



Gokhale Education Society's  
R.N.C. ARTS, J.D.B. COMMERCE & N.S.C. SCIENCE COLLEGE, NASHIKROAD  
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## JOURNALS/ PERIODICALS LIST FOR THE YEAR 2022-23

### ARTS STREAM:-

SR. NO.	TITLE OF PERIODICALS / JOURNALS	FREQUENCY	NATIONAL / INTER NATIONAL	REMARK
<b>ARTS STREAM :-</b>				
<b>ENGLISH :</b>				
1	INDIAN LITRATURE	MONTHLY	NATIONAL	
2	JOURNAL OF ENG. LANGUAGE TEACHING	BIO-MONTHLY	NATIONAL	PEER REVIEWED
3	READERS DIGEST	MONTHLY	NATIONAL	
4	TIME MAGAZINE	MONTHLY	INTERNATIONAL	
<b>GEOGRAPHY :</b>				
1	DISCOVER MAGAZINE	MONTHLY	INTERNATIONAL	
2	NATIONAL GEOGRAPHY	MONTHLY	NATIONAL	
3	NATIONALGEOGRAPHIC TRAVLLER (INDIAN)	MONTHLY	NATIONAL	
<b>HINDI :</b>				
1	ALOCHANA	MONTHLY	NATIONAL	
2	GAGANAANCHAL	MONTHLY	NATIONAL	
3	HANS	MONTHLY	NATIONAL	
4	KATHA BIMB	MONTHLY	NATIONAL	
5	MADHUMATI	MONTHLY	NATIONAL	
6	NATRANG	QUARTARLY	NATIONAL	
7	SAMKALIN BHARTIYA SAHITYA	BIO-MONTHLY	NATIONAL	
<b>HISTORY :</b>				
1	BHARTIYA ITIHAS SANSKRUTI	QUARTARLY	NATIONAL	
2	SANSHODHAK	QUARTARLY	NATIONAL	
<b>LIBRARY SCIENCE</b>				
1	ANNALS OF LIBRARY AND INFORMATION	QUARTARLY	NATIONAL	
2	DECIDOC JOURNAL OF LIBRARY INFORM.	BIO-MONTHLY	NATIONAL	UGC CARE PEER REVIEWED



**MARATHI :**

1	ANDHASHRADHA NIRMULAN	MONTHLY	NATIONAL	
2	CHITRALEKHA	MONTHLY	NATIONAL	
3	LALIT	MONTHLY	NATIONAL	
4	MAHA-ANUBHAV	MONTHLY	NATIONAL	
5	PANCHDHARA	HALF-YEARLY	NATIONAL	
6	PARIVARTANACHA VATSARU	FORTNIGHTLY	NATIONAL	
7	SAMAJ PRABODHAN PATRICA	QUARTARLY	NATIONAL	
8	SATSHIK SAKAL	MONTHLY	NATIONAL	
	<b>SPORTS :</b>			
1	SPORT STAR	MONTHLY	NATIONAL	

**GENERAL/OTHERS****EDUCATION :**

1	TEACHER PLUS	MONTHLY	NATIONAL	
2	UNIVERSITY NEWS	WEEKLY	NATIONAL	
3	SHIKSHAN SANKRAMAN	MONTHLY	NATIONAL	

**GENERAL KNOWLEDGE :**

1	BULLETIN OF UNIQUE ACADEMY	MONTHLY	NATIONAL	
2	CHANAKYA MANDAL PARIWAR	MONTHLY	NATIONAL	
3	COMPETITION AFFAIRS	MONTHLY	NATIONAL	
4	COMPETITION SUCCESS REVIEW	MONTHLY	NATIONAL	
5	FRONTLINE	FORTNIGHTLY	INTERNATIONAL	
6	OUT LOOK (HINDI)	FORTNIGHTLY	NATIONAL	
7	OUT LOOK (ENG)	FORTNIGHTLY	NATIONAL	
8	THE WEEK	MONTHLY	NATIONAL	
9	CHRONICAL (IN ENGLISH)	MONTHLY	NATIONAL	
10	CHRONICAL (IN HINDI)	MONTHLY	NATIONAL	



**JOURNALS/ PERIODICALS LIST FOR THE YEAR 2022-23**  
**COMMERCE STREAM:-**

COMMERCE STREAM :-				
1	INDIAN JOURNAL OF ENTERPRENUSHIP	MONTHLY	NATIONAL	PEER REVIEWED
2	INDIAN JOURNAL OF FINANCE	MONTHLY	NATIONAL	UGC CARE
3	INDIAN JOURNAL OF MARKETING	MONTHLY	NATIONAL	UGC CARE
4	INDIAN JOURNAL OF RESEARH CAPITAL MARKET	MONTHLY	NATIONAL	PEER REVIEWED
5	JOURNAL OF COMMERCE & MANAGEMENT THOUGHT	QUARTARLY	NATIONAL	
6	MANAGEMENT ACCOUNTANT	MONTHLY	NATIONAL	
7	PRABANDHAN : INDIAN JR. OF COMMERCE	MONTHLY	NATIONAL	UGC CARE
8	VYAPARI MITRA	MONTHLY	NATIONAL	
ECONOMICS :				
1	ARTHASHASTRA INDIAN JOURNAL OF ECONOMIC & RESEARCH	BIO-MONTHLY	NATIONAL	
2	ECONOMIC & POLITICAL WEEKLY	WEEKLY	NATIONAL	
3	SOUTHERN ECONOMICS	FORTNIGHTLY	NATIONAL	



## JOURNALS/ PERIODICALS LIST FOR THE YEAR 2022-23

### SCIENCE STREAM:-

SR. NO.	TITLE OF PERIODICALS / JOURNALS	FREQUENCY	NATIONAL / INTER NATIONAL	REMARK UGC CARE / PEER REVIEWED
<b>SCIENCE STREAM :-</b>				
<b>BIOLOGY :</b>				
1	BIOLOGY TODAY	MONTHLY	NATIONAL	
<b>CHEMISTRY :</b>				
1	INDIAN JR. OF BIO-CHEMISTRY & BIO.PHSICS	BIO-MONTHLY	NATIONAL	PEER REVIEWED
2	CHMISTRY TODAY	MONTHLY	NATIONAL	
3	INDIAN JOURNAL OF CHEMISTRY (A)	MONTHLY	NATIONAL	
4	INDIAN JOURNAL OF CHMISTRY (B)	MONTHLY	NATIONAL	
<b>COMPUTER SCIENCE :</b>				
1	DATA QUEST	MONTHLY	NATIONAL	
2	DIGIT	MONTHLY	NATIONAL	
3	OPEN SOURCE FOR YOU	MONTHLY	NATIONAL	
4	PC QUEST MAGAZINE	MONTHLY	NATIONAL	
5	VOICE & DATA	MONTHLY	NATIONAL	
<b>ELECTRONIC SCIENCE :</b>				
1	ELECTRONIC FOR YOU	MONTHLY	NATIONAL	
<b>ENVIRONMENT SCIENCE :</b>				
1	DOWN TO EARTH	FORTNIGHTLY	NATIONAL	
<b>GENERAL SCIENCE</b>				
1	CSIR NEWS	FORTNIGHTLY	NATIONAL	
2	CURRENT SCIENCE	FORTNIGHTLY	NATIONAL	UGC CARE
3	SCIENCE REPORTER	MONTHLY	NATIONAL	PEER REVIEWED



<b>MATHS :</b>				
1	<b>MATHEMATICS TODAY</b>	<b>MONTHLY</b>	<b>NATIONAL</b>	
<b>PHYSICS :</b>				
1	<b>INDIAN JOURNAL PURE APPLIED PHYSICS.</b>	<b>MONTHLY</b>	<b>NATIONAL</b>	<b>PEER REVIEWED</b>
2	<b>PHYSICS FOR YOU</b>	<b>MONTHLY</b>	<b>NATIONAL</b>	

### Free Online Journal List:-

Sr. No.	Title of the Journal
1.	<b>MAINSTRAM</b>
2.	<b>BUSINESS INDIA</b>
3.	<b>CAPITAL MARKET</b>
4.	<b>RBI BULLETIN</b>
5.	<b>INDIAN FORESTER</b>
6.	<b>INDIAN JOURNAL OF TRADITIONAL KNOWLEDGE</b>
7.	<b>INDIAN JR. OF EXPETIMENTAL BIOLOGY</b>
8.	<b>INDIAN JR. OF BIO-CHEMISTRY &amp; BIO-PHYSICS</b>
9.	<b>INDIAN JOURNAL OF CHEMISTRY (A)</b>
10.	<b>INDIAN JOURNAL OF CHEMISTRY (B)</b>
11.	<b>Bulletin of Material Science</b>
12.	<b>Journal of Astrophysics &amp; Astronomy</b>
13.	<b>Journal of Genetics</b>
14.	<b>Journal of Chemical Sciences.</b>
15.	<b>Journal of Earth System Science</b>
16.	<b>Pramana : Journal of Physics</b>
17.	<b>Proceedings: Mathematical Sciences</b>



**Summary: - Journals /Periodicals 2022-2023**

**ARTS FACULTY**

SR. NO	SUBJECT	NATIONAL	INTER-NATIONAL	Remark		TOTAL
				PEER REVIEWED	UGC CARE	
1	ENGLISH :	3	1	1		4
2	GEOGRAPHY :	2	1	-	-	3
3	HINDI :	7	—	-	-	7
4	HISTORY :	2	—	-	-	2
5	LIB.SCIENCE	2	—	1	1	2
7	MARATHI :	8	—	-	-	8
8	SPORTS :	1	—	-	-	1
	<b>TOTAL :</b>	25	2	2	2	27

**COMMERCE FACULTY**

SR. NO.	SUBJECT	NATIONAL	INTER-NATIONAL	Remark		TOTAL
				PEER REVIEWED	UGC CARE	
1	COMMERCE	8	—	2	3	8
2	ECONOMICS	3	—	-	-	3
3	<b>TOTAL :</b>	11	--	2	3	11

**SCIENCE FACULTY**

SR. NO.	SUBJECT	NATIONAL	INTER-NATIONAL	Remark		TOTAL
				PEER REVIEWED	UGC CARE	
1	BIOLOGY :	1	—			1
2	CHEMISTRY :	4	—	1		4
3	COMPUTER SCIENCE :	5	—	-	-	5
4	ELECTRONIC SCIENCE :	1	—	-	-	1
5	ENVIRONMENT SCIENCE :	1	—	-	-	1
6	GEN. SCI.	3	—	2	1	3
7	MATHS :	1	—	-	-	1
8	PHYSICS :	2	—	-	-	2
9	EDUCATION :	3	—	-	-	3
	<b>TOTAL :</b>	21	-	5	2	21
1	GENERAL KNOWLEDGE :	9	1	-	-	10
	<b>TOTAL :</b>	31	1	8	3	31



**Summary: - Journals /Periodicals 2022-2023**

INTERNATIONAL	3	ARTS	27
NATIONAL	66	COMMERCE	11
UGC CARE	5	SCIENCE	21
PEER REVIEWED	6	G.K.	10
E- JOURNAL	2	TOTAL	69
Free Online Journals	17	TOTAL	86



**LIBRARIAN**

**R. N. C. Arts, J. D. B. Commerce and  
U. S. C. Science College, Nasik Road**



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**R. N. C. Arts J. D. B. Commerce &  
U. S. C. Science College, Nasik-Road**




**GOKHALE EDUCATION SOCIETY'S  
R.N.C. ARTS, J.D.B. COMMERCE & N.S.C. SCIENCE COLLEGE,  
NASHIK ROAD- 422101**

**COMMERCE RESEARCH CENTER  
LIST OF REGULAR (IN HOUSE) GUIDE**

Sr. No.	Name of Guide	Current Status	Subject	No. of M. Phil Students Registered/ Declared	No. of Ph.D. Students Registered
01	Prin. Dr. R. M. Kulkarni	Retired	Business Administration	02 Students Successfully Completed	Nil
02	Prof. Dr. D. G. Belgaonkar	Retired	Marketing	Nil	03
03	Asso. Prof. Dr. C. B. Chaudhari	Retired	Business Practices	Nil	01
04	Prof. Dr. S. N. Tupe	Transferred at G. E. Society's B. Y. K. College of Commerce, Nashik	Banking and Finance	Nil	Nil
05	Prof. Dr. Mrs. V. R. Hande	Working	Business Administration Marketing	Nil	06 02
06	Asso. Prof. Dr. S. D. Nikam	Working	Accountancy and Auditing Marketing	Nil Nil	Nil Nil
07	Asso. Prof. Dr. Mrs. K. M. Sananse	Working	Accountancy and Auditing Business Administration	Nil Nil	01 03
08	Asst. Prof. Dr. A. A. Thakur	Working	Accountancy and Auditing	Nil	02

Place: - Nashik Road

Date: - 24/03/2023

  
Dr. Thakur Akash Ashok  
Vice Principal- Commerce Faculty &  
Coordinator Commerce Research Center

  
Prof. Dr. Mrs. M. M. Kulkarni  
I/c Principal &  
Director Commerce Research Center




