



S J M COLLEGE OF ARTS, SCIENCE & COMMERCE

Chandravalli, CHITRADURGA – 577501

sjmasccta@rediffmail.com www.sjmcascchitradurga.edu.in

ABOUT THE COLLEGE

Sri Jagadguru Murugharajendra College of Arts Science & Commerce (SJMC), Chitradurga was popularly known as SJM College of Arts, Science & Commerce, Chitradurga was established on 1st June 1969 managed by S.J.M. Vidyapeetha (R.) which was established in 1966. It is one of the premier colleges established to impart & provide in the field of higher education for the deserving

candidates and prove to be a milestone in the part of progress.

The college is at present affiliated with Davangere University, Davangere. Formerly affiliated with Kuvempu University, Shivamogga and it is recognized by the University Grants Commission (UGC) under section 2(f) and 12(B) on 31st March 1971 under Act. 1956. It is reaccredited by National Assessment and Accreditation Council (NAAC) with "A" Grade (CGPA Score 3.05 on a 4 Point Scale in 3rd Cycle) on 28the March, 2017.

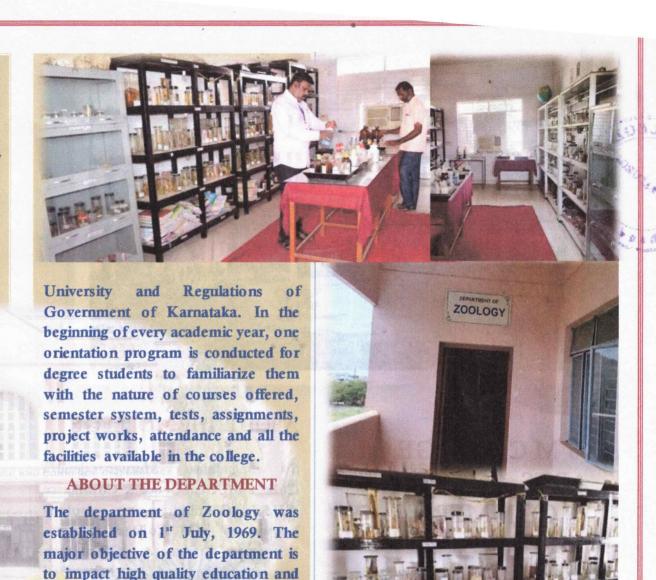
Sri Jagadguru Murugharajendra College of Arts, Science, and Commerce (S.J.M) is one of the reputed institutions which is well administered and offered good infrastructure, facilities and excellent academic activities in Chitradurga which is in the state of Karnataka and this college excels not only in academic activities but also in Extra curricular activities and in Sports too. The college strives to produce intellectually competent, morally upright and strong, compassionately

committed, spiritually inspired and nationally dedicated men and women.

At present, the college is situated in a splendid place called Chandravalli, which has a panoramic view of mountains, greeneries, caves and historically significant Chandravalli Tank on Holalkere Road in outskirts of the city. The college is built on a land of 10 acres with all necessary infrastructures. The college offers three years undergraduate courses in B.A, B.Sc, and B.Com.

The college aims at an integral and personalized education of the young providing well planned undergraduate courses like Arts. Science and Commerce streams. The College has a fine team of qualified, experienced and dedicated faculty and staff members. Value based and skill based initiatives are given priority in department. each Community Oriented Programs such as Reaching the Unreached, Service Beyond Self, creating opportunities for re-energing students.

Admissions in the institutions are according to the norms of Davangere



to encourage to the students in

persuing research. Our department

has good infrastructure and facilities

to being practical knowledge with

Global competition environment.



SRI JAGADGURU MURUGHARAJENDRA **COLLEGE OF ARTS, SCIENCE & COMMERCE** CHANDRAVALLI, CHITRADURGA-577502





Affiliated to Davangere University, Davangere Accredited with 'A' Grade Third cycle



IQAC INITIATIVE DEPARTMENT OF ZOOLOGY



CERTIFICATE COURSE IN APICULTURE

From: 02-11-2022 To 31-01-2023

2022-23





ಎಸ್.ಜಿ.ಎಂ.ವಿದ್ಯಾಪೀಠ (ರಿ.) ಚಿತ್ರದುರ್ಗ

🖀 ಕಛೇರಿ : 08194-222506

ಶ್ರೀ ಜಗದ್ಗರು ಮುರುಫರಾಜೇಂದ್ರ ಕಲಾ, ವಿಜ್ಞಾನ ಮತ್ತು ವಾಣಿಜ್ಯ ಮಹಾವಿದ್ಯಾಲಯ

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SRI JAGADGURU MURUGHARAJENDRA COLLEGE OF ARTS, SCIENCE & COMMERCE

Chandravalli, CHITRADURGA - 577 501, Post Box No. 88, Karnataka NAAC Reaccredited with 'A' Grade CGPA 3.05

ಕ್ರಮಾಂಕ: ಎಸ್.ಜೆ.ಎಂ.ಸಿ. /

/ 20 -20

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0/11/2

To,

The Principal

SJM College of Arts, Science & Commerce Chandravalli, Chitradurga

Sub: Request to grant permission to start

Certificate on Apiculture for the Academic

Year 2022-23

Respected Sir,

As per the guidelines issued by IQAC, we would like to start the Certificate course on "**Apiculture**" from the academic year 2022-23: with intake of 28 students. Please permit us to start the Certificate course and do the needful.

