire supply chain. Different types of catering establishments <ul style="list-style-type: none"> • Hotels / Restaurants • Hospitals / Institutions • Industrial / Canteens • Transport Catering – Cruises, Railways and Airlines Organizational hierarchy of the Kitchen department (line & function) Attributes of kitchen service personal: Duties and responsibilities of kitchen service personal. Career Opportunities in the catering/Food Industry
	Identification of kitchen tools & instruments and it's specific usage (Knives in particular)	Knowledge about small, medium and large instruments, Uses of instruments. Recommended metals for kitchen equipments and their standards (FSSAI), Common brands & manufacturers. Approximate costs. Safety procedure in handling Equipment
	Identification of basic processing / cooking equipment (light & heavy)	Knowledge about small, medium and large processing / cooking equipment. Recommended metals for kitchen equipments and their standards (FSSAI), Common brands & manufacturers. Approximate costs
	Metals used in cooking –	Importance of avoiding other metals

2	Stainless steel	Benefits of using Stainless Steel
	Special uses of Copper & Brass	Specific use & benefits of Copper, Brass.
	Cleaning, maintaining and storage of tools & equipment	Cleaning & sanitizing agents and their usage. Cleaning of kitchen and preparation for work-mise-en-place. Recommended chemicals for cleaning and sanitation and their usage.
	A) Personal hygienic: Safety of different body parts. Food handler's hygienic protective clothing. B) Working area hygiene procedure and its importance. C) Fire Hazards and first aid contents.	Introduction to basic food and personal safety measures. Biological, chemical & Physical adulteration/spoilage. Physical, chemical and Biological hazards in food. Various textures, consistencies Techniques used in pre-preparation and preparation of food items
	Basic hygiene practices to be observed in kitchen area	Personal hygiene Grooming requirements & recommended scheduled to be practiced, care and safety of body and its importance, Food handlers hygienic : Protective clothing. Working area hygiene and its importance.
	Safety practices to be observed in kitchen	Handling and Safety rules for using different types of knives and other kitchen equipment. Introduction to basic first aid theory and Knowledge about treating the minor injuries- <ul style="list-style-type: none">• Cuts• scalds• burns

Block –I
Basic Training

	Professional Skills	Professional Knowledge
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Week No.	Practical	Theory
3-6	<p>Demonstrations</p> <p>Preparation of different food Ingredients (Mise-en-place)</p> <p>Washing & cleaning</p> <p>Separation of edible & non-edible parts</p> <p>Peeling, coring, shelling, Shredding, blanching, grading, sorting, Grinding, Pounding and chopping</p> <p>Cutting (mainly vegetable & fruits):</p> <p>Brunoise, Chiffonade, Jardinere, Julienne, Macedoine, Paysanne, Matignone, Slices, Paring, Turned, Wedges, Allumette, Fluting of mushrooms, Turning Carrots and Potatoes</p> <p>Preparation of paneer/cheese from milk.</p> <p>Cutting of paneer/cheese for varies dishes.</p> <p>Preparation of Burfee, Balushahi, Halwas, Gulabjamun, jalabi, Gujias, phirnee and Rasgulla.</p> <p>Preparation of different types of indigenous food products.</p>	<p>Identification of basic food raw material through photographs/ Videos, samples.</p> <p>Classification of raw materials</p> <p>Fruits & Vegetables ,Cereals & Pulses, Spices, Condiments, Herbs & additives</p> <p>Types and identification of the same.</p> <p>Classification of methods of cutting for different fruits and vegetables.</p> <p>To study the various types of Indigenous desserts sweet dishes and indigenous food products.</p>
	<p>Method of mixing foods:</p> <p>Blending, Dissolving, Emulsification, Whipping, Folding, Beating, Creaming,</p>	<p>Preparation and identification of emulsions, blends, mixes etc.</p>

