"Dissemination of Education for Knowledge, Science, and Culture"
-Shikshanmaharshi Dr. Bapuji Salunkhe

Shri Swami Vivekanand Shikshan Sanstha, Kolhapur

Padmabhushan Dr. Vasantraodada Patil Mahavidyalaya, Tasgaon

Organizer

Department of Botany

Title of the Course:

CERTIFICATE COURSE

IN

"FRUIT PROCESSING AND PRESERVATION"

Type of Course Unit:

Compulsory

(From 02/11/2020 to 07/12/2021)

Language of Instruction: English

Duration: One Month

Course Co-ordinator: Dr. S. K. Khade

Intake Capacity: 71

Dr.N.A.Kulkarni
Professor and Head
Department of Botany
P.D.V.P.College,Tasgaon
Date : 01/11/2020

To,

The Principal

P.D.V.P.College,Tasgaon

Subject : Permission to start add-on course.

Respected Sir,

We are going to start first add-on course on "Fruit Processing and Preservation." The duration of the course is from From 02/11/2020 to 08/12/2020. Kindly permit us to conduct the course.

Thanking You,

Yours faithfully

(Dr.N.A.Kulkarni)

HEAD
DEPARTMENT OF BOTANY
PADMABHUSHAN DR. VASANTRAO DADA PATIL
MAHAVIDYLAYA, TASGAON, DIST. SANGLI

Padmabhushan Dr. Vasantraodada Patil Mahavidyalaya, Tasgaon
Department of Botany

NOTICE

FRUIT PROCESSING AND PRESERVATION

Date: 30/10/2020

All the following faculties of the department are hereby informed you that you are all are appointed as the member of 'Board of studies' for 'FRUIT PROCESSING AND PRESERVATION.' This is to inform you all that a meeting of all the members has been arranged on 01/11/2020 at 11.00 am. Kindly attend the same without fail.

The agenda of the meeting will as bellow.

1. Making the time-table.
2. Finalizing the syllabus.
3. Syllabus distribution.
4. Organizing a workshop.
5. Inviting the external faculties.

Sr. No.	Name of the Teacher	Signature
1.	Dr. S. K. Khade	
2.	Dr. A. P. Inamdr	
3.	Dr. Y. S. Andoji	Y.S. Andoji
4.	Ms. Vaishali Patil	V Patil

(Dr.N.A.Kulkarni)
HEAD
DEPARTMENT OF BOTANY
PADMABHUSHAN DR. VASANTRAO DADA PATIL
MAHAVIDYLAYA. TASGAON. DIST. SANGLI

Padmabhushan Dr. Vasantraodada Patil Mahavidyalaya,
Tasgaon
Department of Botany

NOTICE

"Fruit Processing and Preservation."

'BOARD OF STUDIES'

Date: 30/10/2020

Sr. No.	Name of the Teacher	Signature
1.	Dr. S. K. Khade	
2.	Dr. A. P. Inamdr	
3.	Dr. Y. S. Andoji	Y.S. Andoji
4.	Ms. Vaishali Patil	VSPatil

(Dr.N.A.Kulkarni)
HEAD
DEPARTMENT OF BOTANY
PADMABHUSHAN DR. VASANTRAO DADA PATIL
MAHAVIDYLAYA, TASGAON, DIST. SANGLI

Padmabhushan Dr. Vasantraodada Patil Mahavidyalaya,
Tasgaon
Department of Botany

NOTICE

"Fruit Processing and Preservation."

MINUTES OF THE MEETING

Date: 30/10/2020

A meeting of members of 'Board of studies' for "Fruit Processing and Preservation." has been arranged on 01/12/2019 at 11.00 am. Following are the minutes of the meeting.

1. Making the time-table.
2. Finalizing the syllabus.
3. Syllabus distribution.
4. Organizing a workshop.
5. Inviting the external faculties.

Sr. No.	Name of the Teacher	Signature
1.	Dr. S. K. Khade	
2.	Dr. A. P. Inamdr	
3.	Dr. Y. S. Andoji	Y.S. Andoji
4.	Ms. Vaishali Patil	VS Patil

(Dr.N.A.Kulkarni)
HEAD
DEPARTMENT OF BOTANY
MABHUSHAN DR. VASANTRAO DADA PATIL
MAHAVIDYLAYA, TASGAON, DIST. SANGLI

LEARNING OUTCOMES (knowledge, skills and competence):

Knowledge of vegetable and fruit properties important for their quality and preservation. Mastering the handling, preservation and processing fruit and vegetable technologies. Ability to implement, modify and manage lines and facilities of treatment, storage and processing of fruit and vegetables. Development of products based on fruits and vegetables. Capacity to apply analytical techniques for quality evaluation fruits and vegetables and their products.

CONTENTS

1. Market, production and consumption of fruits and vegetables.
2. Chemical composition and structure of fruits and vegetables.
3. Biochemical phenomena associated with the maturation and postharvest.
4. Minimal processed products.
5. Preservation by chilling and controlled atmosphere.
6. Processed products. Raw materials and finished products quality. Production diagrams. Equipment and facilities. Fermented, frozen and thermally processed products. Table olives.Tomato, pepper, beans, peas and fruits preserves. Fruit juices and beverages, pulps and concentrates. Jams and jellies. Dehydration of fruits and vegetables.

DEMONSTRATION OF THE CONTENTS COHERENCE WITH THE COURSE UNIT'S LEARNING OUTCOMES

The study of the chemical composition and structure of fruits and vegetables, as well as biochemical and postharvest microbiological phenomena, will enable the development of a deep understanding and sensitivity about the fruit and vegetable properties as well as of other influential factors influential in their quality, either as fresh products or as raw materials for processing.