Thanking you,

Head of the boartment Department of zoology Chandravalli, H.L.K Road S.J.M.College Chitradurga

ಎಸ್.ಜಿ.ಎಂ.ವಿದ್ಯಾಪೀಠ (ರಿ.) ಚಿತ್ರದುರ್ಗ

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ಕ್ರಮಾಂಕ: ಎಸ್.ಜೆ.ಎಂ.ಸಿ. /

/ 20 -20

ದಿನಾಂಕ:

雷 ಕಛೇರಿ: 08194-222506

Department of Zoology
Date: 24-10-2022

To,
The IQAC Coordinator
SJM College of Arts, Science & Commerce
Chandravalli, Chitradurga

Sub: About conducting the Certificate Course: Apiculture

Respected Sir,

As per above mention subject the Department of Zoology wanted to conduct the Certificate Course on "Apiculture" in the current academic year from 02-04 1 2022 to 31-01-2023. The syllabus of Course is very helpful and applicable to all Students for all types of curricular as well as co-curricular examinations in the future.

So, please grant the permission for the same.

Thanking you,

Head of the little partment of zooless Chandravalli, H.L.K Road S.J.M.College Chitradurga

ಎಸ್.ಜೆ.ಎಂ.ವಿದ್ಯಾಪೀಠ (ರಿ.), ಚಿತ್ರದುರ್ಗ

ಹ ಕಛೇರಿ : 08194-222506

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ಕ್ರಮಾಂಕ: ಎಸ್.ಜೆ.ಎಂ.ಸಿ. /

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OFFICE ORDER

Sri.C.N.Venkatesh, Assistant Professor of Zoology has been appointed as a Coordinator for the Certificate Course on Apicultute for the academic year 2022-23.

PRINCIPAL
Sri Jagadguru Murugharajendra College/
of Arts, Science & Commerce
CHTRADURGA

Cattaduaga Sanos:

http://www.sjmcascchitradurga.edu.in

ಎಸ್.ಜಿ.ಎಂ.ವಿದ್ಯಾಪೀಠ (ರಿ.) ಚಿತ್ರದುರ್ಗ

물 ಕಛೇರ : 08194-222506

email: sjmasccta@rediffmail.com

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/ 20 -20

ದಿನಾಂಕ : ೨/1/22

NOTICE



All the students are hereby informed that, the **Certificate course on Apiculture** from the **02-11-2022**, interested students can enroll their names.

PRINCIPAL
Sri Jagadguru Murugharajendra College/
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CHITRADURGA

🖀 ಕಛೇರಿ : 08194-222506

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TO ಕ್ರಮಾಂಕ: ಎಸ್.ಜೆ.ಎಂ.ಸಿ. /

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ದಿನಾಂಕ: 93 11 22

Dr.Ramesh Iyyanahalli Associate Professor Dept. of Zoology Govt.Science College, Chitradurga.



Respsected Sir,

Sub: Regarding providing service as Chairman for B.O.S for Certificate Course on Apiculture.

Our College of the Zoology Department has planned to conduct a Certificate Course on Apiculture. In this academic year 2022-23 for B.Sc Students.

Hence I am requesting you to provide your honorable Service as a Chairman of Board of Studies for this Certificate Course.

Thanking you,

PRINCIPAL.
Sri Jagadguru Murugharajendra College of Arts, Science & Commerce CHITRADURGA

ಎಸ್.ಜೆ.ಎಂ.ವಿದ್ಯಾಪೀಠ (ರಿ.), ಚಿತ್ರದುರ್ಗ

🖀 ಕಛೇರಿ : 08194-222506

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ಕ್ರಮಾಂಕ : ಎಸ್.ಜೆ.ಎಂ.ಸಿ. / TO / 20 -20

ದಿನಾಂಕ :02 11 22

Prof.Karibasappa.C
Assistant Professor
Dept. of Zoology
HPPC.First Grade Govt. College,
Challakere.



Respsected Sir,

Sub: Regarding providing service as Member for B.O.S for Certificate Course on Apiculture.

Our College of the Zoology Department has planned to conduct a Certificate Course on Apiculture. In this academic year 2022-23 for B.Sc Students.

Hence I am requesting you to provide your honorable Service as a Member of Board of Studies for this Certificate Course.

