



SONOPANT DANDEKAR ARTS, V.S. APTE COMMERCE AND M.H. MEHTA SCIENCE COLLEGE, PALGHAR

DEPARTMENT OF BOTANY

Certificate Course Plant Tissue Culture

Under the Aegis of

Centre for Excellence and Innovation

Academic Year: 2019-2020

Prof. Mahesh Deshmukh
CFEI – Chairman

Dr. Kiran Save
Principal

Department of Botany
Certificate course in Plant Tissue Culture

Report 2019-2020

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Date: 3rd September, 2019

To,

The Principal

Dr. Kiran Save

Sonopant Dandekar Arts, V.S. Apte Commerce and

M.H. Mehta Science College,

Palghar.

Subject: Proposal for Organizing Certificate Course in Plant tissue culture

Name of the Programme: Plant tissue culture

Organizer: Department of Botany

Proposed Day & Dates – Wednesday, 04 September, 2019

This course would provide students with an understanding of principles

Course Co-Ordinator: Prof. B. N. Jaiswal

Proposed Venue: Botany Main Lab

B.N. J.

Proposed By

Prof. B. N. Jaiswal

Head, Department of Botany

Granted
K. Lame



Sonopant Dandekar Shikshan Mandali's

**SONOPANT DANDEKAR ARTS, V.S. APTE COMMERCE AND
M.H. MEHTA SCIENCE COLLEGE, PALGHAR**

Palghar, Dist. – Palghar, Pin – 401 404, E – Mail: sdsmcollege@yahoo.com

DEPARTMENT OF BOTANY

PLANT TISSUE CULTURE

SYLLABUS

Module-1

- History, types of tissue culture, sterilization techniques, media preparation

Module-2

- Seed: Structure and types - Seed dormancy; causes and methods of breaking dormancy

Module-3

- Micropropagation of explant and study of hardening stages

Module-4

- Role of Plant hormones (auxins, cytokinins, abscisic acid, ethylene and Gibberellins) in plant development



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COURSE OBJECTIVES AND LEARNING OUTCOME

Background

This course examines and discusses the principles, protocols and utilization of plant cell tissue culture systems. In vitro propagation and regeneration, mutagenesis and selection, secondary metabolite elicitation and cell transformation techniques including protoplast fusion, direct DNA uptake and plant bacterial co-cultivation will be emphasized.

About Department

The Department of Botany started in 2006 for UG students. For aspirants of higher students, I plant science like plant genetics, Molecular biology, plant biotechnology, plant physiology, plant pathology, plant taxonomy and plant ecology, etc. The department having the botanical garden depository herbarium and Practical lab

Aim & Objectives

After completing this course student should be able to: -

- Define the basic concepts of Plant Tissue Culture "PTC" as a Biotechnology tool.
- Recognize the importance of Plant Tissue Culture technique.
- Practice the different techniques used in Plant Tissue Culture.
- Acquire all skills used in Plant Tissue Culture techniques.
- List of chemicals, media and equipment required for Plant Tissue Culture Lab

Expected Outcomes

- Propagate plants by using in vitro techniques
- Will be able to apply this technique for research in various areas
- Skills required for employability in industry involved in mass propagation of plants using this technique

Duration

- Total hours- 36 hours
- Lecture and practical's – 36 hours
- Attendance- 75% of attendance is compulsory

Eligibility and Fees

- B.Sc. (Life Science) students
- Fees- Rs 50
- Duration – 36 hours

Faculty

- Prof. B.N. Jaiswal
- Asst.Prof. Asmita P. Raut
- Asst.prof. Dakshata Patil

Reference Book

- Plant Biochemistry and Molecular Biology Second Edition Edited by Peter J. Lea and Richard C. Leegood, John
- Wiley & Sons Ltd, Chichester, United Kingdom, 1999
- Gone to seed. Union of Concerned Scientists. Mellon and Rissler. 2004.. Cambridge, USA



Sonopant Dandekar Shikshan Mandali's

**SONOPANT DANDEKAR ARTS, V. S. APTE COMMERCE
AND M. H. MEHTA SCIENCE COLLEGE**

Tal. Palghar, Dist. Palghar, Pin - 401 404.

