

Semester: - First (30 Credits)

General Education (12 Credits and 1Credit= 15 Hrs teaching)

Paper: - I: - Core Subject: - Introduction to Preservation of Vegetables and fruits

(36 Lectures i.e., 2.4 Credits)



1.	Preservation of fruits and vegetables	05
	Status of vegetable and fruits production in India, scope of vegetable and fruits processing in India, Spoilage of fruits and Vegetables and need of processing, Definition of preservation, Objectives of preservation. Advantages and Disadvantages of preservation	
2	Principles of Preservation	04
	1 Value addition 2 to retard the of microbial activity 3 to enhance shelf life of fruits and vegetables 4 Assure the availability seasonal fruits and vegetables around the year 5 Adding variety to the diet 6 Saving time and energy 7 Improving nutritional value of foods 8 availability of food at an affordable rate during off season.	
3	Methods of preservation	12
	Traditional Methods: - Drying, Cooling, Freezing, Boiling, Heating, Salting, Sugaring, Smoking, Pickling, Lye, Canning, Jellying, Jugging, Burial. Industrial Modern Methods: - Pasteurization, sterilization Vacuum packing, Artificial food additives, Irradiation, Pulsed electric field electroporation, Modified atmosphere, Nonthermal plasma High-pressure food preservation, Bio-preservation, Hurdle technology	
4.	Introduction to Dehydration Process	05
	Introduction, Definition, objectives, scope, general flow sheet for dehydration, Difference between drying and dehydration.	
5.	Pre-drying Treatments	05
	Definition, Objective, need and steps of Pre drying treatment. Blanching, Chemical Process, Sulphuring.	
6	Post-dehydration Treatments	05
	Definition. Need, and Types of treatments: - Sweating, Screening, Inspection and fumigation	

References: -

1. *Preservation of fruit and Vegetables*, **Ife Fitz James**, 2003, Bas Kuipers Publisher: Agromisa Foundation, Wageningen,.
2. *Handbook of Food Preservation*, **M. Shafiur Rahman**, Publisher: CRC Press Taylor & Francis
3. *Preservation of Fruits and Vegetables*, **Giridharilal, G. S. Siddappa and G. L. Tandon**, 2007, Indian Council of Agri. Res., New Delhi.
4. *Post-Harvest Technology of Fruits and Vegetables*, **Verma, L.R. and V.K. Joshi** (2000). Indus Publ., New Delhi.



Paper II: - Core Subject: - Drying and Dehydration Part-I (36 Lectures i.e. 2.4 Credits)

1. Drying	12
Objectives of drying, Moisture content and its measurement, Equilibrium moisture content, Heat and mass transfer in drying, Psychrometry, Psychrometric chart and its application for drying process, Sun drying of various fruits and Vegetables, Advantages and Disadvantages of Sun Drying, factors affecting rate of drying, Methods of drying of various food products, Concept of Intermediate moisture foods.	
2. Fundamentals of Drying	06
Moisture and drying rate curves, constant and falling rate periods, Factors affecting rate of drying, normal drying curve, Shelf-life extension requirements for various products, theories, characteristics curve, cooling rate calculations.	
3. Drying:- Methods	08
Methods of drying: - Thermal & non-Thermal/ direct (convective drying) & indirect Drying Nutritional value, Physico-Chemical changes during drying.	
4. Drying:- Equipments	10
Types of Dryers: - Tray Dryers, Tunnel Dryers, Roller or Drum Dryers, Fluidized Bed Dryers, Spray Dryers, Pneumatic Dryers, Rotary Dryers, Batch Dryers. Diagram/Design of dryers, Osmotic dehydration and Freeze Drying Chilling, refrigeration and freezing: Chilling and freezing equipments, cryogenics	

References:-

1. *An Introduction to Food Dehydration and Drying*: Donald G. Mercer, Ph.D., P.Eng.
2. *Principles Of Drying And Dehydration*: S Murali 2019 Publisher Singapore
3. *Drying*: Abhijit Debnath Published on Nov 2008.
4. *Drying in the Process Industry*: C. M. Van't Land, 2011 John Wiley & Sons, Inc.