Thanking you,

PRINCIPAL

ri Jagadguru Murugharajendra College
of Arts, Science & Commerce
CHITRADURGA

ಎಸ್.ಜೆ.ಎಂ.ವಿದ್ಯಾಪೀಠ (ರಿ.), ಚಿತ್ರದುರ್ಗ

ಹ ಕಛೇರಿ : 08194-222506

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ಕ್ರಮಾಂಕ : ಎಸ್.ಜೆ.ಎಂ.ಸಿ. / TO / 20 -20

ದಿನಾಂಕ: 03/11/22

Dr.Sathish Gowda Associate Professor Dept. of Zoology Govt.Science College, Chitradurga.



Respsected Sir,

Sub: Regarding providing service as Member and Resource Person for B.O.S for Certificate Course on Apiculture.

Our College of the Zoology Department has planned to conduct a Certificate Course on Apiculture. In this academic year 2022-23 for B.Sc Students.

Hence I am requesting you to provide your honorable Service as a Member and Resource Person of Board of Studies for this Certificate Course.

Thanking you,

PRINCIPAL.
Sri Jagadguru Murugharajendra College
of Arts, Science & Commerce
CHITERADI IRGA

ಎಸ್.ಜಿ.ಎಂ.ವಿದ್ಯಾಪೀಠ (ರಿ.) ಚಿತ್ರದುರ್ಗ

🖀 ಕಛೇರಿ : 08194-222506

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ಕ್ರಮಾಂಕ: ಎಸ್.ಜೆ.ಎಂ.ಸಿ. /

/ 20 -20

ದಿನಾಂಕ: 24/10/2

BOS MEETING

A BOS Meeting was convened on 24/10/ 2023 to discuss the rules, regulations and syllabus in connection with the **Certificate course in Apiculture** for the academic year 2022-23 in the presence of following members.

Sl No	Name	Designation	Signature
1	Dr. Ramesh Iyyanahalli Associate Professor Dept of Zoology Govt Science College, Chitradurga	Chairman	V.
2	Prof. Karibasappa C. Assistant Professor Dept of Zoology HPPC First Grade College Challakere	Member	(am) anarimen
3	Prof. C.N. Venkatesh Asst Professor, Dept of Zoology S J M College Of Arts, Science & Commerce, Chitradurga	Member & Co ordinator	200109
4	Dr. Sathis Gowda Associate Professor Dept of Zoology Govt Science College, Chitradurga	Member & Resource Person	Department of L.K Road Chandravalli, H.L.K Road Chandravalli, Chandravalli, Chandravalli, H.L.K Road Chandravalli, Chandrava

ಎಸ್.ಜಿ.ಎಂ.ವಿದ್ಯಾಪೀಠ (ರಿ.) ಚಿತ್ರದುರ್ಗ

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:: MEETING PROCEEDINGS ::

The Meeting of BOS in Zoology under the Chairmanship of Dr.Ramesh Iyyanahalli which was held on 24-10-2022 at S.J.M.College of Arts, Science & Commerce Chandravalli, Chitradurga.

The Syllabus for the Certificate Course on "API CULTURE" was unanimously approved by all the BOS Members.

Signature of BOS Members

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Department of zoology
Chandravalli, H.L.K Road
Chandravalli, Chitradurga
S.J.M.College Chitradurga

Course Code: Zoocc02

Hrs: 30

Certificate Course on APICULTURE

AIMS:

- 1. To promote the study of beekeeping for the improvement crop yield.
- 2. To establish areas of conservation throughout the Chitradurga district farmland for the conservation of honey bee.
- 3. To provide education on Bee to increase public awareness of the native honey bee.
- 4. To promote the formation of Bee Improvement groups
- 5. To act in an advisory capacity to groups and individuals who wish to promote it.
- 6. To co-operate with other Bee-Keeping organisations with similar aims and to seek the help of the scientific community and other stake holders in achieving our aims and objectives.
- 7. To control quality and promote markets of honeybee products.

OBJECTIVES:

To establish areas of conservation throughout the Chitradurga district for the conservation of the native honey bee

- 1. To use honeybee colonies to best execute the beekeeping management plan to maximize the collection of nectar to maximize honey production.
- 2. To provide pollination services for local food crops.
- 3. Explain the basic concepts of apiculture like systematics, colony organization, polymorphism, morphology and foraging.
- 4. Producing other honeybee substances, including bee pollen, propolis, and royal jelly.
- 5. To provide Knowledge of honeybee biology, Knowledge of local nectar flows, Deciding on the goals and how to best use the colonies
- 6. To build human resource in the beekeeping sector.
- 7. To justify the presence of bees to increase the agriculture productivity.