In order to give the student the ability to implement and manage lines of treatment, storage and processing of fruits and vegetables, as well as to assess the their quality, a set of products will be studied, and to each of these will be given prominence to standards of quality, operations and equipment, and will be performed by students the necessary analytical techniques

TEACHING METHODOLOGIES

The lessons of the course will be taught in blocks of theoretical and practical classes. In the lectures theoretical concepts and case studies will be presented and discussed with students. The practical classes will consist in laboratory and pilot plant ones, in which students, individually or in groups, will execute analythical techniques and test the production of various products, and also of study visits to treatment, storage and processing facilities of fruits and vegetables.

CONTENTS

1 Production and processing scenario of Fruits and vegetables in India and world-scope of fruit and vegetable processing industry in India- present status, constraints and prospective.

2 Overview of Principles of preservation- Drying /dehydration-process-types pretreatments required-factors affecting rate of dehydration-Reconstitution -coefficient of rehydration.

3 Freezing-process-types of freezing-changes during cold storage-thawing; Canning of fruits and vegetables-process-unit operations.

4 Contraction -types of concentration-changes during concentration.

5 Chemical preservation-different types of chemicals used in processing of Fruits and vegetables-Preservation by Sulphur dioxide and Sodium benzoate- safe limits of usage.

6 Hurdle concept- Intermediate moisture foods.

7 Irradiation- process-principle and application in fruit and vegetable Industry-safe doses of usage.

8 Processing Technology of Jam – What is Jam?-Ingredients and their role in quality of Jam- Processing of Jam (flowcharts)-Tests for end point determination-Problems in Jam making.

9 Pectin-properties-theories –Olsen's theory ,Spencer's theory , Hinton's theory, Fibril theory. Processing of Jam(flowcharts)-Tests for end point determination-Problems in Jam making.

10 Jelly and Marmalades – Jelly- Difference between Jam and Jelly-Processing of Jelly-End point determination-Failure of Jellies to set- Cloudy or foggy Jellies-Formation of crystals- Syneresis. & Marmalades-what is a

marmalade-types-Jam marmalade-Jelly marmalade-Problem in marmalade making.

11 Fruit preserves and candied fruits-What are fruit preserves?-Preparation of fruits preserves-problems in making; Candied fruits-Preparation of candied fruits; Glazed fruit-preparation.& Glazed fruit-preparation, Crystallized fruit-preparation-problems in preparation of preserves and candied fruit.

12 Chutneys-Preparation of chutney; Pickles-Types of Pickling-Pickling with salt-Dry salting-Brining.& Pickling with Vinegar and fermentation – Saurkraut -Role of lactic acid bacteria in pickling; Pickling with oil –pickling with mixture of salt, oil and spices-Problems/ spoilage in pickles.

13 Sauces and Ketchups- what are sauces –difference between sauce and a ketchup-classification of sauces-thick and thin sauces-processing of Tomato sauce/ketchup-Preparation of soya sauce(thin sauce)-problems in making of sauces.

14 Processing Technology of Fruit Beverage-Unit operations involved in preparation of fruit beverage.& Equipment used in the preparation of beverages – pulping-Screw type juice extractors-Burning machines-rollers-Taglith press by CFTRI.& Basket press-Rack and cloth press-Hydraulic press-Deaerators-Sietzfilters-Flash pasteurizers.

15. Types of Beverages-Processing technology of Beverages-Flow charts of Juice-examples-RTS –Nectar. & Processing of Beverages like Cordial-flow chart; Squash-flow chart; Crush-flow chart.& Processing of Syrups- natural and synthetic- rose syrup –almond syrup fruit syrup. Fruit juice concentrate. & Fruit juice concentrate -Fruit juice powder- Lemon Barley water- Carbonated beverages.

16. Processing technology of Fruit Cheese- Processing of fruit cheese-guava

cheese- Processing of Fruit leather- mango leather. & Fruit toffee- preparation of banana toffee-Processing of Fruit Butter.

17. Processing technology of vegetable wafers- potato wafers- preparation types of peeling- discolorations- slicing-Drying-Frying-Salting-packing.

18. Vegetable Papads-Processing of Papads-preparation-equipment used for preparation- packing.

19. Processing of Soups- preparation of tomato soup-packing/canning preparation of soup powders-technology and equipment required.

20. Fermented products from fruits and vegetables –Vinegar –types of vinegar-methods of vinegar production-Quick method-Orleans slow process-Generator process – problem in vinegar production.

21. Fermented fruit beverages – Wine- types of wines-equipment required preparation- problems. & Sparkling clear wines-Champagne and Cider; Fortified wines-Sherry, vermouths; orange wine , Perry ,Tokay, Port.

22. Cashew wine/ Brandy (Feni), Neera, Toddy, Arrack and different distilled spirits –their source and alcohol percentages.

Syllabus: Fruits and Vegetable Processing

Week	Theory	Practical
1	Admission	
1	Introduction - Definition and scope of preservation. History and development of food preservation industry with special reference to India. Different types of spoilages in fresh fruits and vegetables. General principles and methods of Food preservation.	Spoilage of fruits and vegetables. Industrial visit in fruits and vegetables processing industry.
2	Definition of Fruits and vegetables, Difference in between fruits and vegetable, Fruits and vegetables as available in different parts of the	Identifications of Fruits and vegetables.

	country, their preservation, season of maturity. Constituents of food, importance of fruits & Vegetables in the diet.	
3	Selection of raw materials including fruits and vegetables for Preparation of various products. Spices and other constituents, their properties, condiments and other additives and ingredients, and their flavouring and preservative properties	Identification of spices and food additives used in fruits and vegetable processing.
4	Study of various equipments: usage, care/maintenance and precautions	Study of common food processing equipments such as pulper, sealers, juice extracting machines, autoclaves, corking machines etc.
5	a. Refrigeration and other methods for storing perishables. b. Various methods of drying: sun drying, cabinet drying and solar drying. c. Study of various types of containers like Glass, Tin-merits and demerits of each-scope for new types of containers/ packaging materials, such as plastic pouches, tetra pack, PET bottle and cartons. Understanding the label its importance, and labeling requirements	a. Storage of fresh fruits and vegetable. Methods and containers used in fresh fruits and vegetable preservation b. Sun drying & dehydration and its merits and demerits. Principles involved preservation by drying method. Treatment prior to drying. Mechanical Dehydration-Types of Dryers. c. Practical demonstration

		of sealing pouching machine. Examination of the tetra pack
	Examination	

CERTIFICATE COURSE IN

"FRUIT PROCESSING AND PRESERVATION."