7	Kneading, Marinating. Culinary terms & learn the French word for basic food items	Accompaniments and Garnishes. Culinary terms in English & respective European Languages for European Cuisines. Local/ Regional language for Indian Cuisine.
8-9	<p>Demonstration:</p> <p>Uncooked & Cooked Salads</p> <p>Vegetable Salads,</p> <p>Leafy Salads,</p> <p>Fruit Salads,</p> <p>Whole meal Salads,</p> <p>Indian green salad,</p> <p>Salad Dressings:</p> <p>Vinaigrette Dressing,</p> <p>Oil based dressings,</p> <p>Citrus juice dressings,</p> <p>Derivatives,</p>	A Knowledge about methods of preparation of salads and salad dressing

10-11	<p>Demonstration of cooking methods:</p> <p>Baking</p> <p>Boiling</p> <p>Poaching</p> <p>Stewing</p> <p>Broiling</p> <p>Frying</p> <p>Griddling</p>	<p>Methods of Cooking & effect of heat on foods</p> <p>Dry Heat, Moist Heat and Microwave Heating.</p> <p>Cooking by medium of Fat, Conduction & Convection Heating.</p>
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	Grilling Roasting Saute / Stir Fry To be demonstrated on (as applicable): Fruits & Vegetable Cereals & Pulses	
	Preparation of Rice, Pulaos, Veg Biryani & Daals - 3 preparations in each	Regional Cuisine in India.
		List of utensils & equipment – Material, uses, cleaning & storage.
		Spices & Herbs – Identification & Uses.
		Effect of heating on various food ingredients.
		Rice, Pulaos, Veg Biryani & Daals.
		Tandoor Dishes (includes different seasoning on tandoori dishes. Lighting & controlling and operations of a tandoor.
	Demonstrations:	
12-13	Basic Indian Gravy Base Tomato & Onion, Cashew, Tomato, Yoghurt, Yellow, Makni, White, & Brown Gravy.	To study various types of basic Indian gravies.
	Final finish & presentation of dishes	Tempering (Tadka) & Garnishes.
	Assessment/Examination	

Block – II
Basic Training

Week No.	Professional Skills	Professional Knowledge
	Practical	Theory
	Demonstrations: Stocks, Soups & Sauces Demonstration: Vegetable Stock, Demonstration of one vegetable soups in each type.	Stocks, Soups & Sauces Recipes: Vegetable Stock Types of stock, storage, uses of stocks. Classification of Soups: Thick – Puree Cream Chowder

1-3	Demonstration of one vegetable sauce in each type & its derivative.	Thin – Unpassed Broths Thin – Passed Cold & International Sauces Mayonnaise Veloute Tomato (Kitchen) Sauce Derivatives of Basic Sauces
4-5	Hordoeuvres, Canapes, Sandwiches Demonstration on 6 varieties of each type.	Hordoeuvres, Canapes, Sandwiches : open, toasted, grilled and multi-layered sandwiches
6-8	Preparation & Cooking of Vegetables European Cuisine Potatoes – 3 varieties Vegetables – 3 varieties Demonstration and preparation of Spaghetti & macroni.	Vegetables:- Classification, Selection & assessing quality, Season of availability, Effect of heat on different vegetables in acid/alkaline medium and reaction with different metals. To study about the various type farinaceous products. Yield and Wastage. Weights and Measures. Different brands available in market.
9-10	Preparation of different types of snacks, pickles, preserves & chutney, sauces and Raita.	Different methods of preparation, ingredients, equipments/utensils involved in the preparation of snacks, pickles, preserve & chutney, sauces and Raita.
11	Preparation & Cooking of Cereals, Farinaceous and Pulses Cooking of Rice, Cooking of beans & pulses, Cooking of Pasta – 2 varieties, Cooking of Pasta sauces – 4 varieties	Identification & Selection of Cereals and pulses. Varieties of pasta and methods of preparation.
12	Bakery & Confectionery 5 finished dishes from each base dough & pastes, Breakfast breads – 10 varieties Waffles & Pancakes Cookies Banana fritter, Payasam,	Basic Dough & Pastes. Bread Dough & its types. Puff paste, Choux paste, Short crust paste, Danish paste, Cakes: Pound Cake, Cheese Cake, Puddings: Banana fritter, Payasam, Malpura, , Rice pudding,