1	Status of Dehydration and Drying Industry in India	06
	Profile of various industries like Natural Dehydrated Vegetables Pvt. Ltd, Urban Veegis, Saipro Bio tech Pvt. Ltd., Organic Products India, Veerral Agro Tech.	
2.	Dehydrated products available at National and International level.	10
	Fruits (apples, bananas, apricots, peaches, pears, cherries, blueberries) for eating as snacks or chopped in granola and trail mixes, or dried as purees for fruit leather. Vegetables (carrots, mushrooms, onions, peas, beans, tomatoes) for adding to soups, stews, and backpacking meals . Powders, flakes, veggie chips	
3.	Dehydrated food market - growth, trends	12
	12	
	Scope of the Report, Key Market Trends, Nutritional Quality, Competitive Landscape, Major Players, Customer Experience Map, Actionable Results, Marketing survey, Marketing planning and strategy.	
4.	Scope in India for Dehydrated food products	08
	Demand Supply chain, Evaluation of Market in India, Startups, Registration and establishing business.	

References:-

1. *Hand book of food dehydration and drying* brand: Eiri books, Product Code: 8186732608
2. *The Complete Technology Book on Processing, Dehydration, Canning, Preservation of Fruits & Vegetables* (3rd Revised Edition) NIIR Board of Consultants & Engineers (Author)
3. *Food Science and Nutrition* Paperback – 1 August 2018 Sunetra Roday (Author)



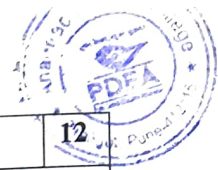
Paper IV: - Introduction to Fruits and Vegetables (36 Lectures i.e. 2.4 Credits)

1.	Introduction to Fruits	08
	Definition, Parts of Fruits, Classification, Nutritional status of Fruits, Indian fruits and exotic Fruits	
2.	Introduction to Vegetables	08
	Definition, Parts of Fruits, Classification, Nutritional status of vegetables, Introduction to Indian vegetables, Exotic vegetables,	
3.	Quality parameters of Fruits and Vegetables	04
	Quality parameters of fruits and vegetables, Factor effecting composition and quality of fruits and vegetables. Temperature, Light, wind, rains, humidity. (Natural factors) Fertilizers, enzymes, pesticide (Cultural factors)	
4.	Importance of fruits and Vegetables in the diet.	02
5.	Different types of spoilages of fresh fruits and vegetables.	06
	Physical, Chemical, biochemical, Enzymatic.	

References:-

1. *Tropical and Subtropical Fruits Postharvest Physiology, Processing and Packaging* Publisher: Wiley Editors: Ferhan Ozadali, Jasim Ahmed, Maria Gloria Lobo, Muhammad Siddiq
2. *Handbook of Fruits and Fruit Processing* Jiwan Sidhu, Jozsef Barta, James Wu, M.Pilar Cano. 2012 Publisher: Wiley Author: Jiwan Sidhu, Jozsef Barta, James Wu, M.Pilar Cano Editors: James Wu, Jiwan Sidhu, Jozsef Barta, M.Pilar Cano, Nirmal K. Sinha
3. *Processing Fruits Science and Technology*, Second Edition Hosahalli S. Ramaswamy · 2004 Publisher: CRC Press Author: Hosahalli S. Ramaswamy Editors: Diane M. Barrett, Hosahalli S. Ramaswamy, Laszlo Somogyi
4. *Systematics of Fruit Crops* Publisher: New India Publishing Agency Author: Girish Sharma
5. *Handbook of Vegetables and Vegetable Processing* Publisher: Wiley Editors: Mark A. Uebersax, Muhammad Siddiq
6. Publisher: CRC Press Author: E. Özgül Evranuz Editors: E. Özgül Evranuz *Handbook of Vegetable Preservation and Processing*, Y. H. Hui
7. *Microbiology of Fruits and Vegetables* Publisher: CRC Press Editors: Ahmed E. Yousef, Gerald M Sapers, James R. Gorny
8. *Food Microbiology*, 2 Volume Set Principles Into Practice Format: Hardcover Publisher: Wiley Author: Osman Erkmén, T. Faruk Bozoglu

Paper V: - General Education (36 Lectures i.e. 2.4 Credits)