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**COMMERCE RESEARCH CENTER  
LIST OF ASSOCIATE (OUT HOUSE) GUIDE**

Sr. No.	Name of Guide	Current Status	Subject	No. of M. Phil Students Registered/ Declared	No. of Ph.D. Students Registered
01	Prof. Dr. Mrs. S. R. Hasabnis	Retired	Business Administration	Nil	02
02	Prof. Dr. S. D. Joshi	Working	Accountancy and Auditing	Nil	04
03	Asso. Prof. D. C. Zalte	Working	Business Practices	Nil	01
04	Asst. Prof. Dr. Mrs. R. A. Kadhane	Working	Banking and Finance	Nil	03

Place: - Nashik Road

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R.N.C. ARTS, J.D.B. COMMERCE & N.S.C. SCIENCE COLLEGE,  
NASHIK ROAD- 422101**

**COMMERCE RESEARCH CENTER  
SUBJECT WISE PH.D. STUDENT LIST**


**FACULTY: - COMMERCE**


**SUBJECT: - ACCOUNTANCY AND AUDITING**

Sr. No.	Name of Student	Category	Date of Registration	Name of Guide
01	Gosavi Neha Aniruddha	Open	06/09/2018	Prof. Dr. S. D. Joshi
02	Lokesh Bhikchand Surana	Open	12/02/2020	Asso. Prof. Dr. Mrs. K. M. Saranse
03	Jagtap Rinku Rajendra	OBC	29/06/2021	Prof. Dr. S. D. Joshi
04	Khambayat Vinayak Gopal	SC	29/06/2021	Prof. Dr. S. D. Joshi
05	Mumtaj Mohammed Saheb Shaikh	Open	25/04/2022	Prof. Dr. S. D. Joshi
06	Mahendra Suresh Varma	Open	09/12/2022	Asst. Prof. A. A. Thakur
07	Prasad Ratnakar Patil	OBC	09/12/2022	Asst. Prof. A. A. Thakur

**Place: - Nashik Road**

**Date: - 24/03/2023**

  
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NASHIK ROAD- 422101

COMMERCE RESEARCH CENTER  
SUBJECT WISE PH.D. STUDENT LIST


FACULTY: - COMMERCE

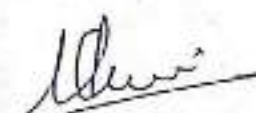
SUBJECT: - BANKING AND FINANCE

Sr. No.	Name of Student	Category	Date of Registration	Name of Guide
01	Amit Baburao Ahire	SC	25/04/2022	Asst. Prof. Dr. Mrs. R. A. Kadhane
02	Prashant Suryabhan Ugale	Open	25/04/2022	Asst. Prof. Dr. Mrs. R. A. Kadhane
03	Sandeep Sitaram Sapkal	Open	25/04/2022	Asst. Prof. Dr. Mrs. R. A. Kadhane

Place: - Nashik Road

Date: - 24/03/2023

  
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**COMMERCE RESEARCH CENTER  
SUBJECT WISE PH.D. STUDENT LIST**


**FACULTY: - COMMERCE**


**SUBJECT: - BUSINESS ADMINISTRATION**

Sr. No.	Name of Student	Category	Date of Registration	Name of Guide
01	Pravin Bhaskar Gole	Open	12/02/2020	Prof. Dr. Mrs. S. R. Hasabnis
02	Amrapali Suresh Jadhav	SC	12/02/2020	Prof. Dr. Mrs. S. R. Hasabnis
03	Vinita Sagar Kulkarni	Open	12/02/2020	Asso. Prof. Dr. Mrs. K. M. Sananse
04	Deepali Ravindra Chandramore	SC	12/02/2020	Asso. Prof. Dr. Mrs. K. M. Sananse
05	Morade Varsha Ganpatrao	Open	22/03/2021	Prof. Dr. Mrs. V. R. Hande
06	Kadam Savita Prabhakar	Open	29/06/2021	Prof. Dr. Mrs. V. R. Hande
07	Jadhav Mahendra Devram	SC	29/06/2021	Prof. Dr. Mrs. V. R. Hande
08	Ujwala Trambak Deore	OBC	25/04/2022	Asso. Prof. Dr. Mrs. K. M. Sananse
09	Ujwala Sharad Kedar	NT- A	25/04/2022	Prof. Dr. Mrs. V. R. Hande
10	Gorakh Namdev Waghale	ST	25/04/2022	Prof. Dr. Mrs. V. R. Hande
11	Sai Vedika Nandkumar	Open	Topic yet not approved	Prof. Dr. Mrs. V. R. Hande

**Place: - Nashik Road**

**Date: - 24/03/2023**

  
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**COMMERCE RESEARCH CENTER  
SUBJECT WISE PH.D. STUDENT LIST**


**FACULTY: - COMMERCE**


**SUBJECT: - MARKETING**

Sr. No.	Name of Student	Category	Date of Registration	Name of Guide
01	Nirbhavane Shashwati Sunil	SC	06/09/2018	Prof. Dr. D. G. Belgaonkar
02	Khairnar Megha Jayesh	OBC	06/09/2018	Prof. Dr. D. G. Belgaonkar
03	Limaye Sonali Ramesh	Open	22/03/2021	Prof. Dr. D. G. Belgaonkar
04	Vaibhav Karbhari Jadhav	Open	23/08/2022	Prof. Dr. Mrs. V. R. Hande
05	Jayashree Dhiraj Paliwal	Open	09/12/2022	Prof. Dr. Mrs. V. R. Hande

**Place: - Nashik Road**

**Date: - 24/03/2023**

  
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R.N.C. ARTS, J.D.B. COMMERCE & N.S.C. SCIENCE COLLEGE,  
NASHIK ROAD- 422101**


**COMMERCE RESEARCH CENTER**


**SUBJECT AND CATEGORY WISE NO OF PH.D. STUDENTS REGISTERED**

Sr. No.	Name of Subject	Category					Total
		Open	SC	ST	NT	OBC	
01	Accountancy and Auditing	04	01	Nil	Nil	02	07
02	Banking and Finance	02	01	Nil	Nil	Nil	03
03	Business Administration	05	03	01	01	01	11
04	Business Practices	02	Nil	Nil	Nil	Nil	02
05	Marketing	03	01	Nil	Nil	01	05
06	<b>Total</b>	16	06	01	01	04	28

Place: - Nashik Road

Date: - 24/03/2023

  
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NASHIK ROAD- 422101**

**COMMERCE RESEARCH CENTER  
SUBJECT WISE PILD. STUDENT LIST**


**FACULTY: - COMMERCE**

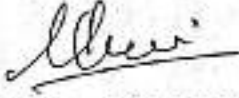
**SUBJECT: - BUSINESS PRACTICES**

Sr. No.	Name of Student	Category	Date of Registration	Name of Guide
01	Nilesh Sunil Murkute	Open	25/04/2022	Asso. Prof. Dr. C. B. Chaudhari
02	Subhash Patingrao Bhosale	Open	25/04/2022	Asso. Prof. D. C. Zalte

**Place: - Nashik Road**

**Date: - 24/03/2023**

  
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**COMMERCE RESEARCH CENTER**

**SUBJECT AND CATEGORY WISE NO OF PH.D. STUDENTS REGISTERED**


**MALE AND FEMALE**


Sr. No.	Name of Subject	Category												Total
		Open		SC		ST		NT		OBC		Total		
		M	F	M	F	M	F	M	F	M	F	M	F	
01	Accountancy and Auditing	02	02	01	Nil	Nil	Nil	Nil	Nil	01	01	04	03	07
02	Banking and Finance	02	Nil	01	Nil	Nil	Nil	Nil	Nil	Nil	Nil	03	Nil	03
03	Business Administration	01	04	01	02	01	Nil	Nil	01	Nil	01	03	08	11
04	Business Practiccs	02	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	02	Nil	02
05	Marketing	01	02	Nil	01	Nil	Nil	Nil	Nil	Nil	01	01	04	05
06	Total	08	08	03	03	01	Nil	Nil	01	01	03	13	15	28

M: - Male  
F: - Female

Place: - Nashik Road

Date: - 24/03/2023

  
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**SUBJECT AND CATEGORY WISE NO OF PH.D. STUDENTS REGISTERED**


**MALE AND FEMALE**


Sr. No.	Name of Subject	Category												Total
		Open		SC		ST		NT		OBC		Total		
		M	F	M	F	M	F	M	F	M	F	M	F	
01	Accountancy and Auditing	02	02	01	Nil	Nil	Nil	Nil	Nil	01	01	04	03	07
02	Banking and Finance	02	Nil	01	Nil	Nil	Nil	Nil	Nil	Nil	Nil	03	Nil	03
03	Business Administration	01	04	01	02	01	Nil	Nil	01	Nil	01	03	08	11
04	Business Practiccs	02	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	02	Nil	02
05	Marketing	01	02	Nil	01	Nil	Nil	Nil	Nil	Nil	01	01	04	05
06	Total	08	08	03	03	01	Nil	Nil	01	01	03	13	15	28

M: - Male  
F: - Female

Place: - Nashik Road

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ORIGINAL

मूल/No : 121170



भारत सरकार  
GOVERNMENT OF INDIA  
पेटेंट कार्यालय  
THE PATENT OFFICE

डिजाइन के पंजीकरण का प्रमाणपत्र  
CERTIFICATE OF REGISTRATION OF DESIGN

डिजाइन सं. / Design No. : 368750-001  
तारीख / Date : 04/08/2022  
पारस्परिकता तारीख / Reciprocity Date\* :  
देश / Country :

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो **BIRD NEST MONITORING DEVICE** से संबंधित है, का पंजीकरण, श्रेणी **10-05** में 1.Dr. Shaikh Hasim Mohammed Isak 2. Dr. Prakash Tanaji Wankhedkar 3.Mr. Siddharth Dnyandeo Nimbalkar 4.Dr. Patel Yusuf Ebrahim के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

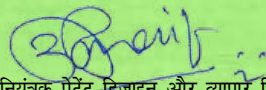
Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class **10-05** in respect of the application of such design to **BIRD NEST MONITORING DEVICE** in the name of 1.Dr. Shaikh Hasim Mohammed Isak 2. Dr. Prakash Tanaji Wankhedkar 3.Mr. Siddharth Dnyandeo Nimbalkar 4.Dr. Patel Yusuf Ebrahim.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्याधीन प्रावधानों के अनुसरण में।

In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

INTELLECTUAL  
PROPERTY INDIA  
PATENTS | DESIGNS | TRADE MARKS  
GEOGRAPHICAL INDICATIONS

निर्गमन की तारीख/Date of Issue : 22/12/2022

  
महानियंत्रक पेटेंट डिजाइन और व्यापार चिह्न  
Controller General of Patents, Designs and Trade Marks

पारस्परिकता तारीख (यदि कोई हो) जिसकी अनुमति देश के नाम पर की गई है। डिजाइन का सत्त्वाधिकार पंजीकरण की तारीख से दस वर्षों के लिए होगा जिसका विस्तार, अधिनियम एवं नियम के निबंधनों के अधीन, पाँच वर्षों की अतिरिक्त अवधि के लिए किया जा सकेगा। इस प्रमाण पत्र का उपयोग विधिक कार्यवाहियों अथवा विदेश में पंजीकरण प्राप्त करने के लिए नहीं हो सकता है।

\*The reciprocity date (if any) which has been allowed and the name of the country. Copyright in the design will subsist for ten years from the date of Registration, and may under the terms of the Act and Rules, be extended for a further period of five years. This Certificate is not for use in legal proceedings or for obtaining registration abroad.

**FORM 5**  
**THE PATENTS ACT 1970**  
 (39 of 1970)  
 &  
 The Patents rules, 2003  
**DECLARATION AS TO INVENTORSHIP**  
 [See section 10(6) and rule 13(6)]

1. NAME: OF APPICANT (S)

1. Dr. Rajesh Bhaskar Survase
2. Dr. Santosh Tukaram Jadhav
3. Dr. Nana Zagade
4. Dr. Shashikant Memane
5. Prof. Naresh Uttamrao Patil
6. Dr. Ashok Bhagwan Divekar
7. Mr. Vijay Subhash Survase
8. Dr. Arjun Baban Doke
9. Dr. Shrikant Tukaram Ghadge
10. Ms. Maitrayee Ashok Divekar

Hereby declare that the truth and first inventor (s) of the invention disclosed in the provisional specification filed in pursuance of my application numbered 2023\_\_\_\_\_ dated \_\_\_\_\_ are.