	Malpura, Rice pudding, Basic Calligraphy for cake decoration.	
13	Preparation of different types of Regional foods—2 Varieties each.	Balancing of recipes. Standardization of recipes, Yield, Menu compilation, Menu planning, Portion control with brief study of how portions are worked out, Purchasing specification. Quality control, indenting and costing Rechauffe.
Assessment/Examination		

7.1.3 Employability Skills

GENERAL INFORMATION

- 1) **Name of the subject** : **EMPLOYABILITY SKILLS**
- 2) **Applicability** : ATS- Mandatory for fresher only
- 3) **Hours of Instruction** : **110 Hrs.**
- 4) **Examination** : The examination will be held at the
end of Block I & II of Basic Training.
- 5) **Instructor Qualification** :

i) MBA/BBA with two years experience or graduate in sociology/social welfare/Economics with two years experience and trained in Employability skill from DGT Institute .

And

Must have studied in English/Communication Skill and Basic Computer at 12th /diploma level

OR

ii) Existing Social Study Instructor duly trained in Employability Skill from DGT Institute.

7.1.3.1 Syllabus of Employability Skills

Block – I Basic Training

Topic No.	Topic	Duration (in hours)
	English Literacy	20
1	Pronunciation : Accentuation (mode of pronunciation) on simple words, Diction (use of word and speech)	
2	Functional Grammar Transformation of sentences, Voice change, Change of tense, Spellings.	
3	Reading Reading and understanding simple sentences about self, work and environment	
4	Writing Construction of simple sentences Writing simple English	
5	Speaking / Spoken English Speaking with preparation on self, on family, on friends/ classmates, on know, picture reading gain confidence through role-playing and discussions on current happening job description, asking about someone's job habitual actions. Cardinal (fundamental) numbers ordinal numbers. Taking messages, passing messages on and filling in message forms Greeting and introductions office hospitality, Resumes or curriculum vita essential parts, letters of application reference to previous communication.	
	I.T. Literacy	20
1	Basics of Computer Introduction, Computer and its applications, Hardware and peripherals, Switching on-Starting and shutting down of computer.	
2	Computer Operating System Basics of Operating System, WINDOWS, The user interface of Windows OS, Create, Copy, Move and delete Files and Folders, Use of External memory like pen drive, CD, DVD etc, Use of Common applications.	
3	Word processing and Worksheet Basic operating of Word Processing, Creating, opening and closing Documents, use of shortcuts, Creating and Editing of Text, Formatting the Text, Insertion & creation of Tables. Printing document. Basics of Excel worksheet, understanding basic commands, creating simple worksheets, understanding sample worksheets, use of simple formulas and functions, Printing of simple excel sheets	
4	Computer Networking and INTERNET Basic of computer Networks (using real life examples), Definitions	

	of Local Area Network (LAN), Wide Area Network (WAN), Internet, Concept of Internet (Network of Networks), Meaning of World Wide Web (WWW), Web Browser, Web Site, Web page and Search Engines. Accessing the Internet using Web Browser, Downloading and Printing Web Pages, Opening an email account and use of email. Social media sites and its implication. Information Security and antivirus tools, Do's and Don'ts in Information Security, Awareness of IT - ACT, types of cyber crimes.	
	Communication Skill	15
1	Introduction to Communication Skills Communication and its importance Principles of Effective communication Types of communication - verbal, non verbal, written, email, talking on phone. Non verbal communication -characteristics, components-Para-language Body - language Barriers to communication and dealing with barriers. Handling nervousness/ discomfort.	
2	Listening Skills Listening-hearing and listening, effective listening, barriers to effective listening guidelines for effective listening. Triple- A Listening - Attitude, Attention & Adjustment. Active Listening Skills.	
3	Motivational Training Characteristics Essential to Achieving Success The Power of Positive Attitude Self awareness Importance of Commitment Ethics and Values Ways to Motivate Oneself Personal Goal setting and Employability Planning.	
4	Facing Interviews Manners, Etiquettes, Dress code for an interview Do's & Don'ts for an interview	
5	Behavioral Skills Problem Solving Confidence Building Attitude	