SYLLABUS

1. Introduction - Definition and scope of preservation. History and development of food preservation industry with special reference to India. Different types of spoilages in fresh fruits and vegetables.
2. General principles and methods of food preservation.
3. Definition of Fruits and vegetables, Difference in between fruits and vegetable, Fruits and vegetables as available in different parts of the country, their preservation, season of maturity.
4. Constituents of food, importance of fruits & Vegetables in the diet.
5. Selection of raw materials including fruits and vegetables for Preparation of various products.
6. Spices and other constituents, their properties, condiments and other additives and ingredients, and their flavoring and preservative properties.
7. Study of various equipments: usage, care/maintenance and precautions.
8. Refrigeration and other methods for storing perishables.
9. Various methods of drying: sun drying, cabinet drying and solar drying.
10. Study of various types of containers like Glass, Tin-merits and demerits of each-scope for new types of containers/ packaging

materials, such as plastic pouches, tetra pack, PET bottle and cartons. Understanding the label its importance, and labeling requirements.

11. Review what you have been learning.
12. Final Assessment.

"FRUIT PROCESSING AND PRESERVATION."

TIME – TABLE

Sr. No.	Date	Time	Theory /Practical	Details	Name of the Resource Person
1	02/11/ 2020	9.30 am to 10.30 am	(T)	Introduction - Definition and scope of preservation.	Dr. N.A.Kulkarni
2	03/11/ 2020	10.30 to 11.30 am	(P)	History and development of food preservation industry with special reference to India.	-"-
3	04/11/ 2020	9.30 am to 10.30 am	(T)	Different types of spoilages in fresh fruits and vegetables. General principles and methods of food preservation.	Dr.S.K.Khade
4	05/11/ 2020	10.30 to 11.30 am	(P)	Identifications of Fruits and vegetables.	-"-
5	06/11/ 2020	9.30 am to 10.30 am	(T)	Selection of raw materials including fruits and vegetables for Preparation of various products.	Dr.A.A.Inamdr
6	07/11/ 2020	10.30 to 11.30 am	(P)	Spoilage of fruits and vegetables.	-"-
7	09/11/ 2020	9.30 am to 10.30 am	(T)	Spices and other constituents, their properties, condiments and other additives and ingredients, and their flavoring and preservative properties.	Dr.Y.S.Andoji
8	10/11/ 2020	10.30 to 11.30 am	(P)	Identification of spices and food additives used in fruits and vegetable processing.	-"-
9	11/11/ 2020	9.30 am to 10.30 am	(T)	Study of various equipments: usage, Care/maintenance and precautions.	Miss. Reshma Chavan
10	12/11/ 2020	10.30 to 11.30 am	(P)	Study of common food processing equipments such as pulper, sealers, juice extracting	-"-

				machines, autoclaves, corking machines etc.	
11	13/11/ 2020	9.30 am to 10.30 am	(T)	Refrigeration and other Methods for storing perishables.	Dr. N.A.Kulkarni
12	14/11/ 2020	10.30 to 11.30 am	(P)	Storage of fresh fruits and vegetable. Principles involved preservation by drying method.	-”-
13	16/11/ 2020	9.30 am to 10.30 am	(T)	Various methods of Drying: sun drying, cabinet drying and solar drying.	Dr.S.K.Khade
14	17/11/ 2020	10.30 to 11.30 am	(P)	Methods and containers used in fresh fruits and vegetable preservation	-”-
15	18/11/ 2020	9.30 am to 10.30 am	(T)	Study of various types of containers like Glass, Tin-merits and demerits of each-scope for new types of containers/ packaging materials, such as plastic pouches, tetra pack, PET bottle and cartons.	Miss. Sujan Patil
16	19/11/ 2020	10.30 to 11.30 am	(P)	Sun drying & dehydration and its merits and demerits.	-”-
17	20/11/ 2020	9.30 am to 10.30 am	(T)	Local Marketing Techniques.	Miss. Rutuja More
18	21/11/ 2020	10.30 to 11.30 am	(P)	Treatment prior to drying. Mechanical Dehydration.	-”-
19	23/11/ 2020	9.30 am to 10.30 am	(T)	National Marketing Techniques.	Miss. Reshma Chavan
20	24/11/ 2020	10.30 to 11.30 am	(P)	Types of Dryers. Practical demonstration of sealing pouching machine	-”-
21	25/11/ 2020	9.30 am to 10.30 am	(T)	Inter National Marketing Techniques.	Dr.A.A.Inamdr Dr.Y.S.Andoji
22	26/11/ 2020	10.30 to 11.30 am	(P)	Principles of Import and Exports.	-”-
23	27/11/ 2020	9.30 am to 10.30 am	(T)	Understanding the label its importance, and labeling requirements.	Miss. Vaishali Patil
24	28/11/ 2020	10.30 to 11.30 am	(P)	Advertisement of the Products.	-”-
25	30/11/ 2020	9.30 am to 10.30 am	(T)	Designing of Advertisement of the Products.	Dr.Y.S.Andoji
26	01/12/	10.30 to	(P)	Industrial visit in fruits and	-”-