Code.: (02525) 252163, Prin : 252317 • Resi.: 252316

website : www.sdsmcollege.com • Email: sdsmcollege@yahoo.com

(NAAC Reaccredited 'B' Grade)

Date- 26-08-2019

NOTICE

Department of Botany

All the Student of UG, Botany is hereby informed that department of botany is arranging a certificate course on “**Plant tissue culture**” in Botany Lab from 05-09-2019.

The fee for above course is **Rs. 500**

After successful Completion of the Course and Examination, Participants will get Certificate from College, for more details kindly contact Department of Botany.

Venue – Botany Lab, SDSM College

Prof. B. N. Jaiswal

(Head Dept. of Botany)



Sonopant Dandekar Shikshan Mandali's

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M.H. MEHTA SCIENCE COLLEGE, PALGHAR**

Palghar, Dist. – Palghar, Pin – 401 404, E – Mail: sdsmcollege@yahoo.com

PROGRAMME SCHEDULE

Day	Day	Topic	Session
1	05.09.2019	Introduction of PTC History,	2 Hours
2	06.09.2019	Methods of PTC	2 Hours
3	07.09.2019	types of tissue culture,	2 Hours
4	11.09.2019	Single cell culture	2 Hours
5	12.09.2019	Polyploid	2 Hours
6	13.09.2019	Importance of Polyploid, Mutation, Hybridization	2 Hours
7	14.09.2019	Application of PTC	2 Hours
8	16.09.2019	Preparation of various media	2 Hours
9	17.09.2019	Totipotency-Importance	2 Hours
10	18.09.2019	Culturing of PTC	2 Hours
11	19.09.2019	Seed: Structure and types -	2 Hours
12	20.09.2019	Hands on training, sterilization, inoculation	2 Hours
13	21.09.2019	Micropropagation of explant and study of hardening stages	2 Hours
14	23.09.2019	Hands on training media preparation	2 Hours
15	24.09.2019	Seed dormancy; causes and methods of breaking dormancy	2 Hours
16	25.09.2019	sterilization techniques, media preparation	2 Hours
17	26.09.2019	Role of plant hormones	2 Hours
18	27.09.2019	Auxin and Cytokinnines	2 Hours

LIST OF STUDENTS ENROLLED

Sr. No.	Roll No.	Name of Student	Class
1	2017	MANDEKAR MANSI SANJAY	F.Y.B.Sc.
2	2022	SAROJ KHUSHBOO HAWALDAR	F.Y.B.Sc.
3	2024	KATWATE GAURANGI PURUSHOTTAM	F.Y.B.Sc.
4	2025	TRIPATHI ANJALI ANAND	F.Y.B.Sc.
5	2026	BHALERAO SALONI SUBHASH	F.Y.B.Sc.
6	2031	JADHAV SHREYA JITENDRA	F.Y.B.Sc.
7	2032	MANE SHRUTI SURESH	F.Y.B.Sc.
8	2033	TRIPATHI SHIBANI JITENDRA	F.Y.B.Sc.
9	2050	AHIRRAO DEWANG RAJENDRA	F.Y.B.Sc.
10	2051	GAWAD DARVIKA NARESH	F.Y.B.Sc.
11	2052	SHAIKH FIZA FAIROJ	F.Y.B.Sc.
12	2053	TAILOR KALINDI DINESH	F.Y.B.Sc.
13	2082	SANKHE VIRAJ VIJAY	F.Y.B.Sc.
14	2083	SINGH NEHA KUMARI PANKAJ	F.Y.B.Sc.
15	2084	SANKHE MANAS MANOHAR	F.Y.B.Sc.
16	2085	SINGH SHREYA ASHOKKUMAR	F.Y.B.Sc.
17	2086	BACHHAV SAHIL SANJAY	F.Y.B.Sc.
18	2102	YADAV VIVEK SABHARAJ	F.Y.B.Sc.
19	2103	ACHARYA YADNESH HARIHAR	F.Y.B.Sc.
20	2104	TAMORE RIYA DATATREY	F.Y.B.Sc.
21	2105	GHARAT POOJA BALWANT	F.Y.B.Sc.
22	2106	PATIL SEJAL JAYESH	F.Y.B.Sc.
23	2107	PATIL VAISHNAVI VIVEK	F.Y.B.Sc.
24	2108	PATIL KSHITIJA PRAKASH	F.Y.B.Sc.
25	2306	PAGDHARE JANHAVI DEVANAND	S.Y.B.Sc.
26	2307	BARI SAKSHI MANOHAR	S.Y.B.Sc.
27	2308	BARI ASHWITA SUBHASH	S.Y.B.Sc.
28	2309	SHINGRE PUJA LAXMAN	S.Y.B.Sc.
29	2310	GHARAT HIMANI KETAN	S.Y.B.Sc.
30	2325	TARE RUTUJA BHUPESH	S.Y.B.Sc.
31	2384	PATIL MAYURESH MAHESH	S.Y.B.Sc.
32	2385	CHURI BHAGYESH VIVIEK	S.Y.B.Sc.
33	2387	TANDEL TANMAY VISHWAS	S.Y.B.Sc.
34	2388	CHAUDHARI MAYUR RAJENDRA	S.Y.B.Sc.
35	2389	DAVANE SHIVANI NARESH	S.Y.B.Sc.
36	25005	BHOIR RAVINA VINOD	S.Y.B.Sc.
37	25006	BHOIR RAJASHRI RAMESH	S.Y.B.Sc.