**2. INVENTOR (S)**

NAME	NATION-ALITY	ADDRESS
Dr. Rajesh Bhaskar Survase	Indian	Assistant Professor Department of Earth Science- Geography E. S. Divekar College Varvand, Daund, Pune Pin: 412215 Maharashtra India
Dr. Santosh Tukaram Jadhav	Indian	Associate Professor Department of Earth Science- Geography M.V.P. SAMAJ'S, KARMAVEER PUNJABABA GOVARDHANE ARTS COMMERCE & SCIENCE COLLEGE, IGATPURI. NASHIK Pin: 422403 Maharashtra India
Dr. Nana Zagade	Indian	Professor Department of Marathi

		PDEA's Annasaheb Magar College, Hadapsar, Pune Pin: 411028 Maharashtra India
Dr. Shashikant Memane	Indian	Associate Professor Department of Earth Science- Geography CES's, Dr. Arvind B. Telang Sr. College, Survey No. 27/A Nigdi Pradhikaran, Pune Pin: 411044 Maharashtra India
Prof. Naresh Uttamrao Patil	Indian	Assistant Professor Department of Earth Science- Geography RNC ARTS JDB COMMERCE AND NSC SCIENCE COLLEGE Dawkhar Wadi, Nashik Road, Nashik, Pin: 422101 Maharashtra India
Dr. Ashok Bhagwan Divekar	Indian	Assistant Professor Department of Earth Science- Geography Subhash Baburao Kul College Kedgaon Daund, Pune Pin: 412203 Maharashtra India
Mr. Vijay Subhash Survase	Indian	Student Department of B.E. Computer Engineering Dhole Patil College of Engineering, Near Eon IT Park, Kharadi- Wagholi Rd., Wagholi, Pune. Pin:412207 Maharashtra India
Dr. Arjun Baban Doke	Indian	Professor Department of Earth Science-

		Geography Baburaoji Gholap College Sangavi Pune Pin: 411027 Maharashtra India
Dr. Shrikant Tukaram Ghadge	Indian	Assistant Professor Department of Earth Science- Geography M. S. Kakade College Someshwarnagar, Baramati Pune Pin:412306 Maharashtra India
Ms. Maitrayee Ashok Divekar	Indian	Student Department of B.E Computer Engineering Padmabhooshan Vasantdada Patil Institute of Technology, Bavdhan. Pune Pin: 411021 Maharashtra India
Date 31/05/2023		
 Dr. Rajesh Bhaskar Survase (Applicant's Signature)		
<b>3. DECLARATION TO BE GIVEN WHEN THE APPLICATION IN INDIA IS FILED BY THE APPLICANT (S) IN THE CONVENTION COUNTRY:-</b> -NA- <del>We the applicant(s) in the convention country hereby declare that our right to apply for a patent in India is by way of assignment from the true and first inventor(s).</del>		
Dated this ___ day of ___, 2022.		
Signature:-NA Name: of signatory:- NA		
To, <b>The controller of patent</b> <b>The patent office, at Delhi/Mumbai/Chennai/Kolkata.</b>		



Office of the Controller General of Patents, Designs & Trade Marks  
Department of Industrial Policy & Promotion,  
Ministry of Commerce & Industry,  
Government of India



#### Application Details

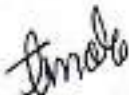
APPLICATION NUMBER	202321037661
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	31/05/2023
APPLICANT NAME	1 . Dr. Rajesh Bhaskar Survase 2 . Dr. Santosh Tukaram Jadhav 3 . Dr. Nana Zagade 4 . Dr. Shashikant Memane 5 . Prof. Naresh Uttamrao Patil 6 . Dr. Ashok Bhagwan Divekar 7 . Mr. Vijay Subhash Survase 8 . Dr. Arjun Baban Doke 9 . Dr. Shrikant Tukaram Ghadge 10 . Ms. Maitrayee Ashok Divekar
TITLE OF INVENTION	ENVIRONMENTAL JUSTICE AND THE DISPROPORTIONATE IMPACTS OF POLLUTION ON VULNERABLE COMMUNITIES

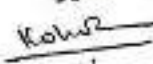
# Meeting Notice

22/8/2022

## Department of Zoology

A Meeting of staff members will be conducted on 23rd August to discuss about working of entrepreneur cell in department of Zoology. All staff members should remain present at 12:30pm sharp.

Dr.Ashwini Ghanbahadur 

Dr.Kishori. T. Dhumal 



Prof. Dr. Ashwini .G. Ghanbahadur

**Head**

**Department of Zoology,**

RNC Arts, JDB Commerce & NSC Science College,  
Nashik Road - 422101

## Minutes of the meeting

23/08/2022

A meeting of staff members was conducted on 23 August 2022 in order to discuss working of Entrepreneur cell in Zoology department. In this meeting it was decided to extend information regarding Apiculture, Sericulture, Vermiculture and Fisheries to staff, students and local people in the area.

Following members were appointed in cell:

- Dr.Mrs.A.G. Ghanbahadur *Amole*
- Dr.Mrs.K.T Dhumal *K.T.*



Dr.Mrs.A.G. Ghanbahadur  
Head

Department of Zoology,  
RNC Arts, JDB Commerce & NSC Science College,  
Nashik Road - 422101



Entrepreneurial development

Cell - Department of Zoology 2022-23

Name of Beneficiary	Matr No.	Name of Teacher	Information extended	Teacher sign	Beneficiary sign
1) Shilpa Patil	9011256074	Dr. H. G. Shanbhakar	Information about fisheries	Shilpa	Shilpa
2) Khushi Dhavale	9008449421	Dr. A. G. Shanbhakar	gave information about Apiculture	Khushi	Khushi
3) Sakshi Patil	9836923621	Dr. A. G. Shanbhakar	gave information about pisciculture	Sakshi	Sakshi
4) Arpita Patil	9856102154	Dr. A. G. Shanbhakar	gave information about pisciculture	Arpita	Arpita
5) Masami P. Chelav	9512915409	Dr. A. G. Shanbhakar	gave information about apiculture	Masami	Masami
6) Sakshi Ghemane	755943425	Dr. Kishori Dhawal	gave information about vermicomposting	Sakshi	Sakshi
7) Sanjana S. Shinde	9990347457	Dr. Kishori Dhawal	gave information about vermicomposting	Sanjana	Sanjana
8) Ashwini M. Dalavi	788570522	Dr. Kishori Dhawal	gave information about vermicompost & apiculture	Ashwini	Ashwini

**G.E. Society's**  
**RNC Arts, JDB commerce & NSC Science College, Nasik Road**

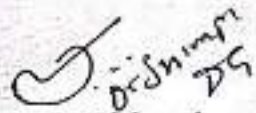
**Department of Botany**  
**Entrepreneur development cell**

01/09/2022

**Meeting notice**

A meeting of staff members will be conducted on 5<sup>th</sup> September 2022 to discuss about working of the entrepreneur cell in the department of botany. all staff members should remain present at 12.30 pm sharp.

please note.

  
**Dr. D.G. Shimpi**  
**Head, Dept. Of Botany**

G.E. Society's  
RNC Arts, JDB commerce & NSC Science College, Nasik Road

Department of Botany  
Entrepreneur development cell

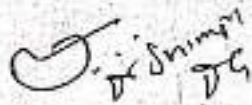
05/09/2022

Minutes of the meeting

A meeting of staff members was conducted on 5<sup>th</sup> September 2022 in order to discuss working of entrepreneur cell in the Botany Department. In this meeting it was decided to extend information regarding horticultural practices, rare plants, endangered plants conserved by tissue culture technology etc to our students as well as local people in our area.

following members were appointed in the cell-

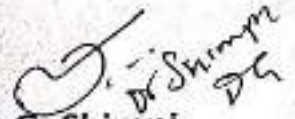
Dr. D.G. Shimpi



Dr. H.V. Bhat



Dr. D.G. Shimpi



Head, Dept. Of Botany

Academic Year 2022-23

Name of beneficiary	Information provided
Thiruv. Radha Ranjay	Identification of medicinal plants
Singh Anka	Identification of medicinal plants
Munibawon J. Sheikh	965334521
Bhatia V. Bhadran	986187272
Prasanna S. Srinivas	951222945
Tanya S. Singh	9010041954

Taufique Shaikh	9360748941	Artificial methods of plant propagation
Omkar S. Godse	9370881972	
Omkar A. Tejanpure	93556165959	
Lalhar R. Chansade	9922882452	
Singh Niko V. Jay	5294050961	

### Entrepreneur development cell.

Name of Teacher	Sign	Sign of beneficiary
Dr. Shampi D. G.		

Dr. Bhat H. V.		
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## NOTICE

Entrepreneur  
Cell MeetingDate - 11<sup>th</sup> Jan 2023

Academic Year 2022-23

The meeting of the Entrepreneur cell Committee members for academic Year 2022-23 will be conducted on 11<sup>th</sup> Jan 2023. All faculty members should remain present at 11:30 am.

- 1) Mr. P. C. Pandit
- 2) Mrs. J. J. Pexnale
- 3) Miss R. V. Reddier
- 4) Ms. S. B. Aher
- 5) Miss A. M. Bunde

T. Pandit

J. Pexnale

R. Reddier

S. Aher

A. Bunde

## Minutes of Meeting

A meeting of staff members of department of Biotechnology was conducted on 12/01/2023. All staff members were instructed to guide the students properly and also they should provide accurate information to the students to staff members of the college who approach the cell.

Following faculty members were present for the meeting:

- 1) Mr. P. C. Pandit
- 2) Mrs. J. J. Pexnale
- 3) Miss R. V. Reddier
- 4) Ms. S. B. Aher
- 5) Miss A. M. Bunde

T. Pandit

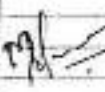
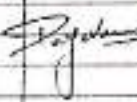
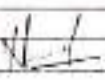
J. Pexnale

R. Reddier

S. Aher

A. Bunde

Sl. No	Information Given by	Name of the Beneficiary
①	Mrs. J. J. Pekarale	Mustaxim Shaha
②	Ms. P. C. Pandit	Dnyaneshwari Tale
③	Ms. A. M. Bardi	Diyant Keshavnha Aarti Nagra
④	Ms. R. V. Kulkarni	Mrs. Dinesh Bobade

Topic with Description	Sign
<p>S<sub>1</sub> &amp; S<sub>2</sub> Reactions            Chemical Bonding, Hybridization,            Laws of Thermodynamics, Acid base            Concept            (Student was studying regarding NET/SET            topics. An idea topic of Biochemistry and            Chemistry was taught to him during            the free time of lectures)</p>	
<p>Dnyaneshwari Tale was working on            Concepts of Plant tissue contamination.            During practicing Plant tissue culture            we generally use Pre bottle contami-            nation. Knowledge was given regarding            contamination microbes &amp; fungus &amp;            some measures to take to reduce            contamination.</p>	
<p>Knowledge regarding Microbial            biotechnology was given to students.            They were working on Microbial            disease for Microbial olympiad competition            proper knowledge was given to students            by giving PPT presentation.</p>	
<p>Mr. Dinesh Bobade Sir is working in            Physics department. He was having            some samples of which he was            requested to do microbial test.</p>	

Sr. No	Information Given By	Name of the Beneficiary
⑤	Ms. S. B. Anur	Mrs. Dinesh Babade
⑥	Ms. A. M. Barde	Maasi Shajwalkar Om Pawar Anushka Magle Kashmita Dhanwar Surbhi Anur

Topic with Description	Sign.
All the microbial test was performed successfully and the results was given sound (pictures of plates) with Sr.	
Topic - Testing samples on Biofertilizers. Same samples was given by Mrs. Dinesh Babade Sr. Ms. S. B. Anur prepared Biofertilizers and inoculated same given samples on biofertilizers. Results was obtained successfully.	
Topic - Alkaline Phosphatase Test. Students wanted to know about alkaline phosphatase test for uric acid is used to check the quality of pasteurization of milk. Practical was performed successfully to know the effect of alkaline phosphatase.	Anushka



## AGRI SEARCH (INDIA) PVT. LTD.

CORPORATE OFFICE : Gat No. 211, Pimpalnare, Tal. Dindori, Dist. Nashik- 422 004. (M.S.) INDIA.  
E-mail : agrisearchindia@gmail.com URL : www.agrisearchindia.com CIN : U73100MH2000PTC124501  
CITY OFFICE : 552, Market Yard Shopping Complex, Dindori Road, Panchavati, Nashik- 422 003. (M.S.) INDIA.  
Tel. No. : +91 253 2518541.



Date: 13/01/2023.

To,  
**The Principal,**  
RNC Arts JDB Commerce and NSC  
Science College, Nashik Road

**Subject: MOU between Agri Search (India) Pvt. Ltd and Department of Biotechnology**

**Dear Sir/Madam,**

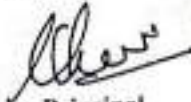
The members of Agri Search (India) Pvt. Ltd. Gat No-211, A/P -Pimpalnare, Tal-Dindori, Dist. Nashik, Pin-422004 Maharashtra, India agreed for the Memorandum of Understanding (MOU) with RNC Arts, JDB Commerce and NSC Science College, Nashik Road. Pin- 422101.

The terms and conditions are as follows:


1. In order to promote Academic and Research co-operation between the students and faculty of both the institutes. It is agreed that the areas like Academic activities, Placements, Joint collaborative research activities and Students practicals etc of co-operation should be developed.
2. It is agreed between two institutes will participate / undertake the above mentioned activities with prior information from the Head of both institutes.
3. Other common activities that could help enhance co-operation, such as joint seminars, field visits, awareness programme, exhibitions etc.
4. The data obtained jointly by research workers on mentioned area will be the property of both the institutes and due acknowledgement should be given to individuals or institutes involved. Research workers of both institutes will be allowed to present and publish research work with the permission of Institutes, which will be furnished by mutual consent.
5. The term of this agreement may be amended at any time by mutual written consent of the parties.
6. Either company or Institution may terminate this agreement by giving prior notice to other institution any time in the study period if desired. In case of termination, the academic programme of the students currently enrolled will not be affected.