	2020	11.30 am		vegetables processing industry.	
27	02/12/ 2020	9.30 am to 10.30 am	(T)	Industrial visit in fruits and vegetables processing industry.	Dr. N.A.Kulkarni Dr.S.K.Khade Dr.A.A.Inamdr Dr.Y.S.Andoji Miss. Reshma Chavan Miss. Sujan Patil Miss. Rutuja More
28	03/12/ 2020	10.30 to 11.30 am	(P)	Industrial visit in fruits and vegetables processing industry.	-”-
29	04/12/ 2020	9.30 am to 10.30 am	(T)	Review what you have been learning	Dr. N.A.Kulkarni Dr.S.K.Khade Dr.A.A.Inamdr Dr.Y.S.Andoji Miss. Reshma Chavan Miss. Sujan Patil Miss. Rutuja More
30	07/12/ 2020	10.30 to 11.30 am	(P)	Final Assessment	Dr. N.A.Kulkarni Dr.S.K.Khade Dr.A.A.Inamdr Dr.Y.S.Andoji Miss. Reshma Chavan Miss. Sujan Patil Miss. Rutuja More

Padmabhushan Dr. Vasantraodada Patil Mahavidyalaya, Tasgaon

Department of Botany

NOTICE

TO ALL THE STUDENTS PARTICIPATED IN CERTIFICATE COURSE IN
FRUIT PROCESSING AND PRESERVATION

Date: 30/10/2020

This is to inform you all that a written test of 50 marks and assessment of the project work has been arranged on 01/11/2020 at 11.00 am. Kindly attend the same without fail.

(Dr.N.A.Kulkarni)
HEAD
DEPARTMENT OF BOTANY
PADMABHUSHAN DR. VASANTRAO DADA PATIL
MAHAVIDYLAYA, TASGAON, DIST. SANGLI

"Dissemination of Education for Knowledge, Science, and Culture"

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DEPARTMENT OF BOTANY

"FRUIT PROCESSING AND PRESERVATION."

TEST QUESTION PAPER

Marks 50 (Each question carry 2 marks)

Date: 07/12/2020

1. The temperatures used for canning foods ranges from _____

a) 0-20 degree C

b) 20-60 degree C

c) 60-100 degree C

d) 100-121 degree C

2. In the high-temperature short-time (HTST) method of pasteurization, milk is exposed to a temperature of _____

a) 132 degree F

b) 145 degree F

c) 161 degree F

d) 120 degree F

3. Sterilization occurs at high temperatures for long periods of time.

a) True

b) False

4. Which of the following microorganism survive at -9 to -17 degree C?

a) Salmonella

b) Staphylococci

c) Bacilli

d) Clostridium

5. Which of the following microorganism is eliminated in canned foods?

a) Mycobacterium tuberculosis

b) Coxiella burnetii

c) Clostridium botulinum

d) Lactobacillus

6. Phosphatase enzyme present in milk is destroyed in which of the following processes?

a) Sterilization

b) Canning

c) Dehydration

d) Pasteurization

7. Jellies and jams are rarely affected by bacterial action.

a) True

b) False

8. Which chemical is used to inhibit mold growth in bread?

a) benzoic acid

b) nitrates

c) sorbic acid

d) lactic acid

9. Acetic acid and lactic acid are used for_____

a) curing meats

b) preservation of color

c) preservation of pickles

d) inhibiting mold growth

10. Which of the following method is used for treatment of water used for

the depuration of shellfish?

a) Chemicals

b) Radiation

c) Low temperature

d) Osmotic pressure

11. Which of the following is a factor that affects the storage stability of food?

a. Type of raw material used

b. Quality of raw material used

c. Method/effectiveness of packaging

d. All of the mentioned

12. Which of the following sentence is true with respect to food storage/preservation?

a. Each food type has a potential storage life

b. The mechanical abuse that food has received during storage/distribution does not affects its storage stability

c. All of the mentioned

d. None of the mentioned

13. Choose the true statement.

a. Food storage and preservation is observed to be better/easier in parts of the world that have civilizations prevalent there

b. Proteins are held in an emulsion state in a water system

c. Fats are in colloidal state

d. All of the mentioned

14. Statement 1: Foods of plant origin can be used as additives for food preservation.
Statement 2: Dry fruits and seeds are the most important higher plant structures used as food

a. True, False

b. True, True

c. False, False

d. False, True

15. Which of the following statement with respect to food preservation is true?

a. Leafy vegetables perish fast due to their high moisture content

b. Cereals have the highest requirements of moisture and soil types

c. Cereal can be grown with less labour and yield of food is high

d. All of the mentioned

16. Cereals are the major source of food in the world.

a. True

b. False

c. May be True or False

d. Can't say

17. Cereals are a major source of carbohydrates.

a. True

b. False

c. May be True or False

d. Can't say

18. Statement 1: Majority of the fish have more proteins than water.
Statement 2: Whole milk has more water than fat.

a. True, False

b. True, True

c. False, False

d. False, True

19. Statement 1: Nuts can be classified as high-fat, high-protein and high-carbohydrate.
Statement 2: Cashew nuts come under the high-carbohydrate category.

a. True, False

b. True, True

c. False, False

d. False, True

20. Statement 1: Are almonds high-fat or high-protein nuts?

Statement 2: Tiny fat globules in water are called butter.

a. High-fat, False

b. High-fat, True

c. High-protein, False

d. High-protein, True

21. Statement 1: The stomach of a goat or a sheep has an enzyme called rennin which is used to make cottage/curd cheese.
Statement 2: Certain sea-foods such as shrimps and lobsters can destroy vitamin B-12 in the body if eaten raw due to the presence of an enzyme called thiaminase.

a. True, False

b. True, True

c. False, False

d. False, True

22. Bacteria and yeast can _____

a. Grow with or without air

b. Need humid/warm conditions to grow

c. Need more moisture than molds

d. All the mentioned statements can be used to fill the blanks

23. Which of the following fact is correct with respect to the food preservation industry?

a. Majority of high quality foods in the world are the highly perishable food items

b. More people with more than adequate standard of living exist and hence the demand for safe preserved food is growing

c. Food preservation market is going to boom as more people are shifting to areas where there is more industrial growth and hence they expect a better standard of living which includes safer food

d. All of the mentioned

24. Statement 1: Shelf stable foods are considered non-perishable at room temperatures.
Statement 2: Protected from light also includes food items that are wrapped in an aluminium foil.