38	25007	TARE DAMINI KAMLAKAR	S.Y.B.Sc.
39	25008	BHOIR SAMRUDDHI KIRAN	S.Y.B.Sc.
40	2614	KALPUND PRACHI PRAMOD	T.Y.B.Sc.
41	2632	MOULE VINOD AMRUT	T.Y.B.Sc.
42	2637	MULAY NIHARIKA DINESH	T.Y.B.Sc.
43	2700	SHAIKH AMEER SALIM	T.Y.B.Sc.
44	26011	SINGH KRISHNA SHRICHAND	T.Y.B.Sc.
45	26063	KHAN YASMIN M NAEEM	T.Y.B.Sc.

B.N. Jaiswal

Prof. B.N. Jaiswal

HOD - Botany



ATTENDANCE REPORT

From 5th September, 2019 to 16th September, 2019

Roll No.	Name of Student	Class	05.09.2019	06.09.2019	07.09.2019	11.09.2019	12.09.2019	13.09.2019	14.09.2019	16.09.2019
2017	MANDEKAR MANSI SANJAY	F.Y.B.Sc.	Mansi	Mansi	Mansi	Mansi	Mansi	Mansi	Mansi	Mansi
2022	SAROJ KHUSHBOO HAWALDAR	F.Y.B.Sc.	K.Saroj	K.Saroj	K.Saroj	K.Saroj	K.Saroj	K.Saroj	AB	K.Saroj
2024	KATWATE GAURANGI PURUSHOTTAM	F.Y.B.Sc.	Gau-T	Gau-T	Gau-T	Gau-T	Gau-T	Gau-T	Gau-T	Gau-T
2025	TRIPATHI ANJALI ANAND	F.Y.B.Sc.	Anjali	Anjali	Anjali	Anjali	Anjali	Anjali	Anjali	Anjali
2026	BHALERAO SALONI SUBHASH	F.Y.B.Sc.	Saloni	Saloni	Saloni	Saloni	Saloni	Saloni	Saloni	Saloni
2031	JADHAV SHREYA JITENDRA	F.Y.B.Sc.	Shreya-J	Shreya-J	AB	Shreya-J	Shreya-J	Shreya-J	Shreya-J	Shreya-J
2032	MANE SHRUTI SURESH	F.Y.B.Sc.	shruti	shruti	shruti	shruti	shruti	shruti	shruti	shruti
2033	TRIPATHI SHIBANI JITENDRA	F.Y.B.Sc.	Shruti	Shruti	Shruti	Shruti	AB	Shruti	Shruti	Shruti
2050	AHIRRAO DEWANG RAJENDRA	F.Y.B.Sc.	Dewang	Dewang	Dewang	Dewang	Dewang	Dewang	Dewang	Dewang
2051	GAWAD DARVIKA NARESH	F.Y.B.Sc.	Darvika	Darvika	Darvika	Darvika	Darvika	Darvika	Darvika	Darvika
2052	SHAIKH FIZA FAIROJ	F.Y.B.Sc.	AB	Fiza	Fiza	Fiza	Fiza	Fiza	Fiza	Fiza
2053	TAILOR KALINDI DINESH	F.Y.B.Sc.	K.T	K.T	K.T	K.T	K.T	K.T	K.T	K.T
2082	SANKHE VIRAJ VIJAY	F.Y.B.Sc.	Viraj	Viraj	Viraj	Viraj	Viraj	Viraj	Viraj	AB