Hence the memorandum of understanding is signed.

Thanking you.

  
Principal  
RNC Arts JDB Commerce and NSC  
Science College, Nashik Road



  
Director  
Agri Search (India) Pvt. Ltd  
Gat no-211, A/P-Pimpalnare,  
Tal-Dindori, Dist. Nashik,





Date: 07/01/2023

**To,**  
**The Principal,**  
RNC Arts JDB Commerce and NSC  
Science College, Nashik Road

**Subject:** MOU between Srujan Biotech and Department of Biotechnology

**Dear Sir/Madam,**

The members of Srujan Biotech A/P – Pimpalas Ramache, Nashik Aurangabad Highway Tal-Niphad, Dist. Nashik, Pin-422301, Maharashtra, India agreed for the Memorandum of Understanding (MOU) with RNC Arts JDB Commerce and NSC Science College, Nashik Road. Pin- 422101.

The terms and conditions are as follows:

1. In order to promote Academic and Research co-operation between the students and faculty of both the institutes. It is agreed that the areas like Academic activities, Joint collaborative research activities and Students practicals etc of co-operation should be developed.
2. It is agreed between two institutes will participate / undertake the above mentioned activities with prior information from the Head of both institutes.
3. Other common activities that could help enhance co-operation, such as joint seminars, field visits, awareness programme, exhibitions etc.
4. The data obtained jointly by research workers on mentioned area will be the property of both the institutes and due acknowledgement should be given to individuals or institutes involved. Research workers of both institutes will be allowed to present and publish research work with the permission of Institutes, which will be furnished by mutual consent.
5. The term of this agreement may be amended at any time by mutual written consent of the parties.
6. Either company or Institution may terminate this agreement by giving prior notice to other institution any time in the study period if desired. In case of termination, the academic programme of the students currently enrolled will not be affected.

Hence the memorandum of understanding is signed.  
Thanking you.



**Principal**

RNC Arts JDB Commerce and NSC  
Science College, Nashik Road



**Director**

Srujan Biotech  
A/P-Pimpalas Ramache,  
Nashik Aurangabad Highway  
Tal-Niphad, Dist. Nashik



**SRUJAN Biotech LLP**

**At/Post :** Pimplas (Ramache) Tajane Vasti, Tal. Niphad, Dist. Nashik 422 303.

**Contact :** 02550243888 / 9321529325 / 8669662172 / 9975721377

**Email :** info@srujanbiotech.com **Website :** <https://srujanbiotech.com>



# GOKHALE EDUCATION SOCIETY

(Founded on : 19-2-1918) Regd. No.: F359 3om.)

(ISO - 9001 - 2008 Certified)

PRIN. T. A. Kulkarni Vidyanagar, Nasik - 422 005.

Phone & Fax : Nasik 0253-2574682 (O), 0253-2342060 (R) Mumbai 022-24136132 (O)

email : • gokhaleeducation@datsonline.in • gokhale\_edu@hotmail.com

Chairman

Prin. S. B. Pandit

M. Com.

Secretary

Sir Dr. M. S. Gosavi

Ph.D. (Busi. Admi.) M. Com., B.A., L.L.B. Sahityacharya

Ref. No. GES/RO/1290-1/2022-23

Date : 30.9.2022

To,

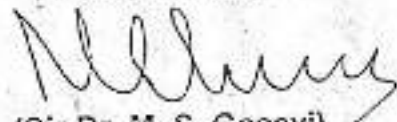
The In-charge Principal  
RNC Arts, JDB Commerce &  
NSC Science College,  
Nasik Road.

Reference : Your Letter No. 514/2022-23 dated. 15.9.2022

Madam,

With reference to your letter quoted above, permission is granted to start Certificate Courses in the department Botany, Zoology, Biotechnology and Chemistry only.

Yours faithfully,

  
(Sir Dr. M. S. Gosavi)  
Secretary & Director General

**Gokhale Education Society's**

**RNC Arts JDB Commerce NSC Science  
College  
Nashik Road**

**DEPARTMENT OF ZOOLOGY**

**CERTIFICATE COURSE IN  
VERMICOMPOST TECHNOLOGY**

**Dr. Mrs. Ashwini G. Ghanbahadur**

*(course co-ordinator)*

**RNC Arts JDB Commerce NSC Science College  
Nashik Road**

**DEPARTMENT OF ZOOLOGY**

**CERTIFICATE COURSE IN  
VERMICOMPOST TECHNOLOGY**

**Introduction:**

Vermicomposting technology is known throughout the world. It may be considered a widely spread, though not necessarily popular technology. Vermicompost is considered as a high nutrient biofertilizer. Vermicomposting is the process of conversion of organic wastes into finely degraded substances using earthworms, it is an alternative method for waste management. It plays a major role in improving growth and yield of different field crops, vegetables, flower and fruit crops. Vermicompost is a biofertilizer enriched with all beneficial soil microbes and also contains all the essential plant nutrients like N,P,K. Vermiwash is another important product obtained during vermicomposting, it is the liquid that is collected after the passage of water through a column of worm action. Vermiwash is rich in enzymes, plant growth hormones, vitamins along with micro and macronutrients which increases the resistance power of crops against various diseases and enhances the growth and productivity of crops.

**Aims&Objective:**

- Students will get proper knowledge of Vermicompost technology.
- Students will get the employment.
- They can generate employment.
- They will also turn towards organic farming.

**Focus:**

To convert unwanted, organic matter, particularly food material, vegetables, plant waste material into compost.

**Name of the course:** Certificate Course in Vermicompost technology

**Type:** Multidisciplinary

**Duration:** 30 Hours

**Enrollment-**Minimum -20 maximum -50 students

**Fee structure-**Rs 200/student

**Available infrastructure:** Well-equipped laboratory, vermiculture unit with 02 pits in garden.

**Examination:**

At the end of course the examination will be conducted and grades will be given. Pattern will MCQ and Short answers.

## **TIME-TABLE**

**WEDNESDAY-PRACTICAL TIMING-8 TO 9.30am**

**THURSDAY-THEORY -8 TO 9.15am**

**FRIDAY-THEORY-8 TO 9.15am**

**NUMBER OF STAFF TO BE APPOINTED-TEACHING 03**

1. DR.A.G GHANBAHADUR

2. DR.K.T.DHUMAL

3. C.H.B STAFF

**NON-TEACHING -01 SHRI-ARIF PATHAN**

# Syllabus

## Theory Course (15 hrs)

Sr.no.	Topic	Hours
1	Introduction to Vermicomposting	2hrs.
2	Biology of Earthworms	1 hrs
3	Methods of Vermicomposting	2 hrs
4	Material required for Vermicomposting	1 hrs
5	Bed preparation steps	2 hrs
6	Inoculation of Earthworms	1 hrs
7	Control measures for predator attack	1 hrs
8	Harvesting of Vermicompost	1 hrs
9	Post- harvest procedures	2hrs
10	Benefits of Vermicomposting and how to use it	2 hrs
	<b>Total</b>	<b>15 hrs</b>

## Syllabus Practical Course (15 hrs)

Sr. No.	Topic	Hours
1.	Study of Habit Habitat systematic position and external characters of Earthworm	2 hrs
2.	Key to the Identification of different species of earthworm	1 hr
3.	Study of life cycle and development of earthworm	2 hrs
4.	Study of vermiculture Technology	3 hrs
5.	Study of vermicomposting equipment's	1 hr
6.	Preparation of vermibed and its maintenance	3 hrs
7.	Earthworm diseases and enemies	1 hr
8.	Harvesting, Packing and storage of vermicompost	2hrs
	<b>Total</b>	<b>15Hrs</b>



## Reference books to be purchased-

1. Bhatt J.V. & S.R. Khambata (1959) "Role of Earthworms in Agriculture" Indian Council of Agricultural Research, New Delhi
2. Dash, M.C., B.K.Senapati, P.C. Mishra (1980) " Worms and Vermicomposting" Proceedings of the National Seminar on Organic Waste Utilization and Vermicomposting Dec. 5-8, 1984, (Part B), School of Life Sciences, Sambalpur University, Jyoti Vihar, Orissa.
3. Edwards, C.A. and J.R. Lofty (1977) "Biology of Earthworms" Chapman and Hall Ltd., London.
4. Lee, K.E. (1985) "Earthworms: Their ecology and Relationship with Soils and Land Use" Academic Press, Sydney



**Course Co-Ordinator**

(Prof.Dr.A.G.Ghanbahadur)



**I/c Principal**

(Prof.Dr.M.M.Kulkarni)

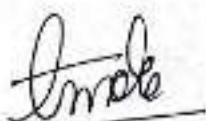
Gokhale Education Society's  
RNC Arts, JDB Commerce and NSC Science College Nashik Road

**Department of ZOOLOGY**

**Certificate Course in Vermicompost Technology**

Sr.no.	Content	Details
1	Student enrollment	Minimum 25 Maximum 50 students
2	Fees structure	200/-per student
3	Duration	30Hrs
4	Timing of lecture & practical	<b>Theory</b> -8am to 9.15am (3lect in a week) <b>Practical</b> -Saturday 8am to9.30am(2 Pract in a week)
5	Examination pattern	MCQ
6	Books to be purchased	01Vermiculture and Vermicompost by Dr.Himandri Panda
7	Staff -Teaching	Prof.Dr.A.G Ghanbahadur Dr.K.T Dhumal
8	Staff- Non teaching	Mr.Arif Pathan
9	Budget	1.Cowdung 1 small trolly.(approx.Rs. 5000/-) 2.Books-Rs 1500/ 3.Large sieve 01(Rs 1000) 4.Gunny bags20(Rs250) <b>TOTAL-Rs 7750/</b>

**Deficit make up**-If minimum students are not enrolled for this course we can sale Vermicompost and manage deficit.



Course co-ordinator  
Prof.Dr.A.G.Ghanbahadur

**Head**

**Department of Zoology,**

RNC Arts, JDB Commerce & NSC Science College,  
Nashik Road - 422101.

GOKHALE EDUCATION SOCIETYS  
RNC ARTS JDB COMMERCE AND NSC SCIENCE COLLEGE  
NASHIK ROAD

ADMISSION FORM FOR CERTIFICATE COURSE

( Vermicompost technology/Horticulture/Stevia Tissue culturing/Chemistry  
education and miracles/Chemistry behind the Life Processes)

Name of the course Vermicompost technology

Name of the student Sanket Rajendra Shilawat

E-mail Sanketshilawat99@gmail.com

Class Sy. BSc

Date of birth 31-05-2003

Nationality \_\_\_\_\_

Gender Male (Male/Female)

Residential Address Mahali Pook Arke Nagar 2  
Jai Bhawani Rd - Nashik Road.

Mother tongue Marathi

Fathers Occupation child-development officer Z.P.

Contact number 9970809969



Sanket  
Signature of student

Roll No: BSG.G.V  
 Examiners Name: Dk. A. G. Chankhade



R. N. Chandak Arts, J. D. Bytco Commerce

GOKHALE EDUCATION SOCIETY'S  
 Department of H.S.

N. S. Chandak Science College, Nasik Road

Course: Zoology (B.Sc)  
 Specialization: \_\_\_\_\_

Vocational Courses: Certificate course

Roll No.	Name of the Student	Month: <u>May 2023</u>																															TOTAL	Remarks		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31				
1	Alakhada Sagar	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	
2	Aleena Ichar	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present		
3	Ayisha Jalde	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present		
4	Jyoti Ashwin	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present		
5	Ahushi Shaikh	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present		
6	Masami Shelar	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present		
7	Saksee Mane	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present		
8	Sakshi Bhaskar	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present		
9	Sakshi Pali	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present		
10	Sakshi Wagh	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present		
11	Ganyana Ghilade	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present		
12	Ganesh Shikhar	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present		
13	Wagh Taranya	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present		
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	No. of Absent Students	0																																		
	Initials	Introduction to zoology Introduction to vertebrate zoology Biology of mammals Methods of vertebrate zoology Material required for vertebrate zoology Vertebrate preparation steps Instructions regarding examination.																																		

Head  
 Department of Zoology  
 Nasik Road College



Class: S.F.B.Sc  
 Teacher's Name: Dr. Dharmal K. S.



GOKHALE EDUCATION SOCIETY'S  
 R. N. Chandak Arts, J. D. Bytco Commerce  
 Department of H.S. **N. S. Chandak Science College, Nasik Road**  
 Vocational Courses

Class: Theory (1st Sem)  
 Semester: Vocational  
 Course: Computer Course

Roll No.	Name of the Student	Month: <u>May 2023</u>														TOTAL	Remarks
		1	2	3	4	5	6	7	8	9	10	11	12	13	14		
1	Akshada Solve	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att		
2	Arpita Palde	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att		
3	Dalvi Adarsh	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att		
4	Khandat Shachi	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att		
5	Masani Shachi	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att		
6	Sakshi Mane	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att		
7	Sakshi Pali	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att		
8	Sakshi Wagh	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att		
9	Sanyasa Shachi	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att		
10	Shirhat Shachi	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att		
11	Wagh Tanu	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att		
12	Alicha Khan	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att		
13	Sakshi Uthare	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att	Att		
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	No. of Absent Students																
	Initials																

Head,  
 Department of Zoology  
 Nasik Road College.

