

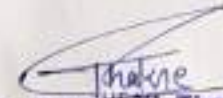
DEPARTMENT OF MICROBIOLOGY
LIST OF M.Sc. PROJECT STUDENTS
SESSION 2022-2023

1	AANCHAL MADHORA SHIVANKAR
2	AISHWARYA RAVINDRA KUTHE
3	ANKITA RAMDAS DANGE
4	GUNESHWARI PRAKASH KAPGATE
5	HRUTUJA RAJENDRA CHAVHAN
6	KAJAL GANGARAM DHAWALE
7	LINA BUDHRAM BAWANKAR
8	MAYURI MADHORA GHANADE
9	MONALI TULARAM NAKTODE
10	NANDINI ANANT GOHANE
11	NEHA GIRIDHAR FULBANDHE
12	PALLAVI LALCHAND ROKADE
13	POOJA TIKESHWAR BHUJADE
14	PRITI LALCHAND MESHRAM
15	PRIYANKA ASHOK RAUT
16	RAJNANDINI PRASHANT BHURE
17	RUPESH PRABHAKAR DONODE
18	RUTUJA RAJENDRA MARWADE
19	SAKSHI GOVINDRAO KHADSE
20	SANDHYA YASHWANT DANI
21	SHIVANI SHALIKRAM KAMBLE
22	SUKANYA SEWAK HUME
23	TEJSWINI PANJABRAO KSHIRSAGAR
24	VRUNDA VASANTA THER
25	YAMINI PRABHAKAR ZODE
26	YUKTA DEORAO FAYE



प्राचार्य

यशवंतराव चव्हाण महाविद्यालय
लाखांदुर जि. भंडारा



Dr. Rakesh U. Thakare
Assistant Professor & HOD
Dept. of Microbiology
Y. C. College, Lakhandur,
Dist. Bhandara.

DEPARTMENT OF GEOLOGY
LIST OF M.Sc. PROJECT STUDENTS
SESSION 2022-2023

1	WAZUL SAMSHUL KHAN
2	VYANKAT HIWARAJ KAPGATE
3	ROSHAN SHEKAR BHOYAR
4	MONALI RAMU THOTE
5	PALLAVI VINAYAK ITWALE
6	PRANAY GAUTAM RAUT
7	SHIVKUMAR REVANKUMAR GHATURKAR
8	LOKMAN PRABHAKAR DIWATHE
9	MANALI MADHUKAR SONWANE
10	PRIYANKA PRADIP DESHPANDE
11	KARISHMA RUPCHAND MESHARAM
12	SHARIF SHANTDIL BORKAR
13	MAYURI NARENDRA DHAKADE
14	AMIR SHANTANU SUKHADEWE
15	RAKESH MANIK NAKADE
16	ROSHAN SUDHAKAR BURDE
17	YOGESH AMBADAS KASAR
18	ZAKIYA SHIREEN MUHAMAD NOORUDDIN
19	SWATI DHARMA GADEKAR
20	PRAGATI AJAYSINGH PAWAR
21	CHETANA AJAYSINGH PAWAR
22	MAHESHWARI NITARAM BHALAVI
23	SHIVAM SUDHAKAR MANDHARE
24	SUPRIYA YASHWANT SHAMKUWAR
25	ASHIKA SUBHASH MADNE



प्राचार्य
यशवंतराव चव्हाण महाविद्यालय
लाखांदुर जि. भंडारा



HEAD

Dr. Snehal G. Juare
H.O.D.
Dept. of Geology
Yashwantrao Chawhan Coll.
Laxandur, Dist. Bhandara

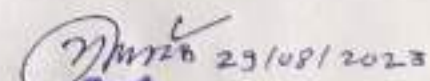
DEPARTMENT OF CHEMISTRY
LIST OF M.Sc. PROJECT STUDENTS
SESSION 2022-2023

1	SAKSHI VINAYAK NAWKHARE
2	TUSHAR RUSHIKESH PATANWAR
3	ASHISH VISHWANATH MASKE
4	MANISHA SHIVSHANKAR BHAGAT
5	AKASH RASTRAPAL RODGE
6	RAHUL MULCHAND KEWAT
7	AACHAL RAMESH HARINKHEDE
8	PRIYA BHARAT BAHEKAR
9	ROHIT VIJAY FASATE
10	BHAVESH SANJAY RAHANGADALE
11	RUPALI SURYABHAN RAHANGADALE
12	PRATIKSHA SADANAND KAPGATE
13	DIPALI MOHAN MEHENDALE
14	DIKSHA RAJESH DHOKE
15	PANKAJ VISHWANATH ZODE
16	POOJA DEOCHAND WALDE
17	PRANALI RAMESH LICHADE
18	NILIMA LEKHRAM KORE
19	BHARTI SANTOSH CHUTE
20	KAJAL ASHOK HUMANE
21	TWINKAL YADORAO KORE
22	MEGHA SUBHASH HATWAR
23	RAVIKUMAR CHUDAMAN KAPGATE
24	NIKITA RAHISKUMAR NINAWA
25	PRITI TULSHIDAS CHAKOLE



प्राचार्य

यशवंतराव चव्हाण महाविद्यालय
लाखांदुर जि. भंडारा


29/08/2023
Head
Department Of Chemistry
Y.C. College, Lakhandur
Dist- Bhondars-441803