a. True, False

b. True, True

c. False, False

d. False, True

25. Dry storage means at a temperature about_____and humidity below _____

a. 20, 50%

b. 100, 50%

c. 20, 50-100%

d. 100, 50-100%

****

ATTENDANCE

Department of Botany

List of the Students B.Sc.III Botany

2020-2021

Sr. No.	Gender	Name of the Students	Mobile No.	2-11-20	3-11-20	4-11-20	5-11-20	6-11-20	7-11-20	9-11-20	10-11-20
1	M	Patil Dhanaji Vikas	9860472719	P	P	P	P	P	P	P	P
2	M	More Omkar Dinkar	7057327839	P	–	P	P	–	P	P	P
3	M	Patil Aditya Shrikant	9075066323	P	P	P	P	P	P	P	P
4	F	Dalavi Aarti Rajendra	7057572990	P	P	P	P	P	P	P	P
5	F	Mane Ankita Adikrao	9422530804	P	P	P	–	P	P	P	–
6	F	Jadhav Jyoti Ajinkya	9562863371	P	P	P	–	P	P	P	–
7	F	Patil Divya Arjun	9307418183	P	P	P	P	P	P	–	P
8	F	Patil Rutuja Shivaji	7666568788	P	P	P	P	P	P	–	P
9	F	Mane Pratibha Manik	9325161877	P	–	P	P	P	P	P	P
10	F	Kulkarni Vaishnavi	7972847112	P	P	P	P	P	P	P	P

		Suresh		2/11/20	3/11/20	4/11/20	5/11/20	6/11/20	7/11/20	9/11/20	12/11/20
11	F	Sayyad Alisha Hamid	7798117149								
12	F	Hivare Rupali Vitthal	8329639490			—					
13	F	Nalawade Vaishnavi Manik	9359781969								
14	F	Patil Anuradha Anandrao	8308683202		—				—		
15	F	Suryavanshi Pooja Hanmant	9284166344		—						
16	F	Mohite Vedanti Dilip	8080020423								
17	F	Yalamar Dipali Lalaso	8806493649							—	
18	F	Mali Ashwini Ramchandra	7666838014				—				
19	F	Madane Komal Sarjerao	7066082819				—				
20	F	Gaikawad Purva Vijay	8855990310		—						—
21	F	Patil Dipali Ramchandra	8080374252								—
22	F	Patil Shubhangi Suresh	9765068341							—	
23	F	Snehal Subhash Dhanawade	7499097305		—						

Department of Botany

List of the Students B.Sc.III Botany

2020-2021

Sr. No.	Gender	Name of the Students	Mobile No.	11-11-20	12-11-20	13-11-20	14-11-20	16-11-20	17-11-20	18-11-20	19-11-20
1	M	Patil Dhanaji Vikas	9860472719	D(H)	D(H)	D(H)	D(H)	D(H)	D(H)	D(H)	D(H)
2	M	More Omkar Dinkar	7057327839	Omk	Omk	Omk	–	Omk	Omk	Omk	Omk
3	M	Patil Aditya Shrikant	9075066323	Patil	Patil	Patil	Patil	Patil	Patil	Patil	Patil
4	F	Dalavi Aarti Rajendra	7057572990	Adalavi	Adalavi	Adalavi	Adalavi	Adalavi	Adalavi	Adalavi	Adalavi
5	F	Mane Ankita Adikrao	9422530804	Mane	Mane	Mane	–	Mane	Mane	Mane	–
6	F	Jadhav Jyoti Ajinkya	9562863371	Jadhav	Jadhav	Jadhav	–	Jadhav	Jadhav	Jadhav	–
7	F	Patil Divya Arjun	9307418183	Patil	Patil	Patil	Patil	Patil	Patil	–	Patil
8	F	Patil Rutuja Shivaji	7666568788	Rutuja	Rutuja	Rutuja	Rutuja	Rutuja	Rutuja	–	Rutuja
9	F	Mane Pratibha Manik	9325161877	Mane	–	Mane	Mane	Mane	Mane	Mane	Mane
10	F	Kulkarni Vaishnavi	7972847112	Kulkarni	Kulkarni	Kulkarni	Kulkarni	Kulkarni	Kulkarni	Kulkarni	Kulkarni

		Suresh		11/11/20	12/11/20	13/11/20	14/11/20	16/11/20	17/11/20	18/11/20	19/11/20
11	F	Sayyad Alisha Hamid	7798117149								
12	F	Hivare Rupali Vitthal	8329639490			—					
13	F	Nalawade Vaishnavi Manik	9359781969								
14	F	Patil Anuradha Anandrao	8308683202		—				—		
15	F	Suryavanshi Pooja Hanmant	9284166344		—						
16	F	Mohite Vedanti Dilip	8080020423								
17	F	Yalamar Dipali Lalaso	8806493649							—	
18	F	Mali Ashwini Ramchandra	7666838014				—				
19	F	Madane Komal Sarjerao	7066082819				—				
20	F	Gaikawad Purva Vijay	8855990310		—						—
21	F	Patil Dipali Ramchandra	8080374252								—
22	F	Patil Shubhangi Suresh	9765068341							—	
23	F	Snehal Subhash Dhanawade	7499097305		—						