Block– II
Basic Training

Topic No.	Topic	Duration (in hours)
	Entrepreneurship skill	15
1	Concept of Entrepreneurship Entrepreneurship - Entrepreneurship - Enterprises:-Conceptual issue Entrepreneurship vs. Management, Entrepreneurial motivation. Performance & Record, Role & Function of entrepreneurs in relation to the enterprise & relation to the economy, Source of business ideas, Entrepreneurial opportunities, The process of setting up a business.	
2	Project Preparation & Marketing analysis Qualities of a good Entrepreneur, SWOT and Risk Analysis. Concept & application of PLC, Sales & distribution Management. Different Between Small Scale & Large Scale Business, Market Survey, Method of marketing, Publicity and advertisement, Marketing Mix.	
3	Institutions Support Preparation of Project. Role of Various Schemes and Institutes for self-employment i.e. DIC, SIDA, SISI, NSIC, SIDO, Idea for financing/ non financing support agencies to familiarizes with the Policies /Programmes& procedure & the available scheme.	
4	Investment Procurement Project formation, Feasibility, Legal formalities i.e., Shop Act, Estimation & Costing, Investment procedure - Loan procurement - Banking Processes.	
	Productivity	10
1	Productivity Definition, Necessity, Meaning of GDP.	
2	Affecting Factors Skills, Working Aids, Automation, Environment, Motivation How improves or slows down.	
3	Comparison with developed countries Comparative productivity in developed countries (viz. Germany, Japan and Australia) in selected industries e.g. Manufacturing, Steel, Mining, Construction etc. Living standards of those countries, wages.	
4	Personal Finance Management Banking processes, Handling ATM, KYC registration, safe cash handling, Personal risk and Insurance.	
	Occupational Safety, Health & Environment Education	15
1	Safety & Health Introduction to Occupational Safety and Health importance of safety and health at workplace.	
2	Occupational Hazards Basic Hazards, Chemical Hazards, Vibroacoustic Hazards, Mechanical Hazards, Electrical Hazards, Thermal Hazards. Occupational health, Occupational hygienic, Occupational Diseases/	

	Disorders & its prevention.	
3	Accident & safety Basic principles for protective equipment. Accident Prevention techniques - control of accidents and safety measures.	
4	First Aid Care of injured & Sick at the workplaces, First-Aid & Transportation of sick person	
5	Basic Provisions Idea of basic provision legislation of India. of safety, health, welfare under legislation of India.	
6	Ecosystem Introduction to Environment. Relationship between Society and Environment, Ecosystem and Factors causing imbalance.	
7	Pollution Pollution and pollutants including liquid, gaseous, solid and hazardous waste.	
8	Energy Conservation Conservation of Energy, re-use and recycle.	
9	Global warming Global warming, climate change and Ozone layer depletion.	
10	Ground Water Hydrological cycle, ground and surface water, Conservation and Harvesting of water	
11	Environment Right attitude towards environment, Maintenance of in -house environment	
	Labour Welfare Legislation	05
1	Welfare Acts Benefits guaranteed under various acts- Factories Act, Apprenticeship Act, Employees State Insurance Act (ESI), Payment Wages Act, Employees Provident Fund Act, The Workmen's compensation Act.	
	Quality Tools	10
1	Quality Consciousness : Meaning of quality, Quality Characteristic	
2	Quality Circles : Definition, Advantage of small group activity, objectives of quality Circle, Roles and function of Quality Circles in Organization, Operation of Quality circle. Approaches to starting Quality Circles, Steps for continuation Quality Circles.	
3	Quality Management System : Idea of ISO 9000 and BIS systems and its importance in maintaining qualities.	
4	House Keeping : Purpose of Housekeeping, Practice of good Housekeeping.	
5	Quality Tools Basic quality tools with a few examples	