PROGRAM OF THE COURSE:

- Course will be of 30 Credits (20 theory + 10 practical). One credit is equivalent to 15 hour of teaching (Lecture/Tutorial) or 4 hours of practical work/field work per week.
- 2. Maximum number of Students per batch will be 50.
- 3. The candidate required to attend 75% lectures/periods.
- 4. The candidate must obtained 35% of the total marks in theory and practical/project work separate to pass the course.
- 5. Candidate will be offered English as a medium of instructions/examination.
- 6. The admission shall be opened to any candidate who passed 10+2 examination.
- 7. There is no age bar to participate in the course.
- 8. Certificate: Successful persons will be awarded certificates issued by National Skill Qualification Framework (NSQF) under UGC & LVH College, Panchavati, Nashik.

Syllabus

Basics of Apiculture

Total Lecture: 30

1	Introduction to Apiculture: Scope, importance, history of bee keeping	04
2	Types: Traditional bee keeping, Modern beekeeping, Urban or backyard beekeeping.	06
3	Basic Taxonomy: Honey bee species and identification. Origin, systematic and distribution of honey bees. Types of honey bees, Species of honey bees. Bee identification.	08
4	Basic concepts of morphology of Honey bees - indigenous, exotic	06
5	Social organization in honey bees: Drone, Worker and Queen, Colony life and social organization, Annual biological cycle of the bee colony.	06
6	Social behaviour and Communication.	04
7	Production of Honey by honeybee: its medicinal properties, application in various fields, other valuable by products of honey bees	08
8	Honey: its medicinal properties - application in various fields - other valuable by products of honey bees.	06
9	Nutrients and composition of honey, Acid content and flavour effects, Value added honey products. Properties of honey products	06
10		

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	Practicals
	Study of morphology and anatomy of honey bee (different body parts of honey bees and their
	modifications)
	Identification of different species and sub-species of honeybees.
	Study of development stages of life cycle of the different types of bees and time needed to complete each stage.
	To observe organization of a honey bee colony and become familiar with their duties
	To become familiar with developmental stages and life cycle of different castes of honey bees.
	Social behaviour of honey bees: To understand communication system of a honey bee colony.
	To become familiar with different equipments used in modern beekeeping for domesticating hive
	bees.
	To understand technique of mass queen rearing of honey bees which include prerequisite to
	produce good queen, basic grafting, management of cell builder colony and handling of queens produced.
	To become familiar with important bee enemies and their management.
).	To familiarize with honey bee diseases, their symptoms and management.

Reference Books

- ABC & XYZ of Bee culture A. I. Root
- Alethea Morrison (Author), Mars Vilaubi (Photographer), 2013. Homegrown Honey Boes: An Absolute Beginner's Guide to Beekeeping Your First Year, from Hiving to Honey Harvest. Store Publishing, LLC; 1 edition.
- Alison Benjamin, By (author) Brian McCallum, 2008. Keeping Bees and Making Honey. David & Charles, Newton Abbot.
- Alison Benjamin, By (author) Brian McCallum, 2008. Keeping Bees and Making Honey. David & Charles, Newton Abbot.
- Asian Bee Journal
- Bee Keeping in India G. K. Ghosh
- Beekeeping: A personal journey Dennis Brown
- Craig Hughes, 2010. Urban Beekeeping: A Guide to Keeping Bees in the City. e Good Life Press, Preston.
- David Cramp, 2009. A Practical Manual of Beekeeping: How to Keep Bees and Develop Your Full Potential as an Apiarist. Spring Hill, London.
- David Cramp, 2012. The Complete Step-by-step Book of Beekeeping: A Practical Guide to Beekeeping, from Setting up a Colony to Hive Management and Harvesting the Honey.Lorenz Books. London.
- David Cramp, 2012. The Complete Step-by-step Book of Beekeeping: A Practical Guide to Beekeeping, from Setting up a Colony to Hive Management and Harvesting the Honey. Lorenz Books. London.
- Dewey M. Caron, 2013. Honey Bee Biology and Beekeeping, Revised Edition. Wicwas Press, Kalamazoo.
- Eva Crane, 1999. The World History of Beekeeping and Honey Hunting. Routledge, India.
- Hunt, G.J., 2000. Using honey bees in pollination Purdue University.
- Indian Bee Journal All India Bee Keeping Association
- Kim Flottum, 2014. The Backyard Beekeeper: An Absolute Beginner's Guide to Keeping Bees in Your Yard and Garden. Quarry Books.
- Kim Pezza, 2013. Backyard Farming: Keeping Honey Bees: From Hive Management to Honey Harvesting and More. Hatherleigh Press, U.S.
- Kim Pezza, 2013. Backyard Farming: Keeping Honey Bees: From Hive Management to Honey Harvesting and More. Hatherleigh Press, U.S.
- Laidlaw, H.H., 1997. Contemporary queen rearing. Published by Dadant and Sons. R. A. Morse, Rearing queen honey bees. Wicwas press, NY.
- Laidlaw, H.H., 1997. Contemporary queen rearing. Published by Dadant and Sons. R. A. Morse, Rearing queen honey bees. Wicwas press, NY.
- Pradip V Jabde, 1993. Text Book of Applied Zoology: Vermiculture, Apiculture, Sericulture, Lac Culture, Agricultural Pests and their Controls. Discovery Publishing House, New Delhi.
- Prospective in Indian Apiculture R.C. Mishra
- Rearing queen bees in India M.C. Suryanarayana et. al.
- Roger A. Morse, Kim Flottum, 1998. Honey Bee Pests, Predators and Diseases. Wicwas Pr; 3rd edition.
- Technology and value addition of Honey Dr. D. M. Wakhle and K. D. Kamble.
- Ted Hooper, 2010. Guide to Bees & Honey: The World's Best Selling Guide to Beekeeping.
 Northern Bee Books, Oxford.
- Ted Hooper, 2010. Guide to Bees and Honey: The World's Best Selling Guide to Beekeeping. Northern Bee Books. Oxford.8
- The Backyard Beekeeper 3rd Edition: An Absolute Beginner's Guide to Bee Keeping Kim Flottum