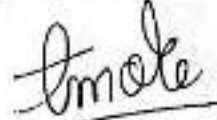
Revision of Present Study Book  
 Calculation of Attendance  
 Control notebook of Regular attend  
 Maintenance of Verminology  
 Study notebook of Production  
 Book - Verminology - Control  
 Elements of Verminology and  
 Link to Verminology



18/06/2023

## NOTICE

All the students enrolled in Certificate course on Vermicompost technology are hereby informed that their examination will be conducted on 25<sup>th</sup> June 2022 at 11.30am in department of Zoology. Those who fail to appear for examination will not be given certificate.



Dr.A.G Ghanbahadur  
(Course Co-ordinator).

**Head**  
**Department of Zoology,**  
RNC Arts, JDB Commerce & NSC Science College,  
Nashik Road - 422101



RNC Arts, JDB Commerce and NSC Science College, Nasik Road

Department of Zoology

Certificate course in Vermicomposting

Time: 1 hour

Course end exam 2022-23

Marks 35

Choose the correct answer:

1. The use of earthworms to convert organic waste into fertilizer is known as:  
a. Vermiculture   b. Composting   c. Vermicomposting   d. None of these
2. Which of the following are benefits of vermicomposting?  
a. Improve soil texture   b. Improve water holding capacity  
c. Reduce erosion   d. All of these
3. What percentage of moisture level is required for vermicomposting operations?  
a. Below 30%   b. 40-50%   c. 20-100%   d. 70-80%
4. Vermicompost is used as a bio-fertilizer because it is rich in:  
a. Calcium   b. Nitrogen   c. Phosphorus   d. All of these
5. What is the role of earthworms in vermicomposting?  
a) To break down organic matter  
b) To provide oxygen to the compost pile  
c) To prevent moisture buildup in the compost pile  
d) To regulate the temperature of the compost pile
6. What is the maximum temperature required for vermicomposting?  
a. 20C to 25C   b. 25C to 30C  
c. 35C to 40C   d. 30C to 35C
7. What is known as black gold in vermicomposting?  
a. Worm oil   c. Worm casts   b. Black worms   d. Red worms
8. Which of the following earthworm species is not recommended for vermicomposting?  
a. *Eudrilus eugeniae*  
b. *Eisenia fetida*  
c. *Perionyx excavates*

9. Which of the following are the common pests in vermiculture unit.
- Ants and Mites
  - Birds
  - Centipedes, Millipedes
  - All of these
10. Which of the following form the first layer of compost?
- Dried Leaves, twigs
  - cow dung
  - Grass clipping
  - Kitchen scrap
11. What type of bin is best for vermicomposting?
- Plastic
  - Wood
  - Metal
  - All of these.
12. Vermicompost can be stored for a period of:
- 6 months
  - One year
  - Three years
  - Five years
13. How long will it take for the worm population to double for vermiculture?
- Two months
  - Three months
  - One month
  - Three weeks
14. How long does it typically take for vermicomposting to produce compost?
- 1 week
  - 1 month
  - 6 months
  - 1 year.
15. What is the pH range that is suitable for vermicomposting?
- 1-3
  - 4-6
  - 7-9
  - 10-12
16. What is the recommended method for harvesting vermicompost?
- Removing the top layer of compost and using it for gardening
  - Emptying the entire contents of the bin and sifting through it
  - Using a mesh screen to sift the compost from the worms
  - All of the above
17. What is the recommended method for introducing earthworms to a vermicomposting bin?
- Sprinkling them on top of the bedding material
  - Mixing them into the bedding material
  - Placing them in a separate container until they acclimate to the bin
  - All of the above
18. Which of the following is a sign that the vermicomposting process is working properly?
- Foul Odors
  - Presence of flies
  - Presence of earthworms
  - Mold growth

19. Which of the following chemicals is used for protecting vermi-bed from ants?

- (a) DDT      (b) Griseofulvin      (c) Chloramphenicol      (d) Chlorpyriophosphate

20. Which of the following is a commonly used earthworm species for the vermicomposting process?

- (a) Eisenia fetida      (b) Perionix excavates      (c) Both (a) and (b)      (d) None of the above

21. Which of the following are the best worms used for composting?

- (a) Maggots  
(b) Pink worms  
(c) Red wigglers  
(d) All of the above

22. Which of the following procedures are used by the farmers to multiply the earthworms?

- (a) By adding cow dung  
(b) By adding plant materials  
(c) By mixing more amount of biodegradable wastes  
(d) All of the above

23. Combination of vermiculture and vermicomposting is called as

- a) Vermitechnology  
b) Wiggle Technology  
c) Black gold technology  
d) None of the above

24. Earthworm belongs to Phylum

- a) Annelida      b) Cnidaria      c) Porifera      d) Arthropoda

25. Which of the following worms are used for vermicomposting?

- a. Flatworm      b. Roundworm      c. Redworm      d. Pinworm

26. Which method of vermicomposting is used in our campus?

27. Which of the following is/are natural enemies of vermiculture?

- a) Ants   b) Termites   c) Birds   d) All of the above

28. Which of the following is the product of vermicomposting

- a) Castings   b) Vermiwash   c) Both A&B   d) None of the above

29. What is vermicompost also known as

- a) King of compost   b) Queen of compost  
c) Brown Gold   d) Garbage

30. Vermicompost is a/an

- a) Toxic Material  
b) Organic biofertilizer  
c) Inorganic fertilizer  
d) Synthetic fertilizer

31. Cocoon is formed from

- a) Clitellum   b) Intestine   c) Hindgut   d) Mouth

32. In earthworm \_\_\_\_\_ segments are present

- a) 100-120   b) 50-60   c) 70-80   d) 200-300

33. Faeces of earthworm are called as

- a) Castings   b) Manure   c) Compost   d) All of the above

34. Which of the following form the first layer of compost?

- a. Branches and twigs  
b. Leaves  
c. Grass clipping  
d. Kitchen scraps

35. Earthworm is \_\_\_\_\_ in habitat

- a) Terrestrial   b) Aquatic   c) Both A&B   d) None of the above



RNC ARTS JDB COMMERCE NSC SCIENCE COLLEGE NASHIKROAD

Department of Zoology

S.Y.BSC ZOOLOGY

CERIFICATE COURSE RESULT\_VERMICOMPOST TECHNOLOGY 2022-23

Sr. No	Roll No.	Name of the Student	University No	Grade
1		Akshada Keshav Salve	19904	A+
2		Khushi Shalkh	19910	O
3		Mosami Rajendra Shelar	19913	A
4		Sanket Shilawat	19914	A
5		Sakshi Gorakh Mane	19886	A+
6		Sanjana Suryakant Shinde	19916	A+
7		Sakshi Parasram Wagh	19921	A+
8		Tanaya Wagh	19922	A
9		Ashwini Manikdas Dalavi	19925	A+
10		Khan Aleena Lal	19934	A+
11		Sakshi Vasant Mhaske	19887	A
12		Arpita Palde	19893	A
13		Sakshi Pali	22258	A

Professor Dr.Ashwini .Ghanbahadur

Certificate Course Coordinator  
(VERMICOMPOST TECHNOLOGY)



G.E.Society's

RNC Arts, JDB Commerce and NSC Science College, Nasik Road



This is to certify that Mr/Ms, \_\_\_\_\_

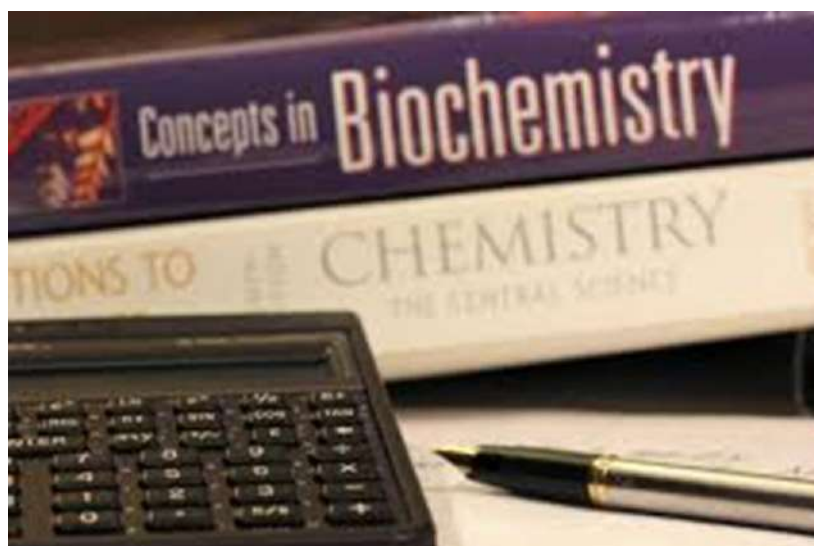
of S.Y.B.Sc has successfully completed certificate course in Vermicompost Technology organised by Department of Zoology, during academic year 2022-23.

He/She has passed the course examination with \_\_\_\_\_ grade.

Dr. Dhumal K.T  
Joint Co-ordinator

Prof.Dr. A.G. Ghanbahadur  
Course Co-ordinator  
Head of the Department

Prof. Dr. Manjusha Kulkarni  
I/c Principal



**CHEMISTRY BEHIND  
THE LIFE PROCESSES**

**GOKHALE  
EDUCATION  
SOCIETYS'  
RNC ARTS,JDB  
COMMERCE NSC  
SCIENCE COLLEGE  
NASHIKROAD,  
NASHIK**

**DEPARTMENT OF  
CHEMISTRY  
CERTIFICATE  
COURSE**





Gokhale Education Society's  
**R.N.Chandak Arts, J.D.Byteo Commerce &  
N.S.Chandak Science College, Nashik Road – 422 101**  
ISO 9001:2015 Certified  
पुणे विद्यापीठाशी संलग्न (**Identification No. : PU/NS/ASC/005(1963)**)  
Ph.Off. (0253) 2461548 Fax No.: (0253) 2469342  
Website :-www.cbccollege.in E-mail : cbcnashikroadcollege@gmail.com



## Department of Chemistry

### Certificate Course

<b>Name of the Course</b>	<b>CHEMISTRY BEHIND THE LIFE PROCESSES</b>
<b>Aim and Objectives</b>	<ol style="list-style-type: none"><li>1. Carbohydrate, Lipid and Amino acid metabolism: The student needs to know the significance of metabolism and energetics.</li><li>2. Role of ATP and types of other high energy compounds. Individual reactions of the metabolic pathways, various enzymes and coenzymes, energetic and features of the pathway.</li><li>3. Electron Transport Chain and Oxidative Phosphorylation: The student needs to know the concepts of biological oxidation.</li><li>4. Types of electron carriers and their location in mitochondria. Formation of proton gradient, Proton motive force and Oxidative Phosphorylation, formation of ATP in the oxysomes.</li><li>5. Inhibitors and Uncouplers of Mitochondrial ETC.</li><li>6. Understanding the structures of purines, pyrimidines, nucleosides and nucleotides, structural features of nucleic acid types and their role.</li><li>7. Central dogma of molecular biology. Experimental procedures that prove DNA as genetic material and its interpretations.</li></ol>
<b>Focus</b>	T.Y.BSc students have already learned the fundamentals of biomolecules and the chemistry that underlie them. This course will assist them in learning about the advances and chemistry that support life processes. This course will also serve as a bridge course for students interested in pursuing their studies in biochemistry.