Department of Botany

List of the Students B.Sc.III Botany

2020-2021

Sr. No.	Gender	Name of the Students	Mobile No.	20-11-20	21-11-20	23-11-20	24-11-20	25-11-20	26-11-20	27-11-20	28-11-20
1	M	Patil Dhanaji Vikas	9860472719	P	P	P	P	P	P	P	P
2	M	More Omkar Dinkar	7057327839	P	—	P	—	P	P	P	P
3	M	Patil Aditya Shrikant	9075066323	P	P	P	P	P	P	P	P
4	F	Dalavi Aarti Rajendra	7057572990	P	P	P	P	P	P	P	P
5	F	Mane Ankita Adikrao	9422530804	P	P	P	—	P	P	P	—
6	F	Jadhav Jyoti Ajinkya	9562863371	P	P	P	—	P	P	P	—
7	F	Patil Divya Arjun	9307418183	P	P	P	P	P	P	—	P
8	F	Patil Rutuja Shivaji	7666568788	P	P	P	P	P	P	—	P
9	F	Mane Pratibha Manik	9325161877	P	—	P	P	P	P	P	P
10	F	Kulkarni Vaishnavi	7972847112	P	P	P	P	P	P	P	P

		Suresh		20/11/20	21/11/20	23/11/20	24/11/20	25/11/20	26/11/20	27/11/20	28/11/20
11	F	Sayyad Alisha Hamid	7798117149								
12	F	Hivare Rupali Vitthal	8329639490			—					
13	F	Nalawade Vaishnavi Manik	9359781969								
14	F	Patil Anuradha Anandrao	8308683202		—				—		
15	F	Suryavanshi Pooja Hanmant	9284166344		—						
16	F	Mohite Vedanti Dilip	8080020423								
17	F	Yalamar Dipali Lalaso	8806493649							—	
18	F	Mali Ashwini Ramchandra	7666838014				—				
19	F	Madane Komal Sarjerao	7066082819				—				
20	F	Gaikawad Purva Vijay	8855990310		—						—
21	F	Patil Dipali Ramchandra	8080374252								—
22	F	Patil Shubhangi Suresh	9765068341							—	
23	F	Snehal Subhash Dhanawade	7499097305		—						

Department of Botany

List of the Students B.Sc.III Botany

2020-2021

Sr. No.	Gender	Name of the Students	Mobile No.	30-11-20	1-12-20	2-12-20	3-12-20	4-12-20	7-12-20
1	M	Patil Dhanaji Vikas	9860472719	DVPi	DVPi	DVPi	DVPi	DVPi	DVPi
2	M	More Omkar Dinkar	7057327839	Omk	Omk	—	Omk	—	Omk
3	M	Patil Aditya Shrikant	9075066323	Puti	Puti	Puti	Puti	Puti	Puti
4	F	Dalavi Aarti Rajendra	7057572990	Adalavi	Adalavi	Adalavi	Adalavi	Adalavi	Adalavi
5	F	Mane Ankita Adikrao	9422530804	Mane	Mane	Mane	—	Mane	Mane
6	F	Jadhav Jyoti Ajinkya	9562863371	Jadhav	Jadhav	Jadhav	—	Jadhav	Jadhav
7	F	Patil Divya Arjun	9307418183	Patil	Patil	Patil	Patil	Patil	Patil
8	F	Patil Rutuja Shivaji	7666568788	Rutuja	Rutuja	Rutuja	Rutuja	Rutuja	Rutuja
9	F	Mane Pratibha Manik	9325161877	Pmane	—	Pmane	Pmane	Pmane	Pmane
10	F	Kulkarni Vaishnavi	7972847112	Vkulkarni	Vkulkarni	Vkulkarni	Vkulkarni	Vkulkarni	Vkulkarni

		Suresh		30/11/20	1/12/20	2/12/20	3/12/20	4/12/20	7/12/20
11	F	Sayyad Alisha Hamid	7798117149						
12	F	Hivare Rupali Vitthal	8329639490			—			
13	F	Nalawade Vaishnavi Manik	9359781969						
14	F	Patil Anuradha Anandrao	8308683202		—				
15	F	Suryavanshi Pooja Hanmant	9284166344		—				
16	F	Mohite Vedanti Dilip	8080020423						
17	F	Yalamar Dipali Lalaso	8806493649						
18	F	Mali Ashwini Ramchandra	7666838014				—		
19	F	Madane Komal Sarjerao	7066082819				—		
20	F	Gaikawad Purva Vijay	8855990310		—				
21	F	Patil Dipali Ramchandra	8080374252						
22	F	Patil Shubhangi Suresh	9765068341						
23	F	Snehal Subhash Dhanawade	7499097305		—				

ATTENDANCE

Department of Botany

List of the Students B.Sc.II Botany

2020-2021

Sr. No.	Roll No.	Gender	Name of the Students	Mobile No.	2-11-20	3-11-20	4-11-20	5-11-20	6-11-20
1	5651	F	Salunkhe Rutuja Bharat	9028225265	Rutuja.	Rutuja.	—	Rutuja.	—
2	5652	F	Shelke Anuja Anil	8605508780	Anuja.	Anuja.	Anuja.	Anuja.	Anuja.
3	5653	F	Shinde Prachi Ankush	7219623436	Shinde	Shinde	Shinde	Shinde	Shinde
4	5654	F	Shintre Gautami Shrikant	8057572990	G.S.S.	G.S.S.	G.S.S.	—	G.S.S.
5	5655	F	Sutar Namrata Kumar	7821991549	Namrata	Namrata	Namrata	Namrata	Namrata
6	5656	F	Sutar Vaishnavi Vitthal	7666288500	Vaishvi.	Vaishvi.	Vaishvi.	Vaishvi.	Vaishvi.
7	5657	F	Valekar Komal Maruti	7758881938	Komal	Komal	Komal	Komal	—
8	5658	F	Vitekar Shreya Chandrakant	9067110531	S.Vitekar	S.Vitekar	S.Vitekar	S.Vitekar	S.Vitekar
9	5659	F	Yadav Anjana Ananda	9307992096	YadavA	YadavA	YadavA.	YadavA.	—
10	5723	F	Bhosale Ankita Dipak	7872847112	AnkitaB	AnkitaB	AnkitaB	AnkitaB	—
11	5660	F	Yadav Mayuri Sunil	7028777466	Mayuri	Mayuri	Mayuri	—	Mayuri.