2083	SINGH NEHA KUMARI PANKAJ	F.Y.B.Sc.	Neha	Neha	Neha	Neha	Neha	Neha	Neha	Neha
2084	SANKHE MANAS MANOHAR	F.Y.B.Sc.	Manas	Manas	Manas	Manas	Manas	Manas	Manas	Manas
2085	SINGH SHREYA ASHOKKUMAR	F.Y.B.Sc.	SSA	SSA	SSA	SSA	SSA	SSA	SSA	SSA
2086	BACHHAV SAHIL SANJAY	F.Y.B.Sc.	Bachhav	Bachhav	Bachhav	Bachhav	Bachhav	Bachhav	Bachhav	Bachhav
2102	YADAV VIVEK SABHARAJ	F.Y.B.Sc.	Vivek	Vivek	Vivek	Vivek	Vivek	Vivek	Vivek	Vivek
2103	ACHARYA YADNESH HARIHAR	F.Y.B.Sc.	AB	Yah	Yah	Yah	Yah	Yah	Yah	Yah
2104	TAMORE RIYA DATATREY	F.Y.B.Sc.	Riya	Riya	Riya	Riya	Riya	Riya	Riya	Riya
2105	GHARAT POOJA BALWANT	F.Y.B.Sc.	Gharat	Gharat	Gharat	Gharat	Gharat	Gharat	Gharat	Gharat
2106	PATIL SEJAL JAYESH	F.Y.B.Sc.	Sejal	Sejal	Sejal	Sejal	Sejal	Sejal	Sejal	Sejal
2107	PATIL VAISHNAVI VIVEK	F.Y.B.Sc.	Patil	Patil	AB	Patil	Patil	Patil	Patil	Patil
2108	PATIL KSHITIJ PRAKASH	F.Y.B.Sc.	K-Patil	K-Patil	K-Patil	K-Patil	K-Patil	K-Patil	K-Patil	K-Patil
2306	PAGDHARE JANHAVI DEVANAND	S.Y.B.Sc.	Janhavi	Janhavi	Janhavi	Janhavi	Janhavi	Janhavi	Janhavi	Janhavi
2307	BARI SAKSHI MANOHAR	S.Y.B.Sc.	Sakshi	Sakshi	Sakshi	Sakshi	Sakshi	Sakshi	Sakshi	Sakshi
2308	BARI ASHWITA SUBHASH	S.Y.B.Sc.	AB	AB	AB	AB	AB	AB	AB	AB
2309	SHINGRE PUJA LAXMAN	S.Y.B.Sc.	Puja-S	Puja-S	Puja-S	Puja-S	Puja-S	Puja-S	Puja-S	Puja-S
2310	GHARAT HIMANI KETAN	S.Y.B.Sc.	Himani	Himani	Himani	Himani	Himani	Himani	Himani	Himani