1.	Communication Skills	12
	Definition, Communication flow, Types of communication, Active listening, Miscommunication	
2.	Soft Skills	12
	Introduction, The objective, Definitions, Group Work / working with others CV and Applications, Self-assessment Professional practice, Assertiveness Creative problem solving, Mentoring and peer support Information Literacy, Digital Literacy Portfolio management, (Tools for delivery, recording and reflection), Integral Parts of Soft Skills, Outcomes of Soft Skills Development, Personal Developmental Plan (PDP), Activities.	
3.	Environmental studies	12
	Pollution : Definition, Types of Pollution, Causes of Pollution, Food Processing and pollution (04)	
	Biodiversity: - Definition, Types of Biodiversity, Fruit and Vegetables diversity in India. (04)	
	Global warming: - Definition, Factors responsible for global warming, Impact of global warming on Agriculture, Effects of Global warming. (04)	

References:-

1. *Communication Skill*, Sanjay Kumar, Pushpa Lata, OUP India Publishers Pvt. Ltd.
2. *Professional Communication Skill*, E.K. Jain, S.Chand Publications
3. *Soft Skills Know Yourself & Know The World*, K. Alex, Dr. K. Alex , S. Chand Limited
4. *Text Book of Biodiversity*, K.V.Krushnamurthy, CRC PRESS Publishers.
5. *Biological Diversity and its Conservation*, Dushyant K.Sharma, Daya Publishing House.
6. *Environmental Pollution*, Dr.R.K. Khitoliya, S.Chand Publications.
7. *Air Pollution*, Bholu Gurjar, CRC PRESS Publishers Pvt. Ltd.

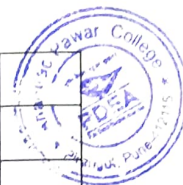


Paper VI: - Practical Based on Paper I & II (30 Practicals)

Practicals on dehydration of fruits and vegetables

1	Types of Dryers	
2.	Pre-drying Treatments Blanching and Sulphuring	
3.	Drying	
4	Dehydration of Bitter Gourd	
5	Dehydration of Cabbage	
6	Dehydration of Okra	
7	Dehydration Powders of onion and garlic	
8	Dehydration of Palak, methi,	
9	Dehydration of other GLV	
10	Dehydration of Pudina, Mint, Coriender	
11	Dehydration of Tubers like arvi, Sweet potato,	
12	Dehydration of Lotus-roots tapioca	
13	Dehydration of Pumpkin	
14	Dehydration of Yam, Ginger/ Haldi	
15	Dehydration of Potato Flex and chips	
16	Dehydration of Potato powder	
17	Dehydration Flex of Tomatoes	
18	Dehydration Powder of Tomatoes	
19	Dehydration Powders of other vegetables including tomatoes	
20	Dehydration of Beans	
21	Dehydration of Beet	
22	Dehydration of Brinjal	
23	Dehydration of Green pea	
24	Dehydration of Bottle gourd	
25	Dehydration of Carrot	
26	Dehydration of Cauliflower	

27	Dehydration of Chilies	
28	Dehydration of Chilies Flex And Powder	
29	Post-dehydration Treatments:- Sweating/Conditioning	
30	Post-dehydration Treatments:- Weighting Packaging Storage	



Paper VI: - Practical Based on Paper II & III (30 Practicals)

1.	Drying : Sun drying , mechanical drying	
2.	Cooling, Freezing,	
3.	Salting, Sugaring Fruits	
4	Salting, Sugaring Vegetables	
5	Boiling, Solar dehydrating	
6	Smoking, Pickling, Lye,	
7	Canning, Jellying, Jugging, Burial	
8	Pasteurization	
9	Sterilization Vacuum packing,	
10	Artificial food additives, Irradiation,	
11	Pulsed electric field electroporation	
12	Modified atmosphere, Non-thermal plasma	
13	High-pressure food preservation,	
14	Bio-preservation, Hurdle technology	
15	Pre drying treatment, Blanching, Sulphuring.	
16	Chemical Process, Salting & Sugaring.	
17	Sweating of dehydrated Fruits	
18	Sweating of dehydrated Leafy Vegetables	
19	Sweating of dehydrated Fruit Vegetables	
20	Sweating of dehydrated Root Vegetables	
21	Sweating of dehydrated Exotic Vegetables	
22	Sweating of dehydrated Herbs	
23	Screening of dehydrated fruits	
24	Screening of dehydrated Leafy Vegetables	
25	Screening of dehydrated Fruit Vegetables	
26	Screening of dehydrated Root Vegetables	