Department of Botany

List of the Students B.Sc.II Botany

2020-2021

Sr. No.	Roll No.	Gender	Name of the Students	Mobile No.	7-11-20	9-11-20	10-11-20	11-11-20	12-11-20
1	5651	F	Salunkhe Rutuja Bharat	9028225265	Rutuja S.	Rutuja S.	–	Rutuja S.	–
2	5652	F	Shelke Anuja Anil	8605508780	Anuja	Anuja	Anuja	Anuja	Anuja
3	5653	F	Shinde Prachi Ankush	7219623436	Shinde	Shinde	Shinde	Shinde	Shinde
4	5654	F	Shintre Gautami Shrikant	8057572990	G.S.S.	G.S.S.	G.S.S.	–	G.S.S.
5	5655	F	Sutar Namrata Kumar	7821991549	Namrata	Namrata	Namrata	Namrata	Namrata
6	5656	F	Sutar Vaishnavi Vitthal	7666288500	Vaishvi S.	Vaishvi S.	Vaishvi S.	Vaishvi S.	Vaishvi S.
7	5657	F	Valekar Komal Maruti	7758881938	Komal	Komal	Komal	Komal	–
8	5658	F	Vitekar Shreya Chandrakant	9067110531	S.Vitekar	S.Vitekar	S.Vitekar	S.Vitekar	S.Vitekar
9	5659	F	Yadav Anjana Ananda	9307992096	YadavA	YadavA	YadavA.	YadavA.	–
10	5723	F	Bhosale Ankita Dipak	7872847112	AnkitaB	AnkitaB	AnkitaB	AnkitaB	–
11	5660	F	Yadav Mayuri Sunil	7028777466	Mayuri	Mayuri	Mayuri	–	Mayuri

Department of Botany

List of the Students B.Sc.II Botany

2020-2021

Sr. No.	Roll No.	Gender	Name of the Students	Mobile No.	13-11-20	14-11-20	16-11-20	17-11-20	18-11-20
1	5651	F	Salunkhe Rutuja Bharat	9028225265	Rutuja S.	Rutuja S.	—	Rutuja S.	—
2	5652	F	Shelke Anuja Anil	8605508780	Anuja	Anuja	Anuja	Anuja	Anuja
3	5653	F	Shinde Prachi Ankush	7219623436	Shinde	Shinde	Shinde	Shinde	Shinde
4	5654	F	Shintre Gautami Shrikant	8057572990	G.S.S.	G.S.S.	G.S.S.	—	G.S.S.
5	5655	F	Sutar Namrata Kumar	7821991549	Namrata	Namrata	Namrata	Namrata	Namrata
6	5656	F	Sutar Vaishnavi Vitthal	7666288500	Vaishvi S.	Vaishvi S.	Vaishvi S.	Vaishvi S.	Vaishvi S.
7	5657	F	Valekar Komal Maruti	7758881938	Komal	Komal	Komal	Komal	—
8	5658	F	Vitekar Shreya Chandrakant	9067110531	S. Vitekar	S. Vitekar	S. Vitekar	S. Vitekar	S. Vitekar
9	5659	F	Yadav Anjana Ananda	9307992096	YadavA	YadavA	YadavA	YadavA	—
10	5723	F	Bhosale Ankita Dipak	7872847112	AnkitaB	AnkitaB	AnkitaB	AnkitaB	—
11	5660	F	Yadav Mayuri Sunil	7028777466	Mayuri	Mayuri	Mayuri	—	Mayuri

Department of Botany

List of the Students B.Sc.II Botany

2020-2021

Sr. No.	Roll No.	Gender	Name of the Students	Mobile No.	19-11-20	20-11-20	21-11-20	23-11-20	24-11-20
1	5651	F	Salunkhe Rutuja Bharat	9028225265	Rutuja S.	Rutuja S.	—	Rutuja S.	—
2	5652	F	Shelke Anuja Anil	8605508780	Anuja	Anuja	Anuja	Anuja	Anuja
3	5653	F	Shinde Prachi Ankush	7219623436	Shinde	Shinde	Shinde	Shinde	Shinde
4	5654	F	Shintre Gautami Shrikant	8057572990	G.S.S.	G.S.S.	G.S.S.	—	G.S.S.
5	5655	F	Sutar Namrata Kumar	7821991549	Namrata	Namrata	Namrata	Namrata	Namrata
6	5656	F	Sutar Vaishnavi Vitthal	7666288500	Vaishnavi	Vaishnavi	Vaishnavi	Vaishnavi	Vaishnavi
7	5657	F	Valekar Komal Maruti	7758881938	Komal	Komal	Komal	Komal	—
8	5658	F	Vitekar Shreya Chandrakant	9067110531	S. Vitekar	S. Vitekar	S. Vitekar	S. Vitekar	S. Vitekar
9	5659	F	Yadav Anjana Ananda	9307992096	YadavA	YadavA	YadavA	YadavA	—
10	5723	F	Bhosale Ankita Dipak	7872847112	AnkitaB	AnkitaB	AnkitaB	AnkitaB	—
11	5660	F	Yadav Mayuri Sunil	7028777466	Mayuri	Mayuri	Mayuri	—	Mayuri