7.2 Practical Training (On-Job Training)

(Block – I &II)

Duration: 18 Months

GENERAL INFORMATION

- 1) **Name of the Trade** : **FOOD PRODUCTION (VEGETARIAN)**
- 2) **Batch size** : a) Apprentice selection as per Apprenticeship guidelines.
b) Maximum 16 candidates in a group.
- 3) **Examination** : i) The examination will be held on the completion of each Block
ii) NCVT exam will be conducted at the end of 2nd year
- 4) **Instructor Qualification** :

i) Degree or equivalent in cooking or catering services, Hotel and Hospitality Administration/Hotel Management with minimum 3 years working experience in the relevant field.

OR

ii) NTC/NAC/Diploma in Food production or catering technology with minimum 5 years working experience in the relevant field.
Craft Instructor Certificate (CIC) is desirable

- 5) **Tools, Equipments & Machinery required** : - As per Annexure – II
- 6) **Method of delivery** : This training is to be imparted in an establishment/industry utilizing suitable methods as listed below.
 - a) Lecture
 - b) Lesson
 - c) Demonstration
 - d) practice
 - e) group discussion
 - f) discussion with peer group
 - g) project work

7.2.1 BROAD SKILL COMPONENT TO BE COVERED DURING ON-JOB TRAINING

Block – I (On-the-Job Training) (9 Month)

1. Identify Utensils & equipments and chemical and sanitizing agents used for kitchen tools and equipments.
2. Identify spices and herbs
3. Demonstrate cooking methods with specific utensils and explain effect of heat on foods.
4. Prepare chutney and dips by using appropriate machines and kitchen tools.
5. Prepare Indian breads and Tandoor dishes.
6. Prepare basic Indian gravies such as Tomato, Onion, Cashew and Yoghurt.
7. Prepare dishes with veg. gravy.
8. Prepare rice, pulaos, Veg biryanis and daals by using kitchen tools
9. Prepare Indian sweet dishes such as Burfee, Balushahi, Halwas, Gulabjamun, jalabi, Gujias, phirnee and Rasgulla.
10. Prepare different types of regional foods.

Block – II (On-the-Job Training) (9 Month)

11. Prepare and explain stocks, soups and sauces by using kitchen tools.
12. Prepare hor d'oeuvres, canapés and sandwiches.
13. Prepare and cook vegetables for European cuisine.
14. Prepare farinaceous products as spaghetti & macroni.
15. Prepare different types of Regional foods.
16. Prepare and cook rice, beans & pulses, pasta and pasta sauces.
17. Prepare bakery and confectionery products such as breakfast breads, waffles & pancakes, cookies and basic calligraphy for cake decoration.
18. Prepare snacks, pickles, preserve, chutney, sauces and Raita.
19. Explain food safety standards and food adulteration.

Block – II (On-the-Job Training) (Optional – Place of European Cuisine) (9 Month)

20. Identify Utensils & equipments and chemical and cleaning agents used for kitchen tools and equipments.
21. Prepare dim-sums by using appropriate machines and tools.
22. Demonstrate cooking methods with specific utensils and explain effect of heat on foods.
23. Prepare rice and noodles by using appropriate machines and tools.
24. Demonstrate the uses of sauces, spices and condiments for finished dishes in Chinese cuisine.