27	Screening of dehydrated exotic Vegetables	
28	Screening of dehydrated Herbs	
29	Inspection and fumigation Vegetables	
30	Inspection and fumigation Fruits	



Paper VIII: - Practical Based on Paper IV & V (30 P)

1.	The packing Process for dehydrated vegetables	
2.	Clean and sanitation	
3.	Nontoxic material	
4	Lightweight durable packing material and types	
5	Easily disposable or recyclable	
6	Protective against light, moisture resistant and Airtight packing system	
7	Easily opened and closed, Impermeable to gases and odors, Durable, Low-cost, Tetra Pack	
8	Material used for packing - Plastic bags, Paper bags	
9	Material used for packing- Oxygen absorber, Silicon bags	
10	Machine used for packing- Seal pack machine, Vacuumed pack machine	
11	Spoilage of food Physical type	
12	Spoilage of food Chemical type	
13	Spoilage of food Biochemical type	
14	Spoilage of food Enzymatic type	
15	Introduction to Computers	
16	Windows Operating System	
17	MS Word Part:-I	
18	MS Word Part:-II	
19	MS Word Part:-III	



20	MS Excel Part:- I	
21	MS Excel Part:- II	
22	MS Excel Part:- III	
23	MS Power Point:- Part I	
24	MS Power Point:- Part II	
25	Effective use of ERP for day-to-day records.	
26	Web Browser And E-mail	
27	Introduction to Internet Part:- I	
28	Introduction to Internet Part:- I	
29	Use of Internet for marketing of the produce	
30	Digital marketing and Branding	

It is expected to opt for 115 Say 120 Hrs. Internship in a semester i.e. Daily 3 hrs. for 30 Days On different Farms.

Semester: - Second (30 Credits)

Paper: - I - Core Subject: - Pre and Post Dehydration Treatments (36 L)

1.	Reconstitution of Dehydrated Fruits and Vegetables	06
	Rehydrate Dried Food, How to reconstitute, soaking in water, alcohol, chemical,	
2	Osmotic Dehydration	05
	Osmotic dehydration process, Uses in dehydrate, Purpose, Mode of Action, Osmotic pressure, difference between osmosis and absorption, mechanism	
3	Pre-dehydration treatment for vegetable and fruit	10
	Steam blanching, water blanching, syrup blanching/ dipping, Ascorbic Acid, Honey dip, Commercial acids	
4.	Post-dehydration treatment for vegetable and fruit	05
	Sweating, Screening, packing,	
5.	Other Treatments on fruit & vegetables	05
	Fruit juices, syrups, jams and jellies, sauerkraut, pickles, preserves, fruit cocktails, etc. Vegetables refrigeration, and fermentation, canning, pasteurization, freezing, irradiation, and the addition of chemicals.	
5.	Waste Management	05
	Waste is recyclable, The 5 R's: Refuse, Reduce, Reuse, Repurpose, Recycle. Waste management.	



References:

1. *Mass transfer in plant materials in aqueous solutions of ethanol and sodium chloride: equilibrium data.* J Food Process : Biswal RN, Le Maguer M (1989)
2. *Effect of osmotic agents and concentration on fruit quality.* J Food Sci : Bolin HR, Huxsoll CC, Jackson R, Ng KC.
3. *Studies on osmotic dehydration of banana.* J Food Sci Technol. 1977; Bongirwar DR, Sreenivasan A.
4. *Dehydration of membranes coated foods osmosis.* J Sci Food Agric. 1968; Camirand WM, Forrey RR, Popper K, Boyle FP, Stanley WL.
5. *Influence of osmotic dehydration on texture, respiration and microbial stability of apple slices (Var. Granny Smith)* J Food Eng. 2009; Ponting JD.
6. *Osmotic dehydration of fruits—recent modifications and applications.* Process Biochem. 1973; Castelló ML, Igual M, Fito PJ, Chiralt A.
7. *Osmotic dehydration of fruits.* Food Technol. 1966; Ponting JD, Watters GG, Forrey RR, Jackson R, Stanley WL.
8. *Waste Management for the Food Industries* Ioannis Arvanitoyannis 2010 Publisher: Elsevier Science