S.J.M. College of Arts, Science & Commerce Chandravalli, Chitradurga

DEPARTMENT OF ZOOLOGY

Time-Table for Certificate Course in API CULTURE -2022-23



DAY	I 8-9	II 9-10	III 10.10- to11-10	IV 11.10- 12-10	V 12.10 to 1.10	VI 2-3	VII 3-4 VIII
MON		-			API CULTURE		4-5
TUE					API CULTURE	1 7	
WED							
THU						4 1	P
FRI							Practical
SAT							Practical

PRINCIPAL.
Sri Jagadguru Murugharajendra College of Arts, Science & Commerce CHITRADURGA

S.J.M. College of Arts, Science & Commerce Chandravalli, Chitradurga Naris List (Theory) API CULTURE-2022-23

Sl.No	Student Name	
1	Haseeba Naz	Haseeba
2	Huzaifa Banu	Huzorija Rand
3	K R Sandeep	Sandeel
4	Kanimesh S	
5	Kavya M J	Kauga.
6	Kavya N	Kayya N
7	Manasa G P	manara erp
8	Megha T M	Megha
9	Mohammed Mustafa	19-
10	Nandeesh kumar J M	
11	Nanditha N	Mandrthan
12	Manjunatha j	
13	Neha twaseen	Nela from
14	Obalesh B	obale 4h B
15	Pooja C S	Pooja
16	Praveen R	Peranen - R
17	Rashimitha N	Rashimitha. N
18	Raviteja L U	Ra
19	Shravani M P	Sharawani M. P.
20	Venkatesha G	Neul
21	Yashwanth N	
22	Zoya hashmi	Zelegio
23	Akash N M	Akalh m
24	Anusha G	Amyla . By
25	Darshan L	Darshian.
26	Manoj Kumar K N	Main 6
27	Navyasri R	Navya
28	Prajwal L U	Dorajeval L. L
29	Raziq M	Rozig M.
30	Sharath S	Show

ATTENDANCE

COURSE: APICULTURE

Certificate Course : Apiculture (Attendance)

		1 1 2	2.1					121	Ö		
SL No	Name of the Student	01/11	7/11/	8/11	MILL	14/11	1814	21/1	3276	28/11	29/11
1	Haseeba Naz	Haseebano	tambanay	Harubana	Haubna	Haubhar	Haulano	Haubanar	+ale banas	Haubaron	Haubaron
2	Huzaifa Banu		the Par	Mark	HARAN			HARA	Mesal C		ruba
3	K R Sandeep	Eander	Counter	sandeep	Saucher	Sourcles	Saudeen				Sandeen
4	Kanimesh S	bowers	Rainburgh	Gaired	Gaulus	Compage	1 auinal	[cantust]	Cantrud	Coursely	Carilley
5	Kavya M J	Kanya	Kaupe	Kaupa	Harrya	Kauja	Karega	Kowya	taya	Bauga	Herepe.
6	Kavya N	Karya	Karya	Kavya	bang	Konp	Karya	Karya	Konya	Konya	Karya
7	Manasa G P	riegha	Megha	regha	Megha	Megha	Megha	nigha	Megha	Megha	riegha
8	Megha T M	managa	momara	manara	Manajo	momoro	manana	manaja	monaja	manaso	mounase
9	Mohammed Mustafa	Mustafa.	Mustafa	Mustafa	mustager	Mustage	Mustafor	Mustafo	Mustafa	mustafa	mustafa
10	Nandeesh kumar J M	A	At	1	AS	4	A	*	A	A T	A
11	Nanditha N	remolit	Mond	Noul	Mornel	Mornel	Monda	Messel	Monda	nombre	nomb
12	Manjunatha j	Marter	manta	marja	marja	manju	Monta	manta	marja	nation	nonger
13	Neha twaseen	Nefatwaren	Nohatwa	wNohatwaw	Seha twacer	Whatwace	Shotware	Vehatwaren	Nehatroacer	nerotware	Netativeer
14	Obalesh B	obaleyh	obaleyh	0	doalersh	obaleyh					
15	Pooja C S	1003a	1900°a	1003a	poosa	possa	podía	poosa	Poosa	pasa	
16	Praveen R	Pera veen.R	Perausen. R	•		Perawen R			PuauemR		
17	Rashimitha N						Rayhmitha N	_			Lauhmithan.
18	Raviteja L U	Ravites	Ravite	Ravited	Ravital	Ravilge	Ravity	Ravitaco	Raviteja	Ravitejos	Raviter
19	Shravani M P	Sheevan?	Shaqian?	show ni	Showan	Shewwari	Showsi	Shoullon?	s heravani	Sheavon	showan?