8 Assessment Standard

8.1 Assessment Guideline:

Appropriate arrangements should be made to ensure that there will be no artificial barriers to assessment. The nature of special needs should be taken into account while undertaking assessment. Due consideration to be given while assessing for team work, avoidance/reduction of scrap/wastage and disposal of scarp/wastage as per procedure, behavioral attitude and regularity in training.

The following marking pattern to be adopted while assessing:

a) Weightage in the range of 60-75% to be allotted during assessment under following performance level:

For this grade, the candidate with occasional guidance and showing due regard for safety procedures and practices, has produced work which demonstrates attainment of an acceptable standard of craftsmanship.

In this work there is evidence of:

- good skill levels in the use of hand tools, machine tools and workshop equipment
- many tolerances while undertaking different work are in line with those demanded by the component/job.
- a fairly good level of neatness and consistency in the finish
- occasional support in completing the project/job.

b) Weightage in the range of above 75%- 90% to be allotted during assessment under following performance level:

For this grade, the candidate, with little guidance and showing due regard for safety procedures and practices, has produced work which demonstrates attainment of a reasonable standard of craftsmanship.

In this work there is evidence of:

- good skill levels in the use of hand tools, machine tools and workshop equipment
- the majority of tolerances while undertaking different work are in line with those demanded by the component/job.
- a good level of neatness and consistency in the finish
- little support in completing the project/job

c) Weightage in the range of above 90% to be allotted during assessment under following performance level:

For performance in this grade, the candidate, with minimal or no support in organization and execution and with due regard for safety procedures and practices, has produced work which demonstrates attainment of a high standard of craftsmanship.

In this work there is evidence of:

- high skill levels in the use of hand tools, machine tools and workshop equipment
- tolerances while undertaking different work being substantially in line with those demanded by the component/job.
- a high level of neatness and consistency in the finish.
- minimal or no support in completing the project

8.2 FINAL ASSESSMENT- ALL INDIA TRADE TEST FOR APPRENTICE

It is decided to follow the pattern of marking system for AITT as described below for Non-Engineering Trade.

(SUMMATIVE ASSESSMENT FOR TWO YEARS TRADE)

SUBJECTS	Marks	Sessional Marks	Full Marks	Pass Marks	Duration of Exam.
Practical	300	100	400	240	08 hrs.
Trade Theory	100	20	120	48	3 hrs.
Basic Numeracy					
Employability Skill	50		50	17	2 hrs.
Grand Total	450	120	570	----	----

Note: - The candidate pass in each subject conducted under all India trade test.

9. Further Learning Pathways

- On successful completion of the course trainees can opt for Diploma course (Lateral entry).
- On successful completion of the course trainees can opt for CITS course.

Employment opportunities:

On successful completion of this course, the candidates shall be gainfully employed in the following industries:

1. Hotels/Restaurants.
2. Food Production Industry.
3. Self-employment.
4. Hospital/Institutions.
5. Industrial/Canteens.
6. Transport catering- Cruises, Railways and Airlines.

10. Annexure – I
LIST OF TOOLS & EQUIPMENTS FOR 20 TRAINEES
TRADE: FOOD PRODUCTION (VEGETARIAN)
(Basic Training)

A: TRAINEES TOOL KIT:-

Sl. No.	Name of the items	Quantity
1	Knife Kit – Chef's Knife Filet Knife Paring Knife Peelers Knife Sharpeners	1 each
2	Wiping Cloth	3 Sets (2 Nos.)
3	Apron	3 Nos
4	Kitchen Shoes (slip on, round front, anti slip)	2 Pairs
5	Head/Beard mesh cap	2 pairs

Training Kitchen

S. No.	Equipment	Essential or Desirable
1	Working tables (Stainless steel food grade)	E
2	L.P. Gas Cooking Range	E
3	Oven, toaster and griller	E
4	Induction Plate	E
5	Tandoor and Skewer	E
6	Cooking Range (High Pressure)	E
7	Griddle (Cooking plate)	E
8	Dry Store	D
9	Refrigerator and Deep Freezer	D
10	Black Board	D
11	Trainer's Table	D
12	Required Electric, Gas Connections, Lighting & Air Conditioning	D
13	Dish Wash Area with required Sink & water supply	E
14	Pot Wash Area with required water supply	E
15	Grinding Stone	E
16	Coconut Grater	D