<b>Other Details</b>	
<b>Contact Hours</b>	<b>30 Hours</b>
<b>No. of students can enrol</b>	<b>50</b>
<b>Fee Structure</b>	<b>10/- (It is only for the hard copy of the certificate) Students need not to pay any fee for the course</b>
<b>Duration</b>	<b>30 Contact Hrs (3 Months) January-March</b>
<b>Timing of the lecture</b>	<b>Self-paced course ( Students can watch explanatory videos as per their convenience</b>
<b>Examination Pattern</b>	<b>Marks : 50 Mode: Online Pattern : 50 MCQ</b>
<b>Staffs</b>	<b>Dr. Meenakshi Rathi Dr. Satish Chavan</b>
<b>Books (All books are available in the college library)</b>	<b>1. Lehninger's, Principles of Biochemistry, by Nelson and Cox Macmillan Publisher 4thEdn. 2. Harper's Illustrated Biochemistry, 26th Edition. 3. Biochemistry by U. Satyanarayana 4. Soft copies of self-explanatory notes will be given to the students.</b>

## Chemistry behind Life Processes

Name of the topic	Number of Lectures	Syllabus	References
<b>1. Introduction to Metabolism</b>	<b>02</b>	<ol style="list-style-type: none"> <li>1. Definition of catabolism and anabolism,</li> <li>2. Types of metabolic reactions, High energy compounds,</li> <li>3. Significance of ATP.</li> </ol>	Reference: 3 pg 247- 249 pg. 227-230
<b>2. Carbohydrate metabolism</b>	<b>06</b>	<ol style="list-style-type: none"> <li>1. Aerobic and anaerobic glycolysis</li> <li>2. Structures of intermediates, various enzymes involved</li> <li>3. Energetics of Glycolysis</li> <li>4. Fate of Pyruvate, Pyruvate dehydrogenase complex.</li> <li>5. TCA cycle- enzymatic reactions and</li> <li>6. Energetics of TCA Cycle</li> </ol>	Reference: 2 pg. 130-135 pg 136-144
<b>3. Lipid metabolism</b>	<b>05</b>	<ol style="list-style-type: none"> <li>1. Transportation of fatty acids with the help of carnitine,</li> <li>2. <math>\beta</math>-oxidation of palmitic acid in mitochondria</li> <li>3. Energetics of <math>\beta</math>-oxidation</li> <li>4. triacylglycerol synthesis,</li> <li>5. Ketogenesis.</li> </ol>	Reference:2, pg 180-189.
<b>4. Amino acid metabolism</b>	<b>04</b>	<ol style="list-style-type: none"> <li>1. Significance of transamination,</li> <li>2. Deamination,</li> <li>3. Decarboxylation reactions of amino acids.</li> <li>4. Urea cycle.</li> </ol>	Reference: 2, pg 242 - 248
<b>5. Electron Transport Chain and Oxidative Phosphorylation</b>	<b>06</b>	<ol style="list-style-type: none"> <li>1. Location of Electron carriers,</li> <li>2. Electron transport chain,</li> <li>3. Proton gradient,</li> <li>4. Oxidative phosphorylation</li> <li>5. Chemiosmotic hypothesis,</li> <li>6. Inhibitors and Uncouplers of Electron transport chain and Oxidative phosphorylation .</li> </ol>	Reference: 3, pg 230-239.
<b>6. Nucleic acids</b>	<b>07</b>	<ol style="list-style-type: none"> <li>1. Structures of Purines and Pyrimidines</li> </ol>	Reference: 3, pg 73-83.

		<ol style="list-style-type: none"> <li>2. Nucleosides, Nucleotides, Polynucleotides.</li> <li>3. Difference between DNA and RNA.</li> <li>4. Watson and Crick model of DNA.</li> <li>5. DNA as genetic material (Macleod and Mcarty, Hershey and Chase experiments).</li> <li>6. RNA and its types.</li> <li>7. Central dogma of molecular biology.</li> </ol>	
<b>Total lectures</b>	<b>30</b>		

**Course Coordinator**  
**Dr.Meenakshi Rathi**

**I/c Principal and Head of the Department**  
**Prof. Dr.Manjusha Kulkarni**

**RNC ARTS JDB COMMERCE NSC SCIENCE COLLEGE NASHIKROAD****Department of Chemistry****TYBSC CHEMISTRY****CERIFICATE COURSE NAME \_CHEMISTRY BEHIND THE LIFE PROCESS 2022-23**

<b>Sr. No</b>	<b>Roll No.</b>	<b>Name of the Student</b>	<b>University No</b>	
1	1	Adgaonkar Pallavi Amol	19952	
2	2	Aher Namrata Narendra	19953	
3	3	Tejaswini Aher Subhash	19954	
4	4	Bagul Pramila Pandharinath	19955	
5	6	Barwkar Sayali Kailas	19956	
6	7	Bhadange Sumit Dhudaku	19957	
7	10	Buwa Rushikesh Arun	19959	
8	12	Chavan Vishakha Sanjay	19960	
9	15	Gaikhe Apeksha Shivaji	19962	
10	19	Kale Shraddha Rajesh	19964	
11	21	Khare Anushka Nilesh	19965	
12	56	Kharwar Poonam Jayprakash	19966	
13	22	Kothule Sakshi Shantaram	19967	
14	24	Kudale Shreya Prakash	19968	
15	25	Kulthe Yash Vijay	19969	
16	24	Kushwaha Nikita Niranjana	19970	
17	26	Lokhande Gayatri Dnyaneshwar	19971	
18	28	Mali Pranali Dipak	19973	
19	31	Pagare Payal Arun	19976	
20	32	Pal Rohit Ambika	19977	
21	34	Pansare Mayur Chindhu	19978	
22	36	Pawar Suresh Rupsing	19981	
23	37	Ramraje Dipika Dharmraj	19982	
24	41	Sayyad Shifa Zulfikar Ali	19984	
25	42	Sayyed Razaali Ferozali	19985	
26	43	Shaikh Ayesha Shahabuddin	19986	
27	45	Shaikh Noor Mohammad Imtiyaz	19987	
28	46	Shaikh Sabeeha Kalimuddin	19988	
29	48	Shinde Sanket Bhausahab	19989	
30	49	Shintre Sakshi Ashok	19990	
31	51	Sonawane Chanda Sadhu	19992	
32	52	Vrushali Zade Rajaram	19993	
33	20	Anam Asif Khan	19996	
34	5	Bairagade Neha Manraj	19997	
35	25	Bodhare Siddhant Rajendra	19998	

**RNC ARTS JDB COMMERCE NSC SCIENCE COLLEGE NASHIKROAD**  
**Department of Chemistry**  
**CERIFICATE COURSE NAME\_ CHEMISTRY BEHIND THE LIFE PROCESS**

<b>Sr. No</b>	<b>Roll No.</b>	<b>Name of the Student</b>	<b>University No</b>	
36	25	Bodhare Siddhant Rajendra	19998	
37	11	Chaudhari Sushant Prashant	19999	
38	13	Dambale Gauri Ravindra	20000	
39	14	Dolas Mrunali Madhav	20001	
40	16	Gaikwad Sneha Dnyaneshwar	20002	
41	30	Mudaliyar Hareeni Govindraju	20003	
42	11	Palkhedkar Shravani Rajendra	20004	
43	38	Samore Akansha Dhyanashwar	20005	
44	39	Sanap Bhushan Ambadas	20006	
45	44	Sanap Vaishnavi Balu	20007	

**Dr.Meenakshi Rathi**

**Certificate Course Coordinator**  
**(CHEMISTRY BEHIND THE LIFE PROCESS )**

## Settings

# Schedule & Details

## Basic Information

The nuts and bolts of your course

Organization	Course Number	Course Run
mvrchemistryo	CC_CH_1	2023_T2

Course Summary Page (for student enrollment and access)

<https://mvrchemistryonlinelearning.edunext.io/courses/course-v1:...>

### How are these settings used?

Your course's schedule determines when students can enroll in and begin a course.

Other information from this page appears on the About page for your course. This information includes the course overview, course image, introduction video, and estimated time requirements. Students use About pages to choose new courses to take.

## Course Pacing

Set the pacing for this course

Course pacing cannot be changed once a course has started.

 **Instructor-Paced**

Instructor-paced courses progress at the pace that the course author sets. You can configure release dates for course content and due dates for assignments.

 **Self-Paced**

Self-paced courses offer suggested due dates for assignments or exams based on the learner's enrollment date and the expected course duration. These courses offer learners flexibility to modify the assignment dates as needed.

### Other Course Settings

[Grading](#)
[Course Team](#)
[Group Configurations](#)
[Advanced Settings](#)

## Course Schedule

Dates that control when your course can be viewed

**Course Start Date**

03/15/2023



First day the course begins

**Course Start Time**

(UTC)

00:00

**Course End Date**

07/31/2023



Last day your course is active

**Course End Time**

(UTC)

00:00

**Enrollment Start Date**

03/01/2023

**Enrollment Start Time**

(UTC)

00:00

First day students can enroll

**Enrollment End Date**

07/31/2023

**Enrollment End Time**

(UTC)

00:00

Last day students can enroll.

## Course Details

Provide useful information about your course

**Course Language**

English



Identify the course language here. This is used to assist users find courses that are taught in a specific language. It is also used to localize the 'From:' field in bulk emails.

## Introducing Your Course

Information for prospective students

**Course Short Description**

T.Y.BSc students have already learned the fundamentals of biomolecules and the chemistry that underlie them. This course will assist them in

Appears on the course catalog page when students roll over the course name. Limit to ~150 characters

**Course Overview**

```
1 <section class="about">
2   <h2>About This Course</h2>
3   <p>1. Carbohydrate, Lipid and Amino acid metabolism: The student
4     needs to know the significance of metabolism and energetics.
5   2. Role of ATP and types of other high energy compounds. Individual
6     reactions of the metabolic pathways, various enzymes and coenzymes,
7     energetic and features of the pathway.
8   3. Electron Transport Chain and Oxidative Phosphorylation: The student
9     needs to know the concepts of biological oxidation.
10  </p>
11  <p>4. Types of electron carriers and their location in mitochondria.
12     Formation of proton gradient, Proton motive force and Oxidative
13     hosphorylation, formation of ATP in the oxsomes.
```

Introductions, prerequisites, FAQs that are used on [your course summary page](#) (formatted in HTML)

**Course Card Image**





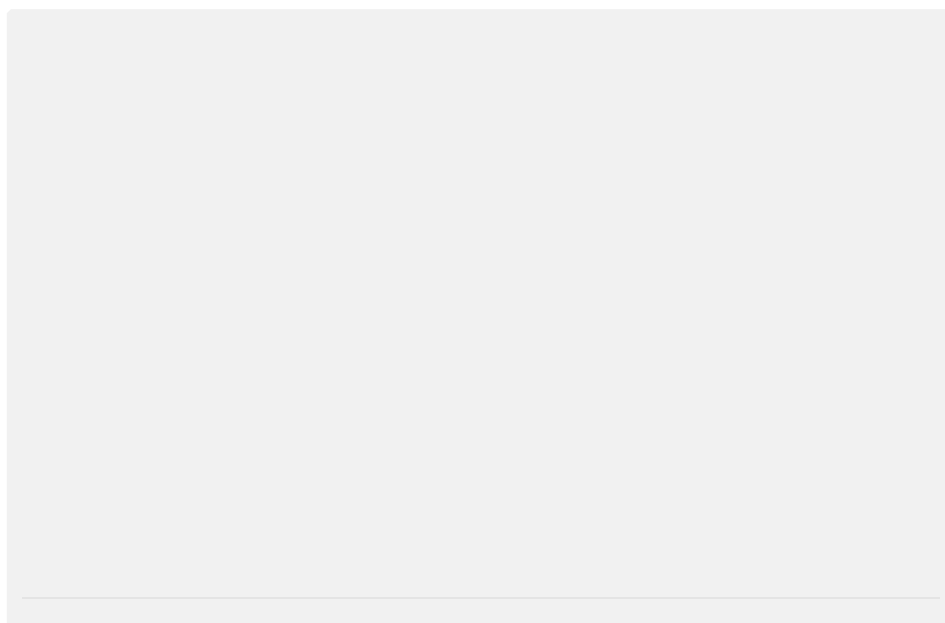
You can manage this image along with all of your other [files and uploads](#)

/asset-v1:mvrchemistryonlinelearning+CC\_CH\_1+2

Please provide a valid path and name to your course image (Note: only JPEG or PNG format supported)

Upload  
Course Card  
Image

### Course Introduction Video



your YouTube video's ID

Enter your YouTube video's ID (along with any restriction parameters)

## Requirements

Expectations of the students taking this course

### Hours of Effort per Week

HH:MM

Time spent on all course work

### Prerequisite Course

None

Course that students must complete before beginning this course

### Entrance Exam

Require students to pass an exam before beginning the course.