Paper: - II: - Core Subject: -Packing Grading, Branding and Logistics (36 Lectures)

1.	Packing of Product	12
	Outline of Pack house, Hygiene and sanitation in Pack house, Packaging materials, Packaging machineries.	
2	Grading	06
	Definition, Importance, Product grading, Benefits of grading, Techniques of grading: - Sorting, Screening, Dehulling, trimming, Destemming	
3	Branding	08
	Meaning, purpose, types, strategies, Logo, Methods of branding, Factors affecting branding.	
4.	Logistics	04
	Supply chain, Transportation, 7R's of logistics, Types of logistics, Functions of logistics.	
5.	Export of Dehydrated fruits and vegetables	06
	Present export scenario of Fruit and vegetables in India,	

References:

1. *In packed processed foods* Edited : Philip Richardson
2. *Problems Associated with Mandatory Grade Labeling of Food Products at the Consumer level.* Brenda Ann (Curran) Anderson · 1966 Publisher : Cornell Univ.



3. *The Naming Book: 5 Steps to Creating Brand and Product Names that Sell.* Brad Flowers Published : Entrepreneur Media Incorporated/Entrepreneur Press 2020
4. *Recent Packaging and Logistics of Fresh and Processed Foods* Tanweer Alam, Priti Khemariya, Sahar Masud · 2018 Publisher :GRIN Verlag
5. *Enhancing Food Safety The Role of the Food and Drug Administration* National Research Council, Institute of Medicine, Board on Agriculture and Natural Resources, Robert B. Wallace, Food and Nutrition Board, Maria Oria, Committee on the Review of the Food and Drug Administration's Role in Ensuring Safe Food · 2010 Publisher :National Academies Press

Paper III: - Core Subject: - Food safety and Additives (36 L)

1.	Spoilage of dried products, defects, causes, and prevention	
	Microbial spoilage, Physical spoilage, Chemical spoilage, Appearance of spoiled food. Signs of food spoilage, variety of causes, characteristics of food spoilage. types of spoilage and defects, How to Prevent Food Spoiling.	
2.	Food Safety and Standards Regulations	
	Food safety rules, the fundamental principles for food safety and food hygiene, the 4 cs of food safety (cleaning, cooking, cross contamination, chilling, contact), hazard analysis and risk-based preventive controls (HARPC), food safety modernization act (FSMA), prerequisite program (PRPS), critical control points (CCPS), operational prerequisite programs (OPRPS).	
3.	Food additives and preservatives	
	The different types of food additive and their uses, Examples of Food Additives (Preservatives, Color additives, Flavors and spices, Flavor enhancers, Emulsifiers), Natural preservatives, disadvantages of food additives	
4.	Details of the machineries	
	Things to Consider in Purchasing Machine & Equipment, Factors that can influence machine choice, Prioritizing your equipment, Regulatory compliance.	
5.	Schedule for drying of fruits	



	determine the best time to buy, Select drying processes, temperature, storage.	
6.	Schedule for drying of Vegetables	
	determine the best time to buy, Select drying processes, temperature, storage.	
7	Good Manufacturing Practices (GMP)	
	Principles of GMP, five key elements, 5 P's of GMP, GMP regulations	

References:-

1. *Food Spoilage Microorganisms* 2006. Publisher: Elsevier Science Editor: Clive de W Blackburn
2. *Food processing and preservation* B. SIVASANKAR · 2004, Publisher: PHI Learning
3. *The Chemistry of Food Additives and Preservatives*, Titus A. M. Msagati · 2012, Publisher: Wiley
4. *Food Preservatives*. Grahame W. Gould · 2012, Publisher: Springer US
5. *Industrial Marketing*, Volume 57, Issues 7-12/1972, Publisher: Crain Communications
6. *Food Processing* 2004 Publisher: Techpress (FPI) Limited
7. *Food and Drink - Good Manufacturing Practice A Guide to Its Responsible Management* Institute of Food Science and Technology, Louise Manning · 2012 Publisher: Wiley