17	Grinder Machine	D
18	Blender/Mixer	D
19	Dough or batter Maker	D
20	Dough Mixer	D
21	Weighing Balance	E
22	Chopping Boards - Plastic with HACCP Colour Coding	E
23	Cutting Knives (Full Set) (All Types)	E
24	Frying Pan-Non-Stick/Small/Medium/Large	E
25	Kadai-Large/Small (Non stick induction)	E
19	Heavy Bottom Pan Small/Big	E
20	Aluminum Degchi-15Ltr./12 Ltr.	E
21	Tawa- General/Large	E
22	Wok (Chinese Kadai)	E
23	Cooker-1 Ltr. / 2 Ltr.,	E
24	Strainers-Conical/Strainers)	E
25	Steel Bowls-Small/Medium/Big	E
26	Collander	E
27	Baking Tray	E
28	Holder(Tongs/bowl)	
29	Saucepan Large/small	E
30	Plastic Trays-Big/Small	D
31	Pie Dish	D
32	Steel Plates	D
33	Containers (For keeping dry items) (Plastic/Steel)	E
34	Serving dish	E
35	Bread, Cake & assorted moulds	E
36	Roiling Pin and Rolling Base	E
37	Mandolin Grater	D
38	Wooden Spatula	E
39	Perforated Spoon	E
40	Steel Slicer	E
41	Steel Basin	D
42	Steel Ladles	D

43	Steel & Plastic Mugs	D
44	Steel Spoons	D
45	Balloon Whisk	E
46	Measuring Jars	E
47	Digital Thermometers	E
48	Dustbins	E
49	Chart denoting the Do's' and Don'ts Kitchen	E
50	First Aid Kit and Fire Extinguishers	E
51	Baking ovens	E
52	Fly killer (UV type)	E
53	Rodent box/ Glue Trap	E

**Infrastructure for Vocational Calculation & Science and Employability Skills
(Basic Training)
TRADE: FOOD PRODUCTION (VEGETARIAN)
LIST OF TOOLS & EQUIPMENTS FOR 20 TRAINEES**

A:-

Sl. No.	Name of the items	Quantity
1	Black / White Board (1200 mm x 90 mm)	1
2	Computer (PC) with latest configurations and Internet connection with standard operating system, standard word processor and worksheet software.	10 No
3	UPS	As required
4	Scanner cum Printer	1
5	Computer Tables	10
6	Computer Chairs	10
7	LCD Projector	1
8	Stationery	As required

B : Instruments & General Shop Outfit

Sl. No.	Name of the items	Quantity
1	Classroom for 20 trainees	As required
2	Writing Table & Chair for each Trainee	As required
3	Soft boards for posters / notices	As required
4	Lighting (natural & artificial)	As required
5	Ventilation, air-conditioning (temperature & humidity and air quality measurement)	As required
6	Locker for 20 trainees	As required