2325	TARE RUTUJA BHUPESH	S.Y.B.Sc.	Rare	Rare	Rare	Rare	Rare	Rare	Rare	AB	Rare
2384	PATIL MAYURESH MAHESH	S.Y.B.Sc.	MP	MP	MP	MP	MP	MP	MP	MP	MP
2385	CHURI BHAGYESH VIVIEK	S.Y.B.Sc.	BChuri	BChuri	AB	BChuri	BChuri	BChuri	BChuri	BChuri	BChuri
2387	TANDEL TANMAY VISHWAS	S.Y.B.Sc.	Tanmay	Tanmay	Tanmay	Tanmay	Tanmay	Tanmay	Tanmay	Tanmay	Tanmay
2388	CHAUDHARI MAYUR RAJENDRA	S.Y.B.Sc.	Mayur	Mayur	Mayur	Mayur	Mayur	Mayur	Mayur	Mayur	Mayur
2389	DAVANE SHIVANI NARESH	S.Y.B.Sc.	Shu	Shu	Shu	Shu	Shu	Shu	Shu	Shu	Shu
25005	BHOIR RAVINA VINOD	S.Y.B.Sc.	Ravina:B	Ravina:B	Ravina:B	AB	Ravina:B	Ravina:B	Ravina:B	Ravina:B	Ravina:B
25006	BHOIR RAJASHRI RAMESH	S.Y.B.Sc.	Raj	Raj	Raj	Raj	Raj	Raj	Raj	Raj	Raj
25007	TARE DAMINI KAMLAKAR	S.Y.B.Sc.	Damini-T	Damini-T	Damini-T	Damini-T	Damini-T	Damini-T	Damini-T	Damini-T	Damini-T
25008	BHOIR SAMRUDDHI KIRAN	S.Y.B.Sc.	\$	\$	\$	\$	\$	\$	\$	\$	\$
2614	KALPUND PRACHI PRAMOD	T.Y.B.Sc.	K.Parchi	K.Parchi	K.Parchi	K.Parchi	K.Parchi	K.Parchi	K.Parchi	K.Parchi	K.Parchi
2632	MOULE VINOD AMRUT	T.Y.B.Sc.	Vinod	Vinod	Vinod	Vinod	Vinod	AB	Vinod	Vinod	Vinod
2637	MULAY NIHARIKA DINESH	T.Y.B.Sc.	Niharika	Niharika	Niharika	Niharika	Niharika	Niharika	Niharika	Niharika	Niharika
2700	SHAIKH AMEER SALIM	T.Y.B.Sc.	Ashak	AB	Ashak	Ashak	Ashak	Ashak	Ashak	Ashak	Ashak
26011	SINGH KRISHNA SHRICHAND	T.Y.B.Sc.	Krishna	Krishna	Krishna	Krishna	Krishna	Krishna	Krishna	Krishna	Krishna
26063	KHAN YASMIN M NAEEM	T.Y.B.Sc.	Yasmin	Yasmin	Yasmin	Yasmin	Yasmin	Yasmin	Yasmin	Yasmin	AB

From 17th September, 2019 to 27th September, 2019

Roll No.	Name of Student	Class	17.09.19	18.09.19	19.9.19	20.09.19	21.09.19	23.09.19	24.09.19	25.09.19	26.9.19	27.9.19
2017	MANDEKAR MANSI SANJAY	F.Y.B.Sc.	Mansi	Mansi	Mansi	Mansi	Mansi	Mansi	Mansi	Mansi	Mansi	Mansi
2022	SAROJ KHUSHBOO HAWALDAR	F.Y.B.Sc.	K.saroj	K.saroj	K.saroj	K.saroj	K.saroj	K.saroj	K.saroj	K.saroj	K.saroj	K.saroj
2024	KATWATE GAURANGI PURUSHOTTA M	F.Y.B.Sc.	Gau.T	Gau.T	Gau.T	Gau.T	Gau.T	Gau.T	Gau.T	Gau.T	Gau.T	Gau.T
2025	TRIPATHI ANJALI ANAND	F.Y.B.Sc.	Anjali	Anjali	Anjali	Anjali	Anjali	Anjali	Anjali	Anjali	Anjali	Anjali
2026	BHALERAO SALONI SUBHASH	F.Y.B.Sc.	Saloni	Saloni	Saloni	Saloni	Saloni	Saloni	Saloni	Saloni	Saloni	Saloni
2031	JADHAV SHREYA JITENDRA	F.Y.B.Sc.	Shreya	Shreya	Shreya	Shreya	Shreya	Shreya	Shreya	Shreya	Shreya	Shreya
2032	MANE SHRUTI SURESH	F.Y.B.Sc.	Shruti	Shruti	Shruti	Shruti	Shruti	Shruti	Shruti	Shruti	Shruti	Shruti
2033	TRIPATHI SHIBANI JITENDRA	F.Y.B.Sc.	Anipathi	Anipathi	Anipathi	Anipathi	AB	Anipathi	Anipathi	Anipathi	Anipathi	Anipathi
2050	AHIRRAO DEWANG RAJENDRA	F.Y.B.Sc.	Dewang	Dewang	Dewang	Dewang	Dewang	Dewang	Dewang	Dewang	Dewang	Dewang
2051	GAWAD DARVIKA NARESH	F.Y.B.Sc.	Darvika	Darvika	Darvika	Darvika	Darvika	Darvika	Darvika	Darvika	Darvika	Darvika
2052	SHAIKH FIZA FAIROJ	F.Y.B.Sc.	Fiza	Fiza	Fiza	Fiza	Fiza	Fiza	Fiza	Fiza	Fiza	Fiza