DEPARTMENT OF GEOGRAPHY
LIST OF M.Sc. PROJECT STUDENTS
SESSION 2022-2023

1	AKSHAY JAYDEO WAKEKAR
2	AKSHAY NAGORAO CHICHMALKAR
3	AMAR PRADIP UKEY
4	BHAGYASHRI SANTOSH AMBADE
5	DAMODHAR TULARAM ZOLE
6	DIPAK MOHAN SURSAUT
7	GAURI PARSHURAM LENGURE
8	GUNWANTA RAMESH KAMBLE
9	HARSHA MOHAN BHAGADKAR
10	HARSHAD SHRAWAN NANHE
11	HEMANT RAMESH KOHALE
12	KOYAL DHANRAJ YERNE
13	MANISHA RAJKUMAR SAYAM
14	MAYUR SOPAN SANGODE
15	MEENAKSHI KISAN TARONE
16	MURTI RAJU WADGURE
17	NALINA KHUSHAL VAIDHYA
18	PAYAL KESHAV DHAKATE
19	PAYAL TEKRAM CHIWARTKAR
20	PRAFULLA DAMODHAR KAMBALI
21	PRAMANAND DEORAO SHAHARE
22	PRATIK SHANKARRAO TANNILWAR
23	PRATIKSHA MANOHAR KAMBLE
24	PRIYANKA PRAMOD BHOWATE
25	PUJA TULARAM SUKHADEVE
26	RAMCHANDRA ARJUN WAGHDHARE
27	SANJANA RAVIKANTSINGH CHANDEL
28	SANJAY DASARATH RAUT
29	SHISHIR BHOURAO DHALE
30	SHUBHAM BHOJARAJ THAKARE
31	SHUBHANGI DADARAM KARTALE
32	SHUBHANGI SUNIL SAMRIT
33	SUPRIYA VITTHAL SHELARE
34	VAISHALI KAILAS RAMTEKE
35	YOGITA HARIDAS RAUT


प्राकाश
यशवंतराव चव्हाण महाविद्यालय
लाखांदुर जि. भंडारा


प्रकाश विद्यालय प्रमुख
एच.महा.लाखांदुर, जि. भंडारा

DEPARTMENT OF BOTANY
LIST OF M.Sc. PROJECT STUDENTS
SESSION 2022-2023

1	AISHWARYA DIPAK SHIVANKAR
2	AKANKSHA DHANANJAY FULE
3	BHAGYASHRI JAGESHWAR RAUT
4	BHUPESH TUKARAM DAKHANE
5	DEEPA RAMU DESHMUKH
6	DIMPALTAI CHARANDAS FUNDE
7	JANHAVI RAJIV KAMDI
8	MADHAVI MAHENDRA RAKHADE
9	MANISHA DHANRAJ LANJEWAR
10	NANDINI MILIND DONODE
11	NIKITA PRABHU NAKADE
12	PAVAN NARESH BUDGEWAR
13	PORNIMA BHOJRAM SELOKAR
14	PRACHI BHOJRAJ HUKARE
15	PRATIKSHA JAGESHWAR KHOBRAGADE
16	PRATIKSHA PRADEEP BADWAIK
17	PRIYANKA PRAKASH MOHURLE
18	PRIYANKA MADHORA CHACHANE
19	PRIYANKA RAJESHWAR NAKHATE
20	PUJA PRAKASH AGASHE
21	SHUBHANGI HARIDAS BHOYAR
22	SNEHA REWAJI FATE
23	SWEETI VISHWAJIT SANGOLE
24	VAISHALI SANJAY MENDHE
25	VIDYA PARASRAM BAHEKAR



प्रचार्य
यशवंतराव चव्हाण महाविद्यालय
लाखंदुर जि. भंडारा

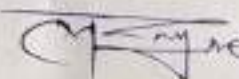


HEAD OF DEPARTMENT
Head
Department of Botany
Y.C. College Lakhandur
Dist Bhandara

DEPARTMENT OF ZOOLOGY
LIST OF M.Sc. PROJECT STUDENTS
SESSION 2022-2023

1	AKSHATA DAKRAM UKEY
2	APEKSHA RAJKUMAR BAWANKAR
3	ASHIT RAVINDRA GADPAYLE
4	HARSHA DINESH WADHAI
5	KAJAL DAYARAM NAWAKHARE
6	KAJAL PRALHAD SUKHADEVE
7	MADHAVI ARVIND ZODE
8	MAYURI RAJKUMAR BAWANKAR
9	MRUDUL NARENDRA MESHRAM
10	NIKITA TULASHIDAS DARWADE
11	OMPRAKASH ARVIND SAHARE
12	PALLAVI DAYARAM THAKARE
13	PAYAL VINOD THAKARE
14	PRASHANT BABUJI BANKAR
15	RASHMI JANARDHAN CHAUDHARI
16	SAKSHI NAYANKUMAR BADOLE
17	SATYAM NARESH MESHRAM
18	SAYALI UDDHAV ROKADE
19	SIRUTI PRAKASH KHANDAIT
20	SNEHA DADAJI YERNE
21	SNEHA SOMESHWAR BHAGADKAR
22	SUPRIYA JAYKRISHNA BANGARE
23	SWATI CHANDRAPRAKASH MESHRAM
24	SWATI MANGALMURTI UPRIKAR
25	SWEETY GANESH DHOTE
26	SWITI RASHTRAPAL LONARE
27	VICKY GANESH KONDAMWAR


प्रचार्य
यशवंतराव चव्हाण महाविद्यालय
लाखांदुर जि. भंडारा


HEAD
Dept. of Zoology
Y. C. College, Lakhandur
Dist. Bhandara (M.S.)