SL No	Name of the Student	11/10	7/11	8/11	9/11	11/11	13/11	21/11	89 111	28/11	29/11
20	Venkatesha G	venkatuhe	ventures	vinkeded	venkedet	ventates	vinkade	venkodell	Vinkatus	venkaded	venkodes
21	Yashwanth N	Youn	South	Joeh (Xoeh	Noch	XOLA	YOUH (Youn	Joeh	roch.
22	Zoya hashmi	J.B	Zoro	700	2.00	200	2.8	200	28	200.	28
23	Akash N M	Alcour	Acous		Acous	Dicar	Skau		Skour	Share	- Accur
24	Anusha G	Asse	And	Amu	Ann	Answ	ann	Amu	AND	Anu	Amu
25	Darshan L	Dariban	Dharshan	Dharston	Dharshan	pharthen	o pheirsher	, phurshan	Dhurshan	s phursha	s Dh withan
26	Manoj Kumar K N	Manog	Manoj	Monog	Manos	Manoj	Monoj	M0000	Money	gono;	Monoy
27	Navyasri R	haus 9	nouxa	havya	MANNA	hava	havya	navya	navya	navya	havy4
28	Prajwal L U	Brajwal	Braj Wal	Prajwal	Prajwal	Prajud	Brajwal	Perajwal	Prajud	Prajud	Brajun
29	Raziq M	Kaziq	Kaziq	Raziq	Paziq	Paziq	Raziq	Raziq	Paziq	Raziq	Raziq
30	Sharath S	gers.	Sue	Sel	500	3.0	2.0	80	22	Said	Sas



Certificate Course : Apiculture (Attendance)

				22							
SL No	Name of the Student	08/12	06 121	12/12	13/12	16/12	19/12	dolor	21/12	26/12	-27/12
1	Haseeba Naz	HaubaNaz	House broz	Hampro	Haubo Noz	Harebanas	Halebarra	Hauderon	Haubary	Haubarag	Hawbarz
2	Huzaifa Banu	Huzayo	Huzentes	Huzar	Ausonfor	Husenja	Huzart	Huzalfe	Aurail &	Husenfer	Huzoul
3	K R Sandeep	Soudeer	Sander	Saudler	Earoley	V.			sander		
4	Kanimesh S	Janhanha	General S	1 gardens	1 Gandusk	Contract	La Caulit	Janhued	Vauhud	Cambrid	1 Dawn
5	Kavya M J	Kauya	Kanya	Kanya	Kanya	Kanya	Karya	Kauya	Kauga	touga	Kaya.
6	Kavya N	Kovya	Karya	Karya	Karya	Kovya	Karya	Kovya	Korya	Kovy	Kanya
7	Manasa G P	Monare	momala	managor	manaya	manasa	momasa	manasa	Momara	manada	manara
8	Megha T M	naghourn	Negha	hugha	Megha	Negha	Megha	Megha	pregha	Megha	Megha
9	Mohammed Mustafa	Mustada	Mustafa	Mustafa	Mustafa	Michoda	mustafo	mustata	reustage	Newtofa	Rughofa
10	Nandeesh kumar J M		A	A	A	A	P	A	A	ACT	At .
11	Nanditha N	Monde	Mondo	Mondy	Monda	planda	Mornelo	Monda	Maruh	plane	Monda
12	Manjunatha j	martin	manja	mantu	manta	planga	nanju	manja	Manja	Manju	navo
13	Neha twaseen		Whatwaur	Niha troaus	Nehotwaw	Nehotwan	Mhatroau	wheha twan	Nehaturu	Ne hotwaen	Nehatwaen
14	Obalesh B	dealersh	obaleyh		obalcyh	obalech				obaleys	shalach
15	Pooja C S	Pooga	1903a	poosa	podáa	Poosa	Poosa	pooja	1903a	poosa	100 3g
16	Praveen R	Prawen R	Prancen, R			Prayen R		Proven R	Penuson.R	Brown R	Perauen.R
17	Rashimitha N			And the second s							
18	Raviteja L U	B	Ravites	Ravite	Ravited	Ravital	Ravitas	Raviter	Ravitas	Ravita	Ray Yes
19	Shravani M P	Shewwari	Sharavani	Show ari	Showoni	Showoni	Showwan	Sheevenon	showani	shower	Sheeren:

-	_	1 12	V		/	7			1		**************************************
SL No	Name of the Student	08/12/	08/10	15/15	13/11	18/15	19/11	20/12	21/12	26/11	2HC2
20	Venkatesha G	venkatulo	Venkertishe	venkulerh	venketella	ventatesha	venkedele	Venkoleka	venkatish	verkodeska	venkadety
21	Yashwanth N	Josh	XOSH	Feel	Koch	Xoch	Joeh	Joan	Voeh	roeh	(xooh)
22	Zoya hashmi	20cms	Zae	Zue	200g	Deug)	Zer	208	2,48_	Dol	29
23	Akash N M	Aleur	Stouh		Aleur	Akeu			Aleur	Akan	Mener
24	Anusha G	Anto	Ason	Anio	Answ	Answ	Anu	Answ	And	Ann	Anu
25	Darshan L	Darthan	Dharshan	Dharshan	Dharthan	Dharthen	Dharthus	bharghas	Dhwrtham	Dharihan	, pharshar
26	Manoj Kumar K N	Monos		Manos -		Manoj	Maros	010007	Monoj	Mong	Moroj
27	Navyasri R	Navya	Navya	Navka	Navya	Navya	newya	Navya	Warya	Navya	Laura
28	Prajwal L U	Prajwal	Powiwal	Prajwal	Buajwal	Prajwal	Peraj Wal	Prajwal	Brajwal	Brajud	Brajwal
29	Raziq M	Raziq	Kaziq	Raziq	Raziq	Raziq	Raziq	Raziq	Rozia.	Raziq	Raziq
30	Sharath S	3,00	Sey	849	glip	900	-18	Ser	eas	399	Seo



Certificate Course : Apiculture (Attendance)

		10110	2 112	1 100				1 1		[5]	
SL No	Name of the Student	02/1/2	03 112	9/1/23	101	161	1711	181	23/6	Ry11	30 1
1	Haseeba Naz	Haseeba	Hazeeba	Haseeba	Hoseeba	Haseeba	Hazeeba	Haseeba	Dan	Hazeebo	Horsela
2	Huzaifa Banu	Hurrendo	Huran	Hurite	Hurail	Herealfe	Jurale	Auschla	Husaile	Huzer	Huzery
3	K R Sandeep	Sander	Sander	Soudee	Sandeg	Sanden	V	U	Eandler		
4	Kanimesh S	Kaurusky	P. Haning	p. Gamely	a Candudle	Cominto	Canhuelp	Cambreyle	s. Januar	Cauchus	Granduck
5	Kavya M J	Kawya	Kavya	Kanya	Kanya.	Kawya	Kanya	Raya	Kavya	Kaugsi	Kaya.
6	Kavya N	Kayya	Karya	Kavya	Kavya	Karya	Karya	Karya	Kavya	Kovya	Kanya
7	Manasa G P	regha	rugha	Megha	Megha	Megha	Megha	riegha	Megha	riegha	Negha
8	Megha T M	momena	momara	manara	manaia	nomaia	manara	momara	mamara	monasa	momasa
9	Mohammed Mustafa	Mustaja	Mutafa	Mustafa	Mustata	raustata	mustafa	mustala	Mustafa	Mustafa	mutala
10	Nandeesh kumar J M	M	6	6	be	کے	2	6	6	6	-
11	Nanditha N	plande	rearrola	Mornels	Mondy	Morneld	Monder	Monda	pronde	Merrolp	Monday
12	Manjunatha j	Marie	manga	manga	manju	manja	mangu	Manju	manger	manju	mange
13	Neha twaseen	Nelatro	Nehato	Nehat	neher (F)	Nelan	Nelow	Mehato	relo. (2)	melato	Nelow
14	Obalesh B	obalesh	obalesh	obalech	obaleigh	obalesh	obakyh	obaleuph	obalech	obaleub	doclerch
15	Pooja C S	Poosa		Pooja	Poosa		Poora	poosa	poosa	Pooja	Poopla
16	Praveen R	Brown. R	_						Perausin R	3	
17	Rashimitha N			_							Pauli mitha N
18	Raviteja L U	Ravites	Ravitor	Ravites	Ravitero	Raviteja	Ravited	Ravites	Ravitajo	Ravitar	Ravitat
19	Shravani M P	Sheeovani	showoni	Shawani	Shouavoin	Shower	Shacevan	Shawani	Show and	Showoni	s ho ewon