2053	TAILOR KALINDI DINESH	F.Y.B.Sc.	K.T	K.T	K.T	K.T	K.T	K.T	K.T	K.T	K.T	K.T
2082	SANKHE VIRAJ VIJAY	F.Y.B.Sc.	Viraj	Viraj	Viraj	Viraj	Viraj	Viraj	Viraj	Viraj	Viraj	Viraj
2083	SINGH NEHA KUMARI PANKAJ	F.Y.B.Sc.	Neha	Neha	Neha	AB	Neha	AB	Neha	Neha	Neha	Neha
2084	SANKHE MANAS MANOHAR	F.Y.B.Sc.	manas	manas	manas	manas	manas	AB	manas	manas	AB	manas
2085	SINGH SHREYA ASHOKKUMAR	F.Y.B.Sc.	Singh	Singh	AB	AB	AB	Singh	Singh	Singh	Singh	Singh
2086	BACHHAV SAHIL SANJAY	F.Y.B.Sc.	Bachhav	Bachhav	AB	Bachhav	Bachhav	Bachhav	AB	Bachhav	AB	Bachhav
2102	YADAV VIVEK SABHARAJ	F.Y.B.Sc.	Vivek	Vivek	Vivek	Vivek	Vivek	Vivek	Vivek	Vivek	Vivek	Vivek
2103	ACHARYA YADNESH HARIHAR	F.Y.B.Sc.	AB	yah	yah	yah	yah	yah	yah	yah	yah	yah
2104	TAMORE RIYA DATATREY	F.Y.B.Sc.	Riya	Riya	Riya	Riya	Riya	Riya	Riya	Riya	Riya	Riya
2105	GHRAT POOJA BALWANT	F.Y.B.Sc.	Bhurat	Bhurat	Bhurat	Bhurat	Bhurat	Bhurat	Bhurat	Bhurat	Bhurat	Bhurat
2106	PATIL SEJAL JAYESH	F.Y.B.Sc.	Sejal	sejal	sejal	sejal	sejal	sejal	sejal	sejal	sejal	sejal
2107	PATIL VAISHNAVI VIVEK	F.Y.B.Sc.	Ppatil	Ppatil	AB	Ppatil	Ppatil	Ppatil	AB	Ppatil	Ppatil	Ppatil
2108	PATIL KSHITIJ PRAKASH	F.Y.B.Sc.	K.Patil	K.Patil	K.Patil	K.Patil	K.Patil	K.Patil	K.Patil	K.Patil	K.Patil	K.Patil