DEPARTMENT OF PHYSICS
LIST OF M.Sc. PROJECT STUDENTS
SESSION 2022-2023

ASHA MANOHAR GUDEWAR
BHAGYASHRI GANGADHAR RAGHORTE
BHAVANA RAJU SHENDE
DIMPAL BAKARAM BANDEBUCHÉ
DIPALI JAGDISH MESHRAM
DIPTY REOCHAND KATRE
KAJAL HIRAMAN BORKAR
LAKKI BHASKAR THIKARE
NIKITA GOVINDRAO BARDE
NIKITA HEMRAJ SHAHARE
POOJA HEMANT THAKARE
RUSHIKESH BHARAT BHONDE
SAMIR SURESH MESHRAM
SANJANA HIRALAL BAWANKAR
SHITAL RAVINDRA DANI
SHITAL TEJRAM DESHMUKH
SHIVANI ANIL PILARE
SUMIT DADI PATLE
UNMESH DINKAR RAUT
UTKARSHA BHUSHAN SARWE
YASHASHRI SHRIDHAR BORKAR


प्रचार्य
यशवंतराव चव्हाण महाविद्यालय
लाखांदुर जि. भंडारा


Head
Dept. of Physics
Y. C. College, Lakhandur
Dist. Bhandara (M.S.)

राष्ट्रसंत तुकडोजी महाराज नागपूर विद्यापीठ, नागपूर
श्री. किसानराव खोब्रागडे शिक्षण संस्था, आरमोरी, जि. गडचिरोली



यशवंतराव चव्हाण कला, वाणिज्य व विज्ञान
महाविद्यालय लाखांदूर, जि. भंडारा

पदव्युत्तर भूगोल विभाग, उच्च शिक्षण व संशोधन केंद्र

सन २०२२-२३

-: प्रमाणपत्र :-

राष्ट्रसंत तुकडोजी महाराज नागपूर विद्यापीठांतर्गत येणाऱ्या एम.ए.
द्वितीय वर्ष, चतुर्थ सेम, भूगोल विषयांतर्गत सन २०२२-२३ या शैक्षणिक सत्राकरिता
सादर करण्यात आलेला "क्षेत्रीय सर्वेक्षण वृत्तांत" एम.ए. अंतिम वर्षाच्या विद्यार्थी-
विद्यार्थिनींनी पूर्ण केला.

हा वृत्तांत स्वतः त्यांनी लिहिलेला असून एम.ए. (द्वितीय वर्ष) चतुर्थ
सेम, भूगोल पदव्युत्तर परीक्षेला सादर करण्यात आलेला आहे.


मार्गदर्शक

प्रा. डॉ. जी. एल. धोटे

यशवंतराव चव्हाण कला, वाणिज्य व
विज्ञान महाविद्यालय, लाखांदूर


अंतर्गत परीक्षक



मार्गदर्शक व भूगोल विभाग प्रमुख

प्रा. डॉ. के. वाय. ठाकरे

यशवंतराव चव्हाण कला, वाणिज्य व
विज्ञान महाविद्यालय, लाखांदूर


बहिःशाल परीक्षक

P. G. DEPARTMENT OF BOTANY
YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE
COLLEGE LAKHANDUR
AFFILIATED TO
RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR
2022-23



Certificate



I hereby certify that the project entitled "DIVERSITY OF DESMIDS IN MASAL LAKE, LAKHANDUR TAHSIL, BHANDARA DISTRICT (M.S.) INDIA", submitted for the award of the Degree of MASTER OF SCIENCE in the faculty of Science & Technology (Botany), of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur embodies the results of bonafide research work, carried out by AISHWARYA DIPAK SHIVANKAR, under my guidance and supervision.

Place: Lakhandur

Date : 28/06/2023

Mr. D. N. LANJEWAR

Supervisor

Forwarded by:

Mr. D. N. LANJEWAR
Head
Department of Botany

Dr. J. V. Dadve
Principal
Y.C.College Lakhandur

28/06/23



CERTIFICATE

This is to certify that the dissertation entitled "Isolation of Chickpea nodule Microsymbiont and screening for the potential plant growth promoting traits nearby Y. C. College Lakhandur, Bhandara, Maharashtra" submitted to Post Graduate Teaching Department of Microbiology, Yashwantrao Chawhan Arts, Commerce & Science College Lakhandur, Dist- Bhandara, for the Partial Fulfillment of the Degree of Master of Science in Microbiology embodies the result of the bonafide work carried out by Miss. Sandhya Yashwant Dani under my Guidance and Supervision in the Post Graduate Teaching Department of Microbiology, Yashwantrao Chawhan Arts, Commerce & Science College Lakhandur, Dist- Bhandara, Maharashtra, India, Pin-441803.

This work was done under the Guidance and Supervision of Dr. Rakesh U. Thakare. This work is now ready for Examination.

Date: 20-06-2023

Place: Lakhandur

[Handwritten signature]
GADKAR

[Handwritten signature]
Dr. Rakesh U. Thakare,
Assistant Professor & Head

Dr. Rakesh U. Thakare
Assistant Professor & Head
Dept. of Microbiology
Y. C. College, Lakhandur,
Dist. Bhandara.

[Handwritten signature]

Principal
Dr. J. V. Dadve

Principal
Y. C. College, Lakhandur
Dist. Bhandara



Shri. Kisanrao Kharbargade Education Society, Amori, Dist.-Gadchiroli
(Reg. No. E-1499/Gad/02)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur
Dist.-Bhandara (M.S.) Pin- 441803**

Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.



E-mail: yccel_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

CERTIFICATE

This is to certify that the dissertation entitled "Limnological study of some ponds surrounding Lakhandur area dist. Bhandara M.S. India" is carried out by **Ms. Nisha Purame** under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date:
Place: Lakhandur

Dr. M. R. Thengare
Supervisor
Assistant Professor & Head
Department of Zoology.