Paper IV: - Core Subject: - Government schemes and agencies, Proposal writing, Banking and Marketing (36 L)

1.	Government schemes and agencies supporting food processing	09
	The Agricultural and Processed Food Products Export Development Authority (APEDA) National Horticulture Board (NHB) National Horticulture Mission (NHM) Small Farmer Agri-Business Consortium (SFAC) Development Commissioner Micro, Small and Medium Enterprises (MSME) Pradhan Mantri Kaushal Vikas Yojana (PMKVY). MOFPI Schemes.	
2	Banking	12
	NABARD loan Food Processing Fund, PM Formalization of Micro Food Processing Enterprises (PMFME Scheme), Finance to food processing industry from Government Banks/ Private Banks.	
3	Marketing	09
	ways to attract customers, Advertising, Engaging With Food Bloggers, Participating in Food Festivals, Ways to Get New Customers, reconnect old customers, use of powerful words	
4.	Proposal writing	03
	Structure of a proposal, Steps to writing your own project proposal, Structuring a One-Page Proposal, the law of proposal	
5.	Government permission and registration of firm	03
	Food Safety and Standards Authority of India (FSSAI), Registrar of Firms (ROF)	

References:-



1. <https://mofpi.nic.in/Schemes/related-schemes-other-agencies> (Download PDF)
2. *Food Processing Industries in India*
3. *Investment Opportunities* Price Waterhouse Associates · 1993 Ministry of Food Processing Industries, Government of India
4. *Indian Banking* R Parameswaran · 2001 S. Chand Limited
5. *Food Marketing and Distribution Selected Readings* 1971 Charles A. Mallowe, Daniel J. McLaughlin Chain Store Age Books

Paper V: - General Education (36 Lectures)

1.	Value Education	12
	<p>Meaning, objectives and need,</p> <p>Constitutional or National values - Democracy, socialism, secularism, equality, justice, liberty, freedom and fraternity.</p> <p>Social Values - Pity and probity, self-control, universal brotherhood.</p> <p>Professional Values - Knowledge thirst, sincerity in profession, regularity, punctuality and faith.</p> <p>Religious Values - Tolerance, wisdom, character.</p> <p>Aesthetic values - Love and appreciation of literature and fine arts and respect for the same. National Integration and international understanding.</p> <p>Broad classification of Human Rights.</p> <p>a. Right to Life, Liberty and Dignity, b. Right to Equality, c. Right against Exploitation d. Cultural and Educational Rights e. Economic Rights f. Political Rights g. Social Rights</p>	
2	Critical Thinking	06
	<p>Critical thinking Communication Skills</p> <p>Listening to others Reflective Practice</p>	
3	Problem solving	06
	Key problem-solving skills, Effective problem-solving process:	

References:

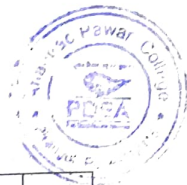
	Define the problem, Generate alternative solutions, Evaluate and select an alternative, Implement and follow up on the solution, Problem solving tools: Fishbone diagrams, Flowcharts, Strategy maps, mental maps, Idea maps, Concept maps, Layered process audit software, Charting software.	06
4.	Introduction to IT skills	
	Introduction to Computers, Windows Operating systems, MS word, Excel, Power Point	06
5.	Application of Computers in Business	
	Internet, E mail, Web browsing, Web designing, ERP, Digital marketing	

References:-

1. *Value Education Need of the Hour* Yojana Patil · 2015 Publisher: Create Space Independent Publishing Platform
2. *Critical Thinking Your Guide to Effective Argument, Successful Analysis and Independent Study* Tom Chatfield · 2017 Publisher: SAGE Publications
3. *Problem Solving And Program Design* In C, 5/E Hanly · 2008, Publisher: Pearson Education.
4. *Introduction to Entrepreneurial Skills I* Kayode Asoga-allen · 2016 Publisher: CreateSpace Independent Publishing Platform
5. *Computer Application in Business (Tamil Nadu)* R Parameswaran · 2008 Publisher: S. Chand Limited