2306	PAGDHARE JANHVI DEVANAND	S.Y.B.Sc.	Janhvi	Janhvi	Janhvi	Janhvi	Janhvi	Janhvi	Janhvi	Janhvi	Janhvi	Janhvi	Janhvi
2307	BARI SAKSHI MANOHAR	S.Y.B.Sc.	Sakshi	Sakshi	Sakshi	Sakshi	Sakshi	Sakshi	Sakshi	Sakshi	Sakshi	Sakshi	Sakshi
2308	BARI ASHWITA SUBHASH	S.Y.B.Sc.	Ashwita	Ashwita	Ashwita	Ashwita	Ashwita	Ashwita	Ashwita	Ashwita	Ashwita	Ashwita	Ashwita
2309	SHINGRE PUJA LAXMAN	S.Y.B.Sc.	Puja	Puja	AB	Puja	Puja	AB	Puja	Puja	Puja	AB	AB
2310	GHARAT HIMANI KETAN	S.Y.B.Sc.	Himani	Himani	Himani	Himani	Himani	Himani	Himani	Himani	Himani	Himani	Himani
2325	TARE RUTUJA BHUPESH	S.Y.B.Sc.	Rutuja	Rutuja	Rutuja	Rutuja	Rutuja	Rutuja	Rutuja	Rutuja	Rutuja	Rutuja	Rutuja
2384	PATIL MAYURESH MAHESH	S.Y.B.Sc.	Patil	Patil	Patil	Patil	Patil	AB	Patil	AB	Patil	Patil	Patil
2385	CHURI BHAGYESH VIVIEK	S.Y.B.Sc.	Bhuro	Bhuro	Bhuro	Bhuro	Bhuro	Bhuro	Bhuro	Bhuro	Bhuro	Bhuro	Bhuro
2387	TANDEL TANMAY VISHWAS	S.Y.B.Sc.	Tanmay	Tanmay	Tanmay	Tanmay	Tanmay	Tanmay	Tanmay	Tanmay	Tanmay	Tanmay	Tanmay
2388	CHAUDHARI MAYUR RAJENDRA	S.Y.B.Sc.	Mayur	Mayur	Mayur	Mayur	Mayur	Mayur	Mayur	Mayur	Mayur	Mayur	Mayur
2389	DAVANE SHIVANI NARESH	S.Y.B.Sc.	Shivani	Shivani	Shivani	Shivani	Shivani	Shivani	Shivani	Shivani	Shivani	Shivani	Shivani
25005	BHOIR RAVINA VINOD	S.Y.B.Sc.	Ravina.B	Ravina.B	Ravina.B	Ravina.B	Ravina.B	Ravina.B	Ravina.B	Ravina.B	Ravina.B	Ravina.B	Ravina.B
25006	BHOIR RAJASHRI RAMESH	S.Y.B.Sc.	Rajashri	Rajashri	Rajashri	Rajashri	Rajashri	Rajashri	Rajashri	Rajashri	Rajashri	Rajashri	Rajashri

SAMPLE CERTIFICATES

DEPARTMENT OF BOTANY
SONOPANT DANDEKAR ARTS, V.S. APTE COMMERCE AND
M.H. MEHTA SCIENCE COLLEGE, PALGHAR



CERTIFICATE **Plant**
TISSUECULTURE

OF APPRECIATION

THIS CERTIFICATE RECOGNIZES THE CONTRIBUTION OF

Miss. Jadhav shreya Jitendra

For successfully participating course in 'PLANT
TISSUE CULTURE'


PROF. B.N. JAISWAL
HEAD, DEPARTMENT OF
BOTANY


DR. KIRAN SAVE
PRINCIPAL



DEPARTMENT OF BOTANY
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Mr. Sankhe Manas Manohar

For successfully participating co
TISSUE CULTURE'

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B.N. J.

PROF. B.N. JAISWAL
HEAD, DEPARTMENT OF
BOTANY

Kiran

DR. KIRAN SAVE
PRINCIPAL





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Miss. Patil Sejal Jayson

For successfully participating course in 'PLANT
TISSUE CULTURE'

B.N. Jaiswal

PROF. B.N. JAISWAL
HEAD, DEPARTMENT OF
BOTANY

Kiran Save

DR. KIRAN SAVE
PRINCIPAL



COURSE SUMMARY REPORT

This course provides an in-depth exploration of plant tissue culture techniques and applications. Through a combination of lectures, laboratory sessions, and hands-on practical exercises, students will gain theoretical knowledge and practical skills in plant tissue culture, including cell culture, organogenesis, embryogenesis, and micropropagation. Emphasis is placed on understanding the principles of tissue culture, mastering aseptic techniques, and applying tissue culture methods to propagate and genetically modify plants for agricultural, horticultural, and research purposes.

Course Structure:

Duration: 36 Hours

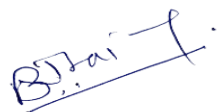
Format: Lectures, discussions, case studies, Test

Date of commencement: 05-09-2019

Date of completion: 27-9-2019

No. of Students Enrolled in the Course: 45

No. of Students Completed the Course: 45



Prof. B.N. Jaiswal

HOD - Botany