Department of Botany

List of the Students B.Sc.II Botany

2020-2021

Sr. No.	Roll No.	Gender	Name of the Students	Mobile No.	25-11-20	26-11-20	27-11-20	28-11-20	30-11-20
1	5651	F	Salunkhe Rutuja Bharat	9028225265	Rutuja S.	Rutuja S.	—	Rutuja S.	—
2	5652	F	Shelke Anuja Anil	8605508780	Anuja	Anuja	Anuja	Anuja	Anuja
3	5653	F	Shinde Prachi Ankush	7219623436	Shinde	Shinde	Shinde	Shinde	Shinde
4	5654	F	Shintre Gautami Shrikant	8057572990	G.S.S.	G.S.S.	G.S.S.	—	G.S.S.
5	5655	F	Sutar Namrata Kumar	7821991549	Namrata	Namrata	Namrata	Namrata	Namrata
6	5656	F	Sutar Vaishnavi Vitthal	7666288500	Vaishnavi S.	Vaishnavi S.	Vaishnavi S.	Vaishnavi S.	Vaishnavi S.
7	5657	F	Valekar Komal Maruti	7758881938	Komal	Komal	Komal	Komal	—
8	5658	F	Vitekar Shreya Chandrakant	9067110531	S. Vitekar	S. Vitekar	S. Vitekar	S. Vitekar	S. Vitekar
9	5659	F	Yadav Anjana Ananda	9307992096	YadavA	YadavA	YadavA	YadavA	—
10	5723	F	Bhosale Ankita Dipak	7872847112	AnkitaB	AnkitaB	AnkitaB	AnkitaB	—
11	5660	F	Yadav Mayuri Sunil	7028777466	Mayuri	Mayuri	Mayuri	—	Mayuri

Department of Botany

List of the Students B.Sc.II Botany

2020-2021

Sr. No.	Roll No.	Gender	Name of the Students	Mobile No.	1-12-20	2-12-20	3-12-20	4-12-20	7-12-20
1	5651	F	Salunkhe Rutuja Bharat	9028225265	Rutuja.	Rutuja.	—	Rutuja.	—
2	5652	F	Shelke Anuja Anil	8605508780	Anuja	Anuja.	Anuja	Anuja	Anuja
3	5653	F	Shinde Prachi Ankush	7219623436	Shinde	Shinde	Shinde	Shinde	Shinde
4	5654	F	Shintre Gautami Shrikant	8057572990	B.Sc.	B.Sc.	B.Sc.	—	B.Sc.
5	5655	F	Sutar Namrata Kumar	7821991549	Namrata	Namrata	Namrata	Namrata	Namrata
6	5656	F	Sutar Vaishnavi Vitthal	7666288500	Vaishvi S.	Vaishvi S	Vaishvi S.	Vaishvi S.	Vaishvi S
7	5657	F	Valekar Komal Maruti	7758881938	Komal	Komal	Komal	Komal	—
8	5658	F	Vitekar Shreya Chandrakant	9067110531	S.Vitekar	S.Vitekar	S.Vitekar	S.Vitekar	S.Vitekar
9	5659	F	Yadav Anjana Ananda	9307992096	YadavA	YadavA	YadavA.	YadavA:	—
10	5723	F	Bhosale Ankita Dipak	7872847112	AnkitaB	AnkitaB	AnkitaB	AnkitaB	—
11	5660	F	Yadav Mayuri Sunil	7028777466	Mayuri	Mayuri	Mayuri	—	Mayuri

Padmabhushan Dr.Vasantraodada Patil Mahavidyalaya, Tasgaon

DEPARTMENT OF BOTANY

"FRUIT PROCESSING AND PRESERVATION."

Mark list of the students participated in Test and project

Total Marks: 100

Date: 08/12/2020

Sr.No.	Class	Name	Test (50)	Project (50)	Total (100)
1.	B.Sc.III	Patil Dhanaji Vikas	42	42	84
2.	B.Sc.III	More Omkar Dinkar	44	45	89
3.	B.Sc.III	Patil Aditya Shrikant	45	47	92
4.	B.Sc.III	Dalavi Aarti Rajendra	44	46	90
5.	B.Sc.III	Mane Ankita Adikrao	45	46	91
6.	B.Sc.III	Jadhav Jyoti Ajinkya	42	46	88
7.	B.Sc.III	Patil Divya Arjun	44	42	86
8.	B.Sc.III	Patil Rutuja Shivaji	48	42	90
9.	B.Sc.III	Mane Pratibha Manik	42	46	88
10.	B.Sc.III	Kulkarni Vaishnavi Suresh	44	42	86
11.	B.Sc.III	Sayyad Alisha Hamid	45	42	87
12.	B.Sc.III	Hivare Rupali Vitthal	46	42	88
13.	B.Sc.III	Nalawade Vaishnavi Manik	42	45	87
14.	B.Sc.III	Patil Anuradha Anandrao	44	43	87
15.	B.Sc.III	Suryavanshi Pooja Hanmant	45	44	89
16.	B.Sc.III	Mohite Vedanti Dilip	43	42	85
17.	B.Sc.III	Yalamar Dipali Lalaso	41	41	82
18.	B.Sc.III	Mali Ashwini Ramchandra	42	46	88
19.	B.Sc.III	Madane Komal Sarjerao	44	45	89
20.	B.Sc.III	Gaikawad Purva Vijay	45	45	89
21.	B.Sc.III	Patil Dipali Ramchandra	42	47	89
22.	B.Sc.III	Patil Shubhangi Suresh	44	42	86
23.	B.Sc.III	Snehal Subhash Dhanawade	48	42	90
24.	B.Sc.III	Pol Ruthvik	42	46	88
25.	B.Sc.II	Salunkhe Rutuja Bharat	45	42	87
26.	B.Sc.II	Shelke Anuja Anil	45	42	87

27.	B.Sc.II	Shinde Prachi Ankush	46	42	88
28.	B.Sc.II	Shintre Gautami Shrikant	42	45	87
29.	B.Sc.II	Sutar Namrata Kumar	45	43	88
30.	B.Sc.II	Sutar Vaishnavi Vitthal	45	44	89
31.	B.Sc.II	Valekar Komal Maruti	43	42	85
32.	B.Sc.II	Vitekar Shreya Chandrakant	41	41	82
33.	B.Sc.II	Yadav Anjana Ananda	42	46	88
34.	B.Sc.II	Bhosale Ankita Dipak	44	46	90
35.	B.Sc.II	Yadav Mayuri Sunil	45	46	91

Head
HEAD
DEPARTMENT OF BOTANY
PADMABHUSHAN DR. VASANTRAO DADA PATIL
MAHAVIDYLAYA, TASGAON. DIST. SANGLI