Dr. J. V. Dadve
Principal
Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur Dist.-Bhandara



६.३ उपायचीजना :-

१. गावात उद्योगांच्या विकासासाठी प्रयत्न व्हायला हवेत.
२. रस्त्यांच्या व वाहतुकीच्या साधनांचा पुरेसा विकास व्हायला हवा.
३. शिण्यांच्या शुध्द पाण्याची सोय करायला हवी.
४. जीवनसवस्त्रक वस्तूच्या पुरवठ्याची सोय उपलब्ध करव्यासाठी प्रयत्न झाले पाहिजेत.
५. अनेक कुटूंबांकडे पन्हे घर नाही. त्यांना पन्हे घर उपलब्ध व्हायला हवे.
६. प्राथमिक शिक्षणाच्या पलीकडे उत्तम शिक्षणाची सुविधा उपलब्ध व्हायला हवी.
७. गावात वाचनालयाची व्यवस्था हवी.
८. शेतीला उद्योगाचे स्वरूप प्राप्त होण्यासाठी प्रयत्न व्हायला हवे.
९. गावातील शेतकऱ्यांकडे सिंचनाच्या सुविधांचा पुरेसा विकास होण्यासाठी प्रयत्न झाले पाहिजे.
१०. शेतकऱ्यांना आधुनिक कृषि साधनांवर भर दिला पाहिजे.
११. गावातील शेतीचे दर हेक्टरी उत्पादन वाढविण्यावर भर दिले पाहिजे.

६.४ सारांश :-

आयली गावाचे एकूण क्षेत्रफळ १.२७ हे. असून गावाची एकूण लोकसंख्या १२१४ व्यक्ती आहे. त्यामध्ये पुरुष ६२७ असून स्त्रियांचे ५८७ आहे. गावामध्ये रस्त्यावर दिवावतीची सोय केली आहे. गावात १ ते ४ वर्गापर्यंत प्राथमिक शाळा आहे. गावात एकूण ५ रस्ते आहेत. रस्ते हे पक्क्या स्वरूपाचे आहेत. गावात शिण्यांच्या पाण्याची उत्तम सोय करवळ करवळ १०० टक्के आहे. घरामध्ये विद्युत पुरवठा झालेला आहे.

सद्य अध्ययनाद्वारे आयली गावातील शेतकऱ्यांच्या शेतीविषयक दृष्टीकोण आणि त्यांचा सामाजिक व आर्थिक विकासाच्या स्थितीचे अवलोकन हे या अध्ययनाचे अभ्यास विषय आहे.

सद्य अध्ययनासाठी पुढील उद्देश मांडण्यात आले आहेत.

१. आयली गावाची भौगोलिक व सामाजिक पार्श्वभूमीचे अवलोकन करणे.
२. सामाजिक व आर्थिक विकास तपासून पाहणे.
३. गावाच्या सामाजिक व आर्थिक समस्या जाणून घेणे.

(...४५...)

४. त्याचबरोबर त्या गावातील शेतीची वैशिष्ट्ये काय आहेत त्याचे विश्लेषण करणे.
५. शेतीतील समस्यांची चर्चा करणे.
६. त्या समस्यांवर उपाययोजना सुचविणे.

इ. उद्देश ठेवून आथली या गावाचे अध्ययन करण्यात आले आहे.

हा भाग जवळ जवळ सपाट स्वरूपाचा असून या भागाची साधारण उंची २५० ते ३०० मीटर पर्यंत आहे. या तालुक्यात जमीनीचा उतार इशान्येकडून नैऋत्येकडे आहे. जिल्ह्यातील मुख्य नदी वैनगंगा असून ती लाखांदूर तालुक्याच्या दक्षिण सिमेवरून वाहते. त्यामुळे त्या वैनगंगेस जाऊन मिळणाऱ्या चुलबंद नदीच्या उपशाच्या व चुलबंद नदी तालुक्यात आपला प्रभाव टाकते. वैनगंगा व चुलबंद नदीच्या किणारी भागात सधन काळी मृदा आढळते. ही मृदा तांदुळ, गहू, ऊस, हरभरा, ज्वारी, तुर मुंग, मसुर, उडीद, वाटाणा इ. पिकविण्यासाठी उपयोगी आहे. लाखांदूर तालुक्याच्या कृषीवर हवामान या घटकांचा परिणामाचा विचार करता हवामानाच्या विविध अंगांपैकी पर्जन्य हा घटक महत्त्वाचा आहे. हा भाग उष्णकटीबंधीय असल्यामुळे तापमान हे कृषिकरीता वर्षभर आवश्यक असते. परंतु पडून्य हे मोसमी स्वरूपाचे आहे. जून ते सप्टेंबर या काळात जवळजवळ ७० टक्के पाऊस पडतो. त्यामुळे या काळात येथे तांदळाची जास्त पाण्याची शेती केली जाते. या गावातील एकुण जमीनीच्या ८२.०० टक्के जमीन पिकाखाली आहे.

लाखांदूर तालुक्यातील आथली गावात एकुण लोकसंख्या १२१४ व्यक्ती असून त्यात पुरुषाचे प्रमाण ६२७ व स्त्रियांचे प्रमाण ५८७ असे आहे. त्यामध्ये जवळ जवळ ४० टक्के लोकसंख्या कार्यकारी म्हणजे रोजगाराभीमुख्य आहे. गावाचे एकुण क्षेत्र ३२७.७९ हेक्टर आहे. आथली गावातील सर्वेक्षणानुसार १२१४ लोकसंख्येपैकी ६२७ पुरुष व ५८७ स्त्रीया आहेत जे की पुरुषांपेक्षा जास्त आहेत. गावात महार, माळी, दीवार, लोहार व कुणबी या जातीचे लोक राहतात. यामध्ये सर्वात जास्त लोकसंख्या कुणबी लोकसंख्या आहे. गावाची एकुण साक्षरता १५ टक्के असून ५ टक्के लोकसंख्या निरक्षर आहे. गावात एकुण पुरुष साक्षरता ७५ टक्के आहे तर स्त्री साक्षरता ६६ टक्के आहे. आथली गावात एकुण ५५ कुटूंब शेती व्यवसायात गुंतलेले आहेत. परंतु सर्वेक्षणावरून स्पष्ट होते. या गावात जवळ जवळ ५८ टक्के लोकसंख्या शेती करतांना आढळते. आथली गावात ९४ कुटूंबांच्या निरीक्षणात ५५ टक्के म्हणजे ५९ टक्के कुटूंबाचे वार्षिक उत्पन्न १५ हजार पेक्षा कमी आहे. गावात अनेक कुटूंबाकडे सोपासेट, मोबाईल फोन, आलमारी, फ्रिज, गॅस शोगडी, टि.व्ही. डी.टी.एच सारख्या वस्तू आढळतात.