## Course Content License

Select the default license for course content

### License Type

All Rights Reserved

Creative Commons

[Learn more about Creative Commons](#)

### License Display

The following message will be displayed at the bottom of the courseware pages within your course:

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## Gradebook

	Test 01	Test 02	Test 03	Test 04	Test Avg	Total
<a href="#">0719</a>	100	90	90	100	95	51
<a href="#">878681529296</a>	70	100	80	60	78	43
<a href="#">aassdd</a>	100	70	90	100	90	56
<a href="#">Abdulmastaan</a>	90	0	0	0	22	2
<a href="#">Anamkhan30</a>	100	30	100	80	77	44
<a href="#">anushka18</a>	100	70	100	90	90	55
<a href="#">Apeksha_21</a>	90	80	100	100	92	59
<a href="#">Ayeshu_01</a>	40	70	70	60	60	48
<a href="#">Bhushan08</a>	80	100	100	100	95	60
<a href="#">Buwarushi</a>	90	50	50	20	52	26
<a href="#">Devyani12</a>	100	70	100	100	92	55
<a href="#">Dipu35</a>	50	100	100	50	75	53
<a href="#">Gaurid023</a>	100	80	100	100	95	48
<a href="#">jassu</a>	50	0	60	70	45	50
<a href="#">Mrunaldolas</a>	90	80	100	100	92	58
<a href="#">Musu786</a>	100	67	90	100	89	56
<a href="#">mvr1234</a>	100	0	0	0	25	3
<a href="#">Namu_21</a>	90	100	80	50	80	47
<a href="#">Neha2001</a>	80	100	100	80	90	47
<a href="#">Nikhu</a>	100	90	100	100	98	58



Copyright - 2019



## Gradebook

<input type="text" value="Search students"/>	Test 01	Test 02	Test 03	Test 04	Test Avg	Total
<a href="#">Pallu123</a>	100	70	100	100	92	53
<a href="#">Payalpagare</a>	100	90	100	80	92	49
<a href="#">poonam kharwar</a>	70	80	100	100	88	52
<a href="#">Pramila2677</a>	70	80	90	50	72	40
<a href="#">Pranali2001</a>	60	80	80	100	80	47
<a href="#">Preru</a>	60	100	80	80	80	49
<a href="#">Raza_02</a>	100	40	90	100	82	56
<a href="#">Rohitpal_1</a>	100	60	90	100	88	53
<a href="#">SabeehaShaikh-</a>	0	0	0	0	0	0
<a href="#">Sakshi2002</a>	0	0	0	0	0	0
<a href="#">Sakshishintre</a>	100	60	60	70	73	43
<a href="#">Saku123</a>	100	53	100	100	88	55
<a href="#">Sanket22</a>	100	100	100	80	95	60
<a href="#">Saurabh21</a>	60	80	100	100	85	58
<a href="#">Sau_2606</a>	100	80	80	70	82	54
<a href="#">shifa123</a>	100	100	90	100	98	56
<a href="#">Shra123</a>	60	60	80	60	65	39
<a href="#">Shreedarsh</a>	0	0	0	0	0	0
<a href="#">ShreyaD</a>	90	67	80	100	84	49
<a href="#">Siddhant_2002</a>	90	67	100	100	89	55



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## Gradebook

Search students

	Test 01	Test 02	Test 03	Test 04	Test Avg	Total
<a href="#">Sneha Gaikwad</a>	100	100	100	100	100	55
<a href="#">Somy</a>	60	80	90	80	77	54
<a href="#">Sumitbhadange5</a>	90	80	100	100	92	49
<a href="#">Suraj4</a>	0	0	0	0	0	0
<a href="#">Surya123</a>	100	70	100	100	92	51
<a href="#">Sushant</a>	100	60	100	100	90	54
<a href="#">Tejaswini12</a>	100	60	70	50	70	53
<a href="#">Vaishu-2002</a>	80	80	90	90	85	52
<a href="#">Vinayakbile</a>	70	70	60	50	62	20
<a href="#">Vishuuu</a>	40	90	90	40	65	40
<a href="#">Vrushh</a>	100	90	80	80	88	55
<a href="#">Yash6423</a>	100	70	100	100	92	58
<a href="#">Noorboxer11</a>	0	0	0	0	0	40

◀ Page 3.0 of 3 ▶

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[ChemNext](#) [Online Learning](#)



Content

# Course Outline

[+ New Section](#)
[↑ Collapse All Sections](#)
[View Live](#)

Start Date

[Mar 15, 2023 at 00:00 UTC](#)

Pacing Type

Self-Paced

Checklists

[4/9 completed](#)

Course Highlight Emails

[Enable Now](#)
[Learn more](#)

Creating your course organization

You add sections, subsections, and units directly in the outline.

Create a section, then add subsections and units. Open a unit to add course components.

Reorganizing your course

Drag sections, subsections, and units to new locations in the outline.

[Learn more about the course outline](#)

Setting release dates and grading policies

Select the Configure icon for a section or subsection to set its release date. When you configure a subsection, you can also set the grading policy and due date.

[Learn more about grading policy settings](#)

Changing the content learners see

To publish draft content, select the Publish icon for a section, subsection, or unit.

To make a section, subsection, or unit unavailable to learners, select the Configure icon for that level, then select the appropriate Hide option. Grades for hidden sections, subsections, and units are not included in grade calculations.

To hide the content of a subsection from learners after the subsection due date has passed, select the Configure icon for a subsection, then select Hide content after due date. Grades for the subsection remain included in grade calculations.

[Learn more about content visibility settings](#)

## 1. Introduction to Metabolism

[0 Section Highlights](#)

1. Definition of catabolism...

2. Types of metabolic reac...

3. Significance of ATP.

Video

Notes

[+ New Subsection](#)

## 2. Carbohydrate metabolism

[0 Section Highlights](#)

1. Aerobic and anaerobic ...

2. Structures of intermedi...

3. Energetics of Glycolysis

4. Fate of Pyruvate, Pyruv...

5. TCA cycle- enzymatic re...

6. Energetics of TCA Cycle

Videos



Notes


[+ New Subsection](#)

### 3. Lipid metabolism


[0 Section Highlights](#)

1. Transportation of fatty ...

2.  $\beta$ -oxidation of palmitic ...3. Energetics of  $\beta$ -oxidation

4. Acylglycerol synthesis,



#### 5. Ketogenesis. ▾



Videos


[+ New Subsection](#)

Saving

### 4. Amino acid metabolism


[0 Section Highlights](#)

1. Significance of transami...



2. Deamination,



3. Decarboxylation reactio...



Video


[+ New Subsection](#)

### 5. Electron Transport Chain a...


[0 Section Highlights](#)

1. Location of Electron car...



2. Electron transport chain,



3. Proton gradient,



4. Oxidative phosphorylati...



5. Chemiosmotic hypothe...



6. Inhibitors and Uncoupl...



Video


[+ New Subsection](#)

Saving

## 6. Nucleic acids


0 Section Highlights

1. Structures of Purines a...



2. Nucleosides, Nucleotide...



3. Di erence between DN...



4. Watson and Crick mode...



5. DNA as genetic material...



6. RNA and its types.



7. Central dogma of molec...



Video



Notes


[+ New Subsection](#)

## UNIT TEST


0 Section Highlights

TEST 1


 Test

Test 2


 Test

MidTerm Exam


 Midterm Exam

TEST 3

✓ Test



TEST 4

✓ Test

[+ New Subsection](#)

Saving

## ▼ FINAL EXAMINATION



0 Section Highlights

## ▼ TERM FINAL EXAMINATION



✓ Final Exam

MCQ BASED FINAL EXAMINATION

[+ New Unit](#)[+ New Subsection](#)[+ New Section](#)

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## Instructor Dashboard

[Course Info](#) [Membership](#) [Cohorts](#) [Extensions](#) [Student Admin](#) [Email](#) [Special Exams](#) [Certificates](#)

### Course Info

#### Enrollment Information

<b>Verified</b>	0
<b>Audit</b>	42
<b>Honor</b>	11
<b>Professional</b>	0
<b>Total</b>	<b>53</b>

Number of enrollees (admins, staff, and students) by track

#### Basic Course Information

- Course Name: CHEMISTRY BEHIND THE LIFE PROCESSES
- Course Run: 2023\_T2
- Course Number: CC\_CH\_1
- Organization: mvrchemistryonlinelearning
- Course Start Date: Mar 15, 2023 05:30 IST
- Course End Date: Jul 31, 2023 05:30 IST
- Has the course started? Yes
- Has the course ended? No
- Number of sections: 8
- Grade Cutoffs: C: 0.31, B: 0.5, A: 0.6

#### Pending Tasks

*No tasks currently running.*

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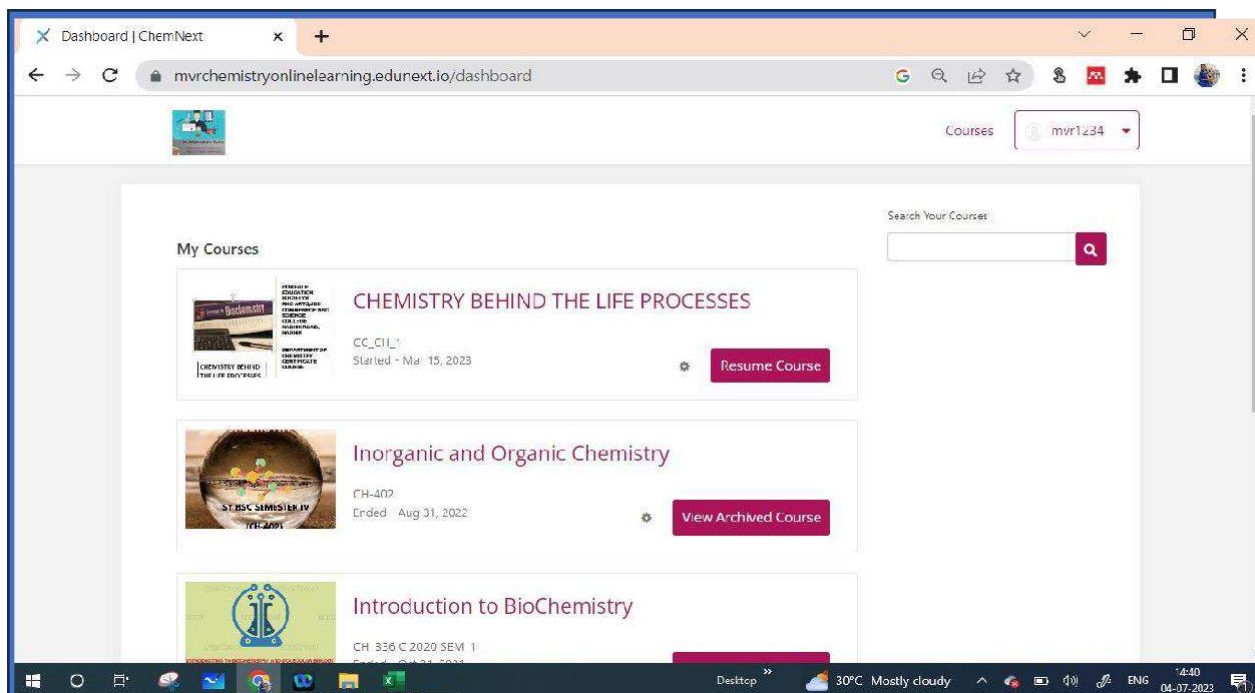
[ChemNext](#) [Online Learning](#)



**Gokhale Education Societys'**

**RNC ARTS, JDB COMMERECE NSC SCIENCE COLLEGE  
NASHIKROAD, NASHIK**

<b>Title of the certificate course</b>	<b>CHEMISTRY BEHIND THE LIFE PROCESSES</b>
<b>Department in charge of the course</b>	<b>CHEMISTRY</b>
<b>Course coordinator</b>	<b>Dr. Meenakshi Rathi</b>
<b>Target Group</b>	<b>TYBSC CHEMISTRY</b>
<b>Fees of the course in Rupees</b>	<b>50/-</b>
<b>No. of the participants</b>	<b>45</b>
<b>Total Fees Collected</b>	<b>2250/-</b>
<b>Details of the Expenses/remuneration</b>	<b>Certificate Charges = 900/-</b>
<b>Status of the certificate Course</b>	<b>Completed</b>
<b>List of the Participants</b>	<b>Attached</b>
<b>Attendance of the Participants</b>	<b>Attached</b>
<b>Geotag Photographs</b>	<b>Attached</b>



Gokhale Education Society's  
RNC ARTS, JDB COMMERCE NSC SCIENCE COLLEGE  
NASHIKROAD, NASHIK

NOTICE

All the coordinators are requested to submit the details of the certificate course in the following given format before the dt:

Title of the certificate course	CERTIFICATE COURSE IN STEVIA TISSUE CULTURING
Department in charge of the course	ASST Prof. Pranali . C. Pandit
Course coordinator	ASST Prof. Pranali . C. Pandit
Target Group	SY BSC BIOTECHNOLOGY
Fees of the course in Rupees	500/- FIVE HUNDRED RUPEES
No. of the participants	09
Total Fees Collected	4500/-
Details of the Expenses/remuneration	4500/-
Status of the certificate Course	Completed/Not completed ✓
List of the Participants	
Attendance of the Participants	
Geotag Photographs	



# GOKHALE EDUCATION SOCIETY

(Founded on: 19-2-1918) Regd. No.: F359 Bom)

(ISO - 9001 - 2008 Certified)

PRIN. T. A. Kulkarni Vidyanagar, Nasik - 422 005.

Phone & Fax : Nasik 0253-2574682 (O), 0253-2342060 (R) Mumbai 022-24136132 (O)

email : • gokhaleeducation@dataone.in • gokhale\_edu@hotmail.com

Chairman

Prin. S. B. Pandit

M. Com

Secretary

Sir Dr. M. S. Gosavi

Ph.D. (Busi. Admi.) M. Com., B.A., L.L.B. Sahityacharya

Ref. No. GFS/RO/1290-1/2022-23

Date : 30.9.2022

To,

The In-charge Principal  
RNC Arts, JDB Commerce &  
NSC Science College,  
Nasik Road.

Reference : Your Letter No. 514/2022-23 dated. 15.9.2022

Madam,

With reference to your letter quoted above, permission is granted to start Certificate Courses in the department Botany, Zoology, Biotechnology and Chemistry only.