11. Annexure – II
INFRASTRUCTURE FOR ON-JOB TRAINING

TRADE: FOOD PRODUCTION (VEGETARIAN)
LIST OF TOOLS & EQUIPMENTS FOR 20 TRAINEES

Repeated from training kitchen

S. No.	Equipment	Essential or Desirable
1	Working tables (Stainless steel food grade)	E
2	L.P. Gas Cooking Range	E
3	Oven, toaster and griller	E
4	Induction Plate	E
5	Tandoor and Skewer	E
6	Cooking Range (High Pressure)	E
7	Griddle (Cooking plate)	E
8	Dry Store	D
9	Refrigerator and Deep Freezer	D
10	Black Board	D
11	Trainer's Table	D
12	Required Electric, Gas Connections, Lighting & Air Conditioning	D
13	Dish Wash Area with required Sink & water supply	E
14	Pot Wash Area with required water supply	E
15	Grinding Stone	E
16	Coconut Grater	D
17	Grinder Machine	D
18	Blender/Mixer	D
19	Dough or batter Maker	D
20	Dough Mixer	D
21	Weighing Balance	E
22	Chopping Boards - Plastic with HACCP Colour Coding	E
23	Cutting Knives (Full Set) (All Types)	E
24	Frying Pan-Non-Stick/Small/Medium/Large	E
25	Kadai-Large/Small (Non stick induction)	E
19	Heavy Bottom Pan Small/Big	E

20	Aluminum Degchi-15Ltr./12 Ltr.	E
21	Tawa- General/Large	E
22	Wok (Chinese Kadai)	E
23	Cooker-1 Ltr. / 2 Ltr.,	E
24	Strainers-Conical/Strainers)	E
25	Steel Bowls-Small/Medium/Big	E
26	Collander	E
27	Baking Tray	E
28	Holder(Tongs/bowl)	
29	Saucepan Large/small	E
30	Plastic Trays-Big/Small	D
31	Pie Dish	D
32	Steel Plates	D
33	Containers (For keeping dry items) (Plastic/Steel)	E
34	Serving dish	E
35	Bread, Cake & assorted moulds	E
36	Rolling Pin and Rolling Base	E
37	Mandolin Grater	D
38	Wooden Spatula	E
39	Perforated Spoon	E
40	Steel Slicer	E
41	Steel Basin	D
42	Steel Ladles	D
43	Steel & Plastic Mugs	D
44	Steel Spoons	D
45	Balloon Whisk	E
46	Measuring Jars	E
47	Digital Thermometers	E
48	Dustbins	E
49	Chart denoting the Do's' and Don'ts Kitchen	E
50	First Aid Kit and Fire Extinguishers	E
51	Baking ovens	E
52	Fly killer (UV type)	E

53	Rodent box/ Glue Trap	E
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B: Instruments & General Shop Outfit

Sl. No.	Name of the items	Quantity
1	Lighting (natural & artificial).	As required
2	Ventilation, air-conditioning (temperature & humidity and air quality measurement).	As required
3	Minimum recommended space for prevention of accidents.	As required
4	Trolleys & other aids to lift and move heavy material.	As required
5	Safety gear while working on heavy duty equipment & preventing contamination of food Steel mesh gloves.	As required
6	Locker for 20 Trainees	As required

C: General Machinery Installations –

Sl. No.	Name & Description of Machines	Quantity
	A machinery / equipment are not essential, but desirable and intended for heavy pay load	As per size of establishment
1	Walk – in coolers and deep freeze	As required
2	Deep fat fryers	As required
3	3- tier ovens	As required
4	Combi – ovens	As required
5	Steam boilers / Tandoors / Griddle plates	As required
6	High pressure gas stoves	As required
7	Industrial scale – peeler, slices, choppers, Grinder and pulper.	As required
9	Dough kneaders & sheeters, Beater / mixers for batters	As required
10	Wet Grinders	As required

12. ANNEXURE-III
GUIDELINES FOR INSTRUCTORS AND PAPER SETTERS

1. All the questions of theory paper for the trade will be in objective type format.
2. Due care to be taken for proper & inclusive delivery among the batch. Some of the following some method of delivery may be adopted:
 - A) LECTURE
 - B) LESSON
 - C) DEMONSTRATION
 - D) PRACTICE
 - E) GROUP DISCUSSION
 - F) DISCUSSION WITH PEER GROUP
 - G) PROJECT WORK
 - H) INDUSTRIAL VISIT
3. Maximum utilization of latest form of training viz., audio visual aids, integration of IT, etc. may be adopted.
4. The total hours to be devoted against each topic may be decided with due diligence to safety & with prioritizing transfer of required skills.