(..४६..)

आथली गावात १८ कुटूंबसंख्या आहे. या कुटूंबातील गावातील शेतीवर ५५ लोक काम करतात. आथली गावामध्ये एकूण कुटूंबामध्ये ८१.४१ टक्के कुटूंबाकडे स्वतःची शेती आहे. त्यामुळे ते स्वतःची शेती करतात. ज्या कुटूंबाकडे शेती आहे. त्या कुटूंबांना शेती करण्यासाठी स्वतः जवळचा पैसा खर्च करावा लागतो. आथली गावातील शेतकरी अनेक संस्थाकडून कर्ज घेत असल्याचे आढळते. आथली गावातील शेतकरी आपल्या शेतामध्ये अनेक रासायनिक खतांचा वापर करतात. आथली गावातील अनेक शेतकरी मागच्या १५ वर्षांपासून किटकनाशकांचा वापर करतांनी आढळतात. ५७ शेतकरी ५ वर्षांपासून ५२ शेतकरी १० वर्षांपासून तर २० कृषक मागच्या १५ वर्षांपासून किटकनाशकांचा वापर करित आहेत. आवडी गावामध्ये प्राचीन काळापासून अजुन बरेच शेतकरी पारंपारीक कृषि अवजारांचा वापर करित असल्याचे आढळते. एकूण कृषी अवजारांमध्ये लोखंडी व लाकडी नागरांची संख्या अनुक्रमे २५ व २५ आहे. कृषिपिकांना ने आण करण्यासाठी वाहतुक साधनासाठी बैलगाडीचा वापर होत असल्याचे आढळते. आथली गावातील शेतकरी पारंपारीक कृषि अवजारां व्यतिरिक्त आधुनिक कृषी अवजारांचा सुध्दा वापर करतांना आढळतात. आथली गावात ३ वर्षापेक्षा कमी पशुंची संख्या १३३ आहे. तर ३ वर्षापेक्षा जास्त वर्षांच्या पशुंची संख्या ८३ आहे.

आथली गावामध्ये एकूण सिंचित क्षेत्रात धान, कापूस, गहु, हरभरा, सोयाबीन, मीरची, उडीद, मुंग, तेलबिया, भाजीपाला इ. पिकांचा समावेश होतो. आथली गावात सर्वात जास्त जलसिंचन विहिरी व स्वोताद्वारे केले जाते. त्या क्षेत्राचे शेकडा प्रमाण ३४.५५ टक्के आहे. आथली गावात सर्वात जास्त क्षेत्र धान पिकाचे आहे. त्यामुळे सर्वात जास्त सुधारीत ची बियाणे धान पिकाचे आहे. एकूण सुधारीत बीयानांच्या तुलनेत एकट्या धान्याचा शेकडा प्रमाण ६६ टक्के आहे. त्यानंतर १४ टक्के क्षेत्र गहु पिकाचे आहे. गावातील एका शेतकऱ्याकडे धान थ्रेसर असून १० शेतकऱ्यांकडे कडधान्य थ्रेसर आहे. एकूण पिकांच्या उत्पादनात सर्वात जास्त उत्पादन तांदुळ पिकाचे आहे. त्याचे शेकडा प्रमाण ७० टक्केच्या वर आहे. तर इतर सर्व पिकांचे उत्पादन जवळ जवळ ३० टक्के आहे.

P. G. DEPARTMENT OF BOTANY

YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE

COLLEGE LAKHANDUR

AFFILIATED TO

RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR

2022-23



Certificate



I hereby certify that the project entitled "DIVERSITY OF DESMIDS IN MASAL LAKE, LAKHANDUR TAHSIL, BHANDARA DISTRICT (M.S.) INDIA", submitted for the award of the Degree of **MASTER OF SCIENCE** in the faculty of Science & Technology (Botany), of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur embodies the results of bonafide research work, carried out by **AISHWARYA DIPAK SHIVANKAR**, under my guidance and supervision.

Place: Lakhandur

Date : 28/06/2023

Mr. D. N. LANJEWAR

Supervisor

Forwarded by:

Mr. D. N. LANJEWAR

Head

Department of Botany

Dr. J. V. Dadve

Principal

Y.C.College Lakhandur

28/06/23

DEPARTMENT OF BOTANY

YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE

COLLEGE LAKHANDUR

AFFILIATED TO

RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR

2022-23



Certificate



*I hereby certify that the project entitled "STUDIES ON TIMBER YIELDING PLANTS IN LAKHANDUR AREA WITH SPECIAL REFERENCE TO MEDICINAL STUDY", submitted for the award of the Degree of **MASTER OF SCIENCE** in the faculty of Science & Technology (Botany), of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur embodies the results of bonafide research work, carried out by **AKANKSHA DHANANJAY FULE**, under my guidance and supervision.*

Place: Lakhandur

Date : 28/06/23

Dr. N. S. Kamble

Supervisor

Forwarded by:

Mr. D. N. LANJEWAR

Head

Department of Botany

Dr. J. V. Dadve

Principal



P. G. DEPARTMENT OF BOTANY
YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE
COLLEGE LAKHANDUR
AFFILIATED TO
RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR
2022-23



Certificate



I hereby certify that the project entitled "STUDIES ON WEED DIVERSITY IN RICE FIELD OF SOUNDAD TA. SADAK ARJUNI", submitted for the award of the Degree of MASTER OF SCIENCE in the faculty of Science & Technology (Botany), of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur embodies the results of bonafide research work, carried out by BHAGYASHRI JAGESHWAR RAUT, under my guidance and supervision.