Yours faithfully,

(Sir Dr. M. S. Gosavi)  
Secretary & Director General




GE Society's  
RNC Arts, JDB Commerce & NSC Science College, Nashik Road  
Department of Biotechnology

Certificate Course In Stevia Tissue culturing

List of Students

Sr. No	Name of Student	Signature
1	Tanishka Jadhav	Tanishka Jadhav
2	Asmita Yadav	A. Yadav
3	Suyog Mahale	Suyog M.
4	Mayur Gaikwad	M. G.
5	Sheetal Kumari	Sheetal Kumari
6	Rutuja Shirsath	Rutuja Shirsath
7	Jayant Kushwaha	Jayant
8	Anchal Kumari	Anchal Kumari
9	Snehal Bhandare	Snehal

For   
Head / coordinator  
Dep. of Biotechnology.

GE Society's  
RNC Arts, JDB Commerce & NSC Science College, Nashik Road  
Department of Biotechnology

Certificate course in Stevia Culturing

Attendance

Sr. No	Name of Student	15/5/23	16/5/23	17/5/23	18/5/23	19/5/23	20/5/23	22/5/23
1	Tanishka Jadhav	Tanishka	Tanishka	Tanishka	Tanishka	Tanishka	Tanishka	Tanishka
2	Anusita Yadav	A.Yadav	A.Yadav	A.Yadav	A.Yadav	A.Yadav	A.Yadav	A.Yadav
3	Suyog Mahale	Suyog M	Suyog M	Suyog M	Suyog M	Suyog M	Suyog M	Suyog M
4	Mayur Gaikwad	M.G	M.G	M.G	M.G	M.G	M.G	M.G
5	Sheetal Kumari	Sheetal	Sheetal	Sheetal	Sheetal	Sheetal	Sheetal	Sheetal
6	Rutuja Shirsalkar	Rutuja	Rutuja	Rutuja	Rutuja	Rutuja	Rutuja	Rutuja
7	Jayant Kushwaha	Jayant	Jayant	Jayant	Jayant	Jayant	Jayant	Jayant
8	Anchal Kumari	Anchal Kum	Anchal Kum	Anchal Kum	Anchal Kum	Anchal Kum	Anchal Kum	Anchal Kum
9	Smruti Abhandate	Smruti	Smruti	Smruti	Smruti	Smruti	Smruti	Smruti

*Smruti*

Signature of Coordinator



Gokhale Education Society's  
R.N.Chandak Arts, J.D.Bytea Commerce &  
N.S.Chandak Science College, Nashik Road - 422 101  
ISO 9001:2015 Certified  
पुणे विद्यापीठाची शाखा (Identification No. : PU/NS/ASC/905(1963))  
Ph.Off: (0253) 2461548 Fax No.: (0253) 2469342  
Website :-www.ebccollege.in E-mail : ebcnashikroadcollege@gmail.com



## Department of Biotechnology

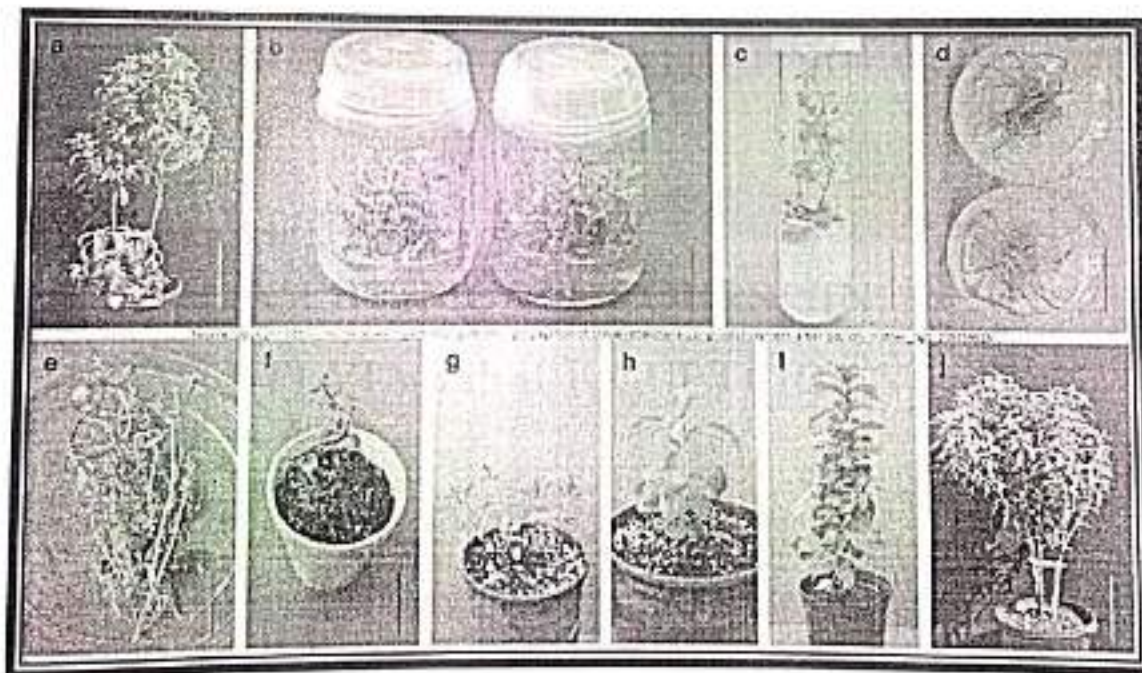
### Certificate Course

NAME OF THE COURSE	CERTIFICATE COURSE IN STEVIA TISSUE CULTURING
Aim and Objectives	<ol style="list-style-type: none"><li>1. Students will get proper knowledge of plant tissue culture.</li><li>2. Students will get the employment.</li><li>3. Students can become entrepreneur.</li><li>4. Students can turn towards technology based farming of cash crop.</li><li>5. Students can setup their own Plant tissue culture laboratory.</li><li>6. Students can generate their revenue.</li></ol>
Focus	To make the beneficiary self-reliant and setup their own plant tissue culture laboratory.
Course Number	BBiCC-1
Level	Certificate
Type	Interdisciplinary
Contact Hours	33 Hours
Available infrastructure	Well-equipped laboratory, Plant tissue culture laboratory
Examination	At the end of course the examination will be conducted and grades will be given.

Gokhale Education Society's  
RNC Arts, JDB Commerce, and NSC Science  
College, Nashik Road

DEPARTMENT OF BIOTECHNOLOGY

CERTIFICATE COURSE IN  
STEVIA TISSUE CULTURING



RNC Arts, JDB Commerce, and NSC Science College  
Nashik Road

DEPARTMENT OF BIOTECHNOLOGY

CERTIFICATE COURSE IN STEVIA TISSUE CULTURING

**Introduction:**

Stevia, a natural sweetener, comprises of 200 species of herbs and shrubs from the family *Asteraceae* (Composite). Stevia contains ent-kaurene, a diterpene glycoside commonly known as stevioside which is 150–300 times than sweeter sugar. Among different chemical constituents, stevioside has a potential mode of actions in controlling type 2 diabetes.

Plant tissue culture involves excising plant tissues and growing them on nutrient media. It is used rather broadly to include several variations, such as meristem culture for propagation of virus-free plants, protoplast culture, cell suspension culture, tissue and organ culture, and anther or pollen culture for producing haploid plants.

Plant tissue culture can play an important role in the commercial production of stevia. A large amount of disease-free stevia plants can be produced throughout the year using tissue culture technique. The plant and tissue cultures have enabled us to increase our knowledge in many areas including differentiation, cell division, cell nutrition, and cell preservation, but today, cells are cultivated in vitro in bulk or as clone from single cells to grow whole plants from isolated meristem, then induce callus, and develop complete plantlets by organogenesis or by embryogenesis.<sup>18</sup> Tissue culture is the only rapid process for the mass propagation of stevia.

Stevia can be added to tea and coffee, cooked or baked goods, processed foods and beverages, fruit juices, tobacco products, pastries, chewing gum, and sherbets. Stevia-enriched food products bring several benefits to human society.

Commercial marketing of products stevia in different form such as leaf powder, liquid and fresh leaves has become a potential adventure for many biotechnological companies because of its large demand.

## Theory Syllabus

Name of the topic	Syllabus	Number of Lectures
<b>1. Introduction and Importance of Plant tissue culture.</b>	<ol style="list-style-type: none"> <li>1. Definition of Plant tissue culture,</li> <li>2. History of plant culture,</li> <li>3. Laboratory Operations,</li> <li>4. Significance and importance of plant.</li> </ol>	02
<b>2. Biology of Stevia.</b>	<ol style="list-style-type: none"> <li>1. Introduction and classification of stevia,</li> <li>2. Life cycle of stevia,</li> <li>3. Anatomy of Stevia,</li> <li>4. Importance of stevia,</li> <li>5. Bioactive compound present in Stevia.</li> </ol>	04
<b>3. Micro propagation of Stevia.</b>	<ol style="list-style-type: none"> <li>1. Methods of Stevia culturing,</li> <li>2. Material Required for Stevia culturing,</li> <li>3. Media,</li> <li>4. Aseptic Manipulation,</li> <li>5. Preparation of Explant,</li> <li>6. Callus culturing.</li> </ol>	05
<b>4. Artificial seed</b>	<ol style="list-style-type: none"> <li>1. Callus differentiation into embryo,</li> <li>2. Encapsulation of embryo,</li> <li>3. Preservation of artificial seeds,</li> <li>4. Transportation of artificial seeds.</li> </ol>	04
<b>5. Hardening of plantlet</b>	<ol style="list-style-type: none"> <li>1. Shooting and rooting.</li> <li>2. Hardening and acclimatization of Plantlets.</li> <li>3. Polyhouse and Green house.</li> </ol>	03
<b>6. Economic and Marketing of Stevia</b>	<ol style="list-style-type: none"> <li>1. Market value of stevia,</li> <li>2. Market outlet.</li> </ol>	02
<b>Total lectures</b>		20

## Practical Syllabus

Sr. No.	Topic	Number of Lectures
1.	Study of Sampling techniques. Study of Surface sterilization of explant. Study of Media Preparation and its sterilization	03
2.	Study of Appropriate growth condition for Stevia culture. Study of Callus Culturing. Study of Sub-Culturing.	05
3.	Study of shooting and rooting using plant hormones. Study of hardening and acclimatization of Bamboo plantlets. Study of Polyhouse and Green house.	05
<b>Total lectures</b>		13
<b>Total course (Theory + Practical)</b>		33

**Gokhale Education Society's**  
**RNC Arts, JDB Commerce, and NSC Science College, Nashik Road**  
**DEPARTMENT OF BIOTECHNOLOGY**  
**CERTIFICATE COURSE IN**  
**STEVIA TISSUE CULTURING**

**Clarification about certificate course details**

Sr. No	Content	Details	Maximum	
1	Student Enrollment	Minimum 30	50	
2	Fees Structure	1500/-		
3	Duration of Course	33 hours		
4	Timing of the Lecture	10am - 1pm		
5	Examination Pattern	MCQ		
6	Books to be purchased	An Introduction to Plant Tissue Culture ; Author, Kalyan Kumar De		
7	Staff Details	Name of Staff		Number of staffs
		Theory	Practical	
		Priya R. Sonawani Surabhi B. Aher	Pranali C. Pandit Revathi V. Reddier	04
8	Budget of certificate Course	<b>Requirments</b>	<b>Quantity</b>	<b>Price</b>
		Alcohol	2lit	190
		Mercuric Chloride	10gm	540
		Ammonium Nitrate	50gm	1062
		Potassium Nitrate	50 gm	323
		Magnesium Sulphate	50gm	300
		Di Potassium Phosphate	50gm	500
		Calcium Chloride	50gm	171
		Manganese Sulphate	1kg	35
		Zinc Sulphate	1 kg	48
		Boric acid	25gm	30
		Potassium Iodide	1kg	76
		Sodium Molybdate	100gm	1120
		Copper Sulphate	100gm	26
		Cobalt Chloride	100gm	53
		Sodium EDTA	10gm	37
		Ferric Sulphate	10gm	10
		Thaimine HCL	10gm	25
		Pyriodoxine HCL	10gm	15
		Nicotinic Acid	10gm	10
Myo-inositol	10	50		
2,4-D	10gm	300		
IAA	10gm	300		
Sucrose	1kg	400		

		File	2	25
		Register	2	100
		Electricity Bill		2000
		Certificate		500
		<b>Total</b>		<b>8246/-</b>

**Deficit Makeup:** If minimum number of students is not enrolled then,

- a. Our budget is minimum against the minimum student enrolment i.e, 8246/- against 45000/-. Therefore, minimum Students should be 10 to manage the deficit against the budget.
- b. We can sale our product and the money obtained can manage the deficit incurred during course.



## Certificate Course Images



Students working in Plant tissue culture lab



## Department of Zoology Vermicompost Unit

Under Department of Zoology vermicompost unit has been setup from last 10 yrs. In order to obtain vermicompost *Eisenia foetida* species of earthworm is reared. This is the fast-growing species with high conversion ratios for organic material. Organic material for vermicompost unit is obtained from leaves from campus and cow dung is procured from outside. The compost obtained from this unit is used in botanical garden. Care of the vermicompost unit is taken by garden staff. This is one of the best practice of our department.



Vermicompost unit Department of Zoology