		1-)								
SL No	Name of the Student	0/1/2	03/1	911	101	1611	17/1	18/1	23/1	2011	36(
20	Venkatesha G	venkatella	ventates	vintatesh	Vinkatesh	y vinkately	venkodesk	ventatuh	vinkately	Centakely	Vinkatuste
21	Yashwanth N	Year	toen.	Forh	Doch	Your	Your	Vaeh	Jach	Voih	York
22	Zoya hashmi	Zas	2.8	2.\$	2.8	28	22	29.	22	28	20
23	Akash N M	Akaus	Akan	Skan	. J Kau	Skew		Akau	Decun	Main	
24	Anusha G	Avon	Anio	Anu	Arto	Anu	Anu	Asaw	And	And	Ann
25	Darshan L	Darthan	Darshan	Durchas	Dharthan	Oharthens	Dhursham	Dharshan	. Dharthan	Ohurshan	. Dharthan
26	Manoj Kumar K N	Monoj	Manoj	Manos	Manog	Manoj	Mon8	monog	Monoj	Monoj	Mang
27	Navyasri R	Navya	Navya	Navya	hanka	nauxa	Navya	Marya	Mawa	NOW	Nauxa
28	Prajwal L U	15 oju de	Projude	Prajwall	Prajudu	prijalo	POGNALO	Projudlo	prijude	priades	129'4000
29	Raziq M	Raziq	Raziq		Raziq	Raziq	,	Raziq		Zaziq	Kaziq
30	Sharath S	500	300	Sul	Solic	80	200	Shop	She	30	-38



S J M VIDYAPEETHA *, Chitradurga

S.J.M. COLLEGE OF ARTS, SCIENCE AND COMMERCE

Chandravalli, CHITRADURGA-577501. Post Box No.88, Karnataka

ON APICULTURE



Final Examination 2022-23 **QUESTION PAPER - THEORY**

Time: 1 Hrs

Max Marks: 25

- Give detailed account of species and races of Honey bees.
- 2 Explain social organization of Honey bee.
- 3 Explain properties and uses of Honey
- 4 Write a note on Honey bee diseases
- 5 Explain scope .importance and history of Bee keeping

S.J.M. College of Arts, Science & Commerce Chandravalli, Chitradurga Marks List (Theory)

API CULTURE-2022-23

CLN	API CULTURE-	-2022-23
Sl.No	Student Name	©
1	Haseeba Naz	21
2	Huzaifa Banu	2 3
3	K R Sandeep	22
4	Kanimesh S	20
5	Kavya M J	20
6	Kavya N	21
7	Manasa G P	23
8	Megha T M	22
9	Mohammed Mustafa	23
10	Nandeesh kumar J M	84
11	Nanditha N	22
12	Manjunatha j	23
13	Neha twaseen	24
14	Obalesh B	25
15	Pooja C S	23
16	Praveen R	21
17	Rashimitha N	22
18	Raviteja L U	20
19	Shravani M P	21
20	Venkatesha G	23
21	Yashwanth N	22
22	Zoya hashmi	& 2
23	Akash N M	21
24	Anusha G	23
25	Darshan L	87
26	Manoj Kumar K N	2)
27	Navyasri R	22
28	Prajwal L U	22
29	Raziq M	21
30	Sharath S	22

Head of the Department Department of zoology Chandravalli, H.L.K Road S.J.M.College Chitradurga

S.J.M. College of Arts, Science & Commerce Chandravalli, Chitradurga Marks List (Practical) API CULTURE-2022-23

Sl.No	Student Name	
1	Haseeba Naz	9
2	Huzaifa Banu	18
3	K R Sandeep	18
4	Kanimesh S	20
5	Kavya M J	91.
6	Kavya N	2
7	Manasa G P	22
8	Megha T M	23
9	Mohammed Mustafa	22
10	Nandeesh kumar J M	21
11	Nanditha N	20
12	Manjunatha j	21
13	Neha twaseen	22
14	Obalesh B	22
15	Pooja C S	23
16	Praveen R	21
17	Rashimitha N	22
18	Raviteja L U	23
19	Shravani M P	24
20	Venkatesha G	21
21	Yashwanth N	92
22	Zoya hashmi	22
23	Akash N M	21
24	Anusha G	20
25	Darshan L	21
26	Manoj Kumar K N	22
27	Navyasri R	23
28	Prajwal L U	21
29	Raziq M	22
30	Sharath S	20

Head of the Department
Department of zoology
Chandravalli, H.L. & Post





COURSE OUTCOME

S.J.M. College of Arts, Science & Commerce Department of Zoology had conducted a Certificate Course on "API CULTURE". in this course the students.

- * The learner understands the basics about beekeeping tools, Equipment, and managing beehives.
- To understand the basic life cycle of the honeybees, beekeeping tools and equipments.
- To learner for managing beehives for honey production and pollination.
- The course is useful for providing self employment to learner.
- The bee keeping is useful in pollination of the flora.
- Learner will understand the marketing of various bee products.





SJM Vidyapeetha (R), Chitradurga

SJM COLLEGE OF ARTS, SCIENCE & COMMERCE

Chandravalli, Chitradurga - 577501 Accredited with 'A' Grade Third Cycle (CGPA-3.05)





DEPARTMENT OF ZOOLOGY

CERTIFICATE

pordinator

Head in the Department

Principal