Place: Lakhander

Date: 23/06/23

Dr. N. S. Kamble

Supervisor

Forwarded by:



Mr. D. N. LANJEWAR
Head
Department of Botany

28/06/23

Dr. J.V. Dadv
Principal
Y.C. College Lakhander

P. G. DEPARTMENT OF BOTANY

YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE

COLLEGE LAKHANDUR

AFFILIATED TO

RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR

2022-23



Certificate



I hereby certify that the project entitled "DIVERSITY OF FOREST TREES IN LAKHANDUR TASHIL", submitted for the award of the Degree of MASTER OF SCIENCE in the faculty of Science & Technology (Botany), of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur embodies the results of bonafide research work, carried out by BHUPESH TUKARAM DAKHANE, under my guidance and supervision.

Place: Lakhandur

Date : 28/06/23

Mr. D. N. LANJEWAR

Supervisor

Forwarded by:

Mr. D. N. LANJEWAR
Head
Department of Botany



Dr. J. V. Dadve
Principal
Y.C.College Lakhandur

P. G. DEPARTMENT OF BOTANY

YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE

COLLEGE LAKHANDUR

AFFILIATED TO

RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR

2022-23



Certificate



I hereby certify that the project entitled "ROLE OF CHAPRAD PAHADI DURGA MATA TEMPLE IN CONSERVATION OF TREES", submitted for the award of the Degree of MASTER OF SCIENCE in the faculty of Science & Technology (Botany), of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur embodies the results of bonafide research work, carried out by DEEPA RAMU DESHMUKH, under my guidance and supervision.

Place: Lakhandur

Date : 28/06/2023

Mr. D. N. LANJEWAR

Supervisor

Forwarded by:

Mr. D. N. LANJEWAR
Head
Department of Botany



Dr. J. V. Dadve
Principal
Y.C.College Lakhandur

P. G. DEPARTMENT OF BOTANY

YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE

COLLEGE LAKHANDUR

AFFILIATED TO

RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR

2022-23



Certificate



I hereby certify that the project entitled "DIVERSITY OF ALGAE IN KHARASHI POND, LAKHANI TAHSIL, BHANDARA DISTRICT (M.S.) INDIA", submitted for the award of the Degree of MASTER OF SCIENCE in the faculty of Science & Technology (Botany), of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur embodies the results of bonafide research work, carried out by DIMPALTAI C. FUNDE, under my guidance and supervision.


Place: Lakhandur


Date : 28/06/23


Dr. N.S. KAMBALE

Supervisor

Forwarded by:


Mr. D. N. LANJEWAR
Head
Department of Botany


Dr. J. V. Dadve
Principal
Y.C.College Lakhandur


28/06/23



P. G. DEPARTMENT OF BOTANY

**YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE
COLLEGE LAKHANDUR**

**AFFILIATED TO
RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR
2022-23**



Certificate



*I hereby certify that the project entitled
"STUDIES ON ETHNOBOTANICALLY IMPORTANT PLANTS USED
IN HAIR CARE", submitted for the award of the Degree of MASTER OF
SCIENCE in the faculty of Science & Technology (Botany), of Rashtrasant
Tukadoji Maharaj Nagpur University, Nagpur embodies the results of
bonafide research work, carried out by JANHAVI RAJIV KAMDI, under
my guidance and supervision.*

Place: Lakhandur

Date : 28/06/2023

Mr. D. N. LANJEWAR

Supervisor

Forwarded by:

**Mr. D. N. LANJEWAR
Head
Department of Botany**



**Dr. J. V. Dadve
Principal
Y.C.College Lakhandur**

28/06/23

P. G. DEPARTMENT OF BOTANY

YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE
COLLEGE LAKHANDUR

AFFILIATED TO
RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR

2022-23



Certificate



I hereby certify that the project entitled
"DIVERSITY OF ALGAE IN AGRICULTURAL LAND OF DHOLSAR
VILLAGE, LAKHANDUR TAHSIL", submitted for the award of the
Degree of MASTER OF SCIENCE in the faculty of Science & Technology
(Botany), of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur
embodies the results of bonafide research work, carried out by
MADHAVI MAHENDRA RAKHADE, under my guidance and supervision.

Place: Lakhander

Date : 28/06/2023

Mr. D. N. LANJEWAR

Supervisor

Forwarded by:

Mr. D. N. LANJEWAR
Head
Department of Botany

Dr. J. V. Dadve
Principal
Y.C.College Lakhander

28/06/23

P. G. DEPARTMENT OF BOTANY

**YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE
COLLEGE LAKHANDUR**

**AFFILIATED TO
RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR
2022-23**



Certificate



I hereby certify that the project entitled "ANALYSIS OF DISEASES IN RICE", submitted for the award of the Degree of MASTER OF SCIENCE in the faculty of Science & Technology (Botany), of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur embodies the results of bonafide research work, carried out by MANISHA D. LANJEWAR, under my guidance and supervision.

Place: Lakhandur

Date : 28/06/2023

Dr. N.S. KABLE

GUIDE

Forwarded by:

Mr. D. N. LANJEWAR
Head
Department of Botany

Dr. J.V. Dadve
Principal
Y.C. College Lakhandur

28/06/23

P. G. DEPARTMENT OF BOTANY

YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE

COLLEGE LAKHANDUR

AFFILIATED TO

RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR

2022-23



Certificate



I hereby certify that the project entitled "DIVERSITY OF PLANTS IN SIREGAON FOREST, ARJUNI MORGAN TAHSIL, GONDIA DISTRICT (M.S.) INDIA", submitted for the award of the Degree of MASTER OF SCIENCE in the faculty of Science & Technology (Botany), of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur embodies the results of bonafide research work, carried out by NANDINI MILIND DONODE, under my guidance and supervision.

Place: Lakhandur

Date : 28/06/2023

Dr. N.S. KAMBLE

Supervisor

Forwarded by:



Mr. D. N. LANJEWAR
Head
Department of Botany

Dr. J. V. Dadve
Principal
Y.C.College Lakhandur

28/06/23

P. G. DEPARTMENT OF BOTANY

YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE

COLLEGE LAKHANDUR

AFFILIATED TO

RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR

2022-23



Certificate



I hereby certify that the project entitled "INVESTIGATION ON SACRED PLANTS IN SAKOLI TAHSIL WITH RESPECT TO SACRED AND MARKETING VALUE", submitted for the award of the Degree of MASTER OF SCIENCE in the faculty of Science & Technology (Botany), of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur embodies the results of bonafide research work, carried out by NIKITA PRABHU NAKADE, under my guidance and supervision.

Place: Lakhndur

Date : 28/06/2023

Dr. N.S. KAMBLE

Supervisor

Forwarded by:



Mr. D. N. LANJEWAR
Head
Department of Botany

Dr. J. V. Dadve
Principal
Y.C.College Lakhndur

28/06/23

P. G. DEPARTMENT OF BOTANY

YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE

COLLEGE LAKHANDUR

AFFILIATED TO

RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR

2022-23



Certificate



I hereby certify that the project entitled **"INVESTIGATION ON NATURAL DYE YELDING PLANTS IN ARJUNI MORGAON TAHSIL OF GONDIA DISTRICT"**, submitted for the award of the Degree of **MASTER OF SCIENCE** in the faculty of Science & Technology (Botany), of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur embodies the results of bonafide research work, carried out by **PAVAN NARESH BUDGEWAR**, under my guidance and supervision.

Place: Lakhandur

Date : 28/06/2023

Mr. D. N. LANJEWAR

Supervisor

Forwarded by:

Mr. D. N. LANJEWAR
Head
Department of Botany



Dr. J. V. Dadve
Principal

Y.C.College Lakhandur

28/06/23

P. G. DEPARTMENT OF BOTANY

**YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE
COLLEGE LAKHANDUR**

**AFFILIATED TO
RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR
2022-23**



Certificate



*I hereby certify that the project entitled
"DIVERSITY AND DENSITY OF FOREST TREES IN GOTHANGAON
RANGE OF ARJUNI MORGAON TAHSIL", submitted for the award of
the Degree of MASTER OF SCIENCE in the faculty of Science &
Technology (Botany), of Rashtrasant Tukadoji Maharaj Nagpur
University, Nagpur embodies the results of bonafide research work, carried
out by PORNIMA BHOJRAM SELOKAR, under my guidance and
supervision.*

Place: Lakhandur

Date : 26/06/23

Mr. D. N. LANJEWAR

Supervisor

Forwarded by:



Mr. D. N. LANJEWAR
Head
Department of Botany

Dr. J. V. Dadve
Principal
Y.C.College Lakhandur

25/06/23

Principal
Y.C. College, Lakhandur
Dist, Bhandara

P. G. DEPARTMENT OF BOTANY

YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE

COLLEGE LAKHANDUR

AFFILIATED TO

RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR

2022-23



Certificate



*I hereby certify that the project entitled "Availability and Potential use of NTFP obtained from Trees in Dighori Forest area Bhandara district M.S." submitted for the award of the Degree of **MASTER OF SCIENCE** in the faculty of Science & Technology (**Botany**), of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur embodies the results of bonafide research work, carried out by **PRACHI BHOJRAJ HUKARE**, under my guidance and supervision.*

Place: Lakhandur

Date : 28/06/2023

D. N. LANJEWAR

Supervisor

Forwarded by:

Mr. D. N. LANJEWAR
Head
Department of Botany

Dr. J. V. Dadve
Principal
Y.C.College Lakhandur



P. G. DEPARTMENT OF BOTANY
YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE
COLLEGE LAKHANDUR

AFFILIATED TO
RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR

2022-23



Certificate



I hereby certify that the project entitled "DIVERSITY OF ALGAE IN LAKHANDUR", submitted for the award of the Degree of MASTER OF SCIENCE in the faculty of Science & Technology (Botany), of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur embodies the results of bonafide research work, carried out by PRATIKSHA JAGESHWAR KHOBRADE, under my guidance and supervision.

Place: Lakhandur

Date : 28/06/2023

Mr. D. N. LANJEWAR

Supervisor

Forwarded by:

Mr. D. N. LANJEWAR
Head
Department of Botany



Dr. J. V. Dadve
Principal
Y.C.College Lakhandur

P. G. DEPARTMENT OF BOTANY
YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE
COLLEGE LAKHANDUR
AFFILIATED TO
RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR
2022-23



Certificate



I hereby certify that the project entitled "DIVERSITY OF DIATOMS IN SHIVANIBANDH LAKE", submitted for the award of the Degree of MASTER OF SCIENCE in the faculty of Science & Technology (Botany), of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur embodies the results of bonafide research work, carried out by PRATIKA PRADEEP BADWAIK, under my guidance and supervision.


Place: Lakhandur

Date: 28/06/2023


Mr. D. N. LANJEWAR
Supervisor

Forwarded by:


Mr. D. N. LANJEWAR
Head
Department of Botany


Dr. S. V. Dadve
Principal
Y.C. College Lakhandur


28/06/23



P. G. DEPARTMENT OF BOTANY

YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE

COLLEGE LAKHANDUR

AFFILIATED TO

RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR

2022-23



Certificate



I hereby certify that the project entitled "STUDIES ON WEED DIVERSITY IN RICE FIELD IN GHATBORI / TELI (GONDIA)", submitted for the award of the Degree of MASTER OF SCIENCE in the faculty of Science & Technology (Botany), of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur embodies the results of bonafide research work, carried out by Priyanka Prakash Mohurle, under my guidance and supervision.


Place: Lakhander

Date : 28/06/23


Miss. ANJALI Mam
Supervisor

Forwarded by:


Mr. D. N. LANJEWAR
Head
Department of Botany


Dr. J.V. Dadve
Principal
Y.C. College Lakhander


28/06/23



P. G. DEPARTMENT OF BOTANY
YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE
COLLEGE LAKHANDUR
AFFILIATED TO
RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR
2022-23



Certificate



I hereby certify that the project entitled
**"STUDIES ON NAVAGRAHA PLANTS WITH SPECIAL REFERENCE
TO SACRED VALUE AND MEDICINAL VALUE"**, submitted for the
award of the Degree of **MASTER OF SCIENCE** in the faculty of Science &
Technology (Botany), of Rashtrasant Tukadoji Maharaj Nagpur
University, Nagpur embodies the results of bonafide research work, carried
out by **PRIYANKA MADHORA CHACHANE**, under my guidance and
supervision.

Place: Lakhandur
Date: 26/08/23

Mr. D. N. LANJEWAR

Supervisor

Forwarded by:



Mr. D. N. LANJEWAR
Head
Department of Botany

Dr. J. V. Dadve
Principal
Y.C.College Lakhandur

28/06/23

P. G. DEPARTMENT OF BOTANY
YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE
COLLEGE LAKHANDUR
AFFILIATED TO
RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR
2022-23



Certificate



*I hereby certify that the project entitled "CROP DISEASE OF TOMATO PLANT IN ARMORI VILLAGE (DIST. - GADCHIROLI) - A SURVEY", submitted for the award of the Degree of **MASTER OF SCIENCE** in the faculty of Science & Technology (Botany), of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur embodies the results of bonafide research work, carried out by **PRIYANKA RAJESHWAE NAKHATE**, under my guidance and supervision.*

Place: Lakhandur
Date : 28/06/23

Dr. N. S. Kamble
Supervisor

Forwarded by:



Mr. D. N. LANJEWAR
Head
Department of Botany

Dr. J. V. Dadve
Principal
Y.C.College Lakhandur

28/06/23

P. G. DEPARTMENT OF BOTANY
YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE
COLLEGE LAKHANDUR
AFFILIATED TO
RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR
2022-23



Certificate



I hereby certify that the project entitled "DISEASES AND MAJOR PESTS ON SELECTED FRUIT PLANTS IN PANDHARPAUNI IN RAJURA TAHSIL, CHANDRAPUR DISTRICT", submitted for the award of the Degree of MASTER OF SCIENCE in the faculty of Science & Technology (Botany), of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur embodies the results of bonafide research work, carried out by PUJA PRAKASH AGASHE, under my guidance and supervision.

Place: Lakhandur

Date : 28/06/2023

Mr. D. N. LANJEWAR

Supervisor

Forwarded by:



Mr. D. N. LANJEWAR
Head
Department of Botany

Dr. J. V. Dadve
Principal
Y.C.College Lakhandur

28/06/23

P. G. DEPARTMENT OF BOTANY
YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE
COLLEGE LAKHANDUR
AFFILIATED TO
RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR
2022-23



Certificate



I hereby certify that the project entitled "ALGAL FLORA OF CHICHGAON LAKE, LAKHANDUR TAHSIL, BHADARA DISTRICT", submitted for the award of the Degree of MASTER OF SCIENCE in the faculty of Science & Technology (Botany), of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur embodies the results of bonafide research work, carried out by SHUBHANGI HARIDAS BHOYAR, under my guidance and supervision.

Place: Lakhandur

Date : 28/06/2023

Mr. D. N. LANJEWAR

Supervisor

Forwarded by:

Mr. D. N. LANJEWAR
Head
Department of Botany



Dr. J. V. Dadve
Principal
Y.C.College Lakhandur

28/06/23

DEPARTMENT OF BOTANY

YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE

COLLEGE LAKHANDUR

AFFILIATED TO

RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR

2022-23



Certificate



I hereby certify that the project entitled "Phytochemical Evaluation from *Chrozophora Tinctoria*", submitted for the award of the Degree of **MASTER OF SCIENCE** in the faculty of Science & Technology (**Botany**), of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur embodies the results of bonafide research work, carried out by **MS. SNEHA R. FATE**, under my guidance and supervision.

Place: Lakhandur

Date : 28/06/2023

Mr. D. N. LANJEWAR

Assistant Professor

Forwarded by:

Mr. D. N. LANJEWAR
Head
Department of Botany

Dr. J. V. Dadve
Principal

DEPARTMENT OF BOTANY



P. G. DEPARTMENT OF BOTANY

YASHWANTRAO CHAVHAN CRIC COLLEGE OF SCIENCE AND TECHNOLOGY
COLLEGE LAKHANDUR

OFFICE NO.

RASHTRANT TUKADOL MAHARAJA NAGPUR UNIVERSITY NAGPUR

2022-23