Paper VI: - Practical Based on Paper II (30 P)

1.	Types of Dryers	
2.	Pre-drying Treatments Blanching and Sulphuring	
3.	Drying	
4.	Dehydration of Bread fruit (Avocado)	
5.	Dehydration of Pears	
6.	Dehydration of Peaches	
7.	Dehydration of Grapes	
8.	Dehydration of Apricots	
9.	Dehydration of Plums	
10.	Dehydration of Berries	
11.	Dehydration of Figs	
12.	Dehydration of Dates	



13	Dehydration of Papaya	
14	Dehydration of Jamun	
15	Dehydration of Flex and chips of Banana	
16	Dehydration of Banana powder	
17	Dehydration Flex and Chips of Apple	
18	Dehydration Powder of Apple	
19	Dehydration Powders of Mango	
20	Dehydration of flex and slices of Mango	
21	Osmo-dried mango slices	
22	Dehydration of Dates	
23	Dehydration of Kiwi	
24	Dehydration of Lemon	
25	Dehydration of Orange	
26	Dehydration of Mosambi	
27	Dehydration of Pinapple	
28	Dehydration of Pinapple Powder	
29	Post-dehydration Treatments:- Sweating/Conditioning	
30	Post-dehydration Treatments:- Weighting, Packaging, Storage	

Paper VII: - Practical Based on Paper II (30 P)

1.	Clean , sanitation and Packing	
2.	Lightweight , Nontoxic packing material	
3.	Easily disposable or recyclable	
4.	Moisture resistant	
5.	Airtight Protective against light	
6.	Easily opened and closed	



7.	Impermeable to gases and odors	
8.	Packing for dehydrated fruits and vegetables	
9.	Products obtained from Dried Vegetables	
10.	Waste Management	
11.	Waste Management	
12.	Waste Management	
13.	Waste Management	
14.	Manufacturing industries in Maharashtra and India.	
15.	Products obtained from Dried Fruits	
16.	Fruit Leathers Mango Vadi	
17.	Fruit Leathers Jack Fruit Vadi	
18.	Fruit Leathers Ginger candy	
19.	Instant upma	
20.	Instant Sheera	
21.	Instant Masalabhat	
22.	Instant Dhokla	
23.	Instant Idli-chatni	
24.	Instant Kheer	
25.	Other Preservation methods Papad	
26.	Freezing vegetables & Fruits	
27.	Pickles	
28.	Jam Mix fruit	
29.	Jam Single fruit	
30.	Jelly	

Paper VIII: - Practical Based on Paper II (30 P)

1.	Preparation of Masalas :- Part I:- Onion-Garlic, Kolhapuri and Garam.	
2.	Preparation of Masalas:- Part II:- Goda, Malvani and Chat.	



3.	Preparation of Masalas:- Part III:- Sambar, Chole, Pavbhaji and Panipuri .	
4.	Rehydration of dehydrated leafy vegetables:- :- Part I	
5.	Rehydration of dehydrated fruit vegetables:- :- Part II	
6.	Rehydration of dehydrated root vegetables:- :- Part III	
7.	Rehydration of dehydrated exotic vegetables:- :- Part IV	
8.	Rehydration of dehydrated fruits:- Part I	
9.	Rehydration of dehydrated fruits:- Part II	
10.	Rehydration of dehydrated fruits:- Part III	
11.	Preparation of fruit leather with Single fruit	
12.	Preparation of fruit leather with mix of fruit pulp	
13.	Introduction to packaging materials	
14.	Introduction to packaging machineries	
15.	Introduction to Computers	
16.	Windows Operating System	
17.	MS Word Part:-I	
18.	MS Word Part:-II	
19.	MS Word Part:-III	
20.	MS Excel Part:- I	
21.	MS Excel Part:- II	
22.	MS Excel Part:- III	
23.	MS Power Point:- Part I	
24.	MS Power Point:- Part II	
25.	Effective use of ERP for day-to-day records.	
26.	Web Browser And E-mail	
27.	Introduction to Internet Part:- I	
28.	Introduction to Internet Part:- I	
29.	Use of Internet for marketing of the produce	
30.	Digital marketing and Branding	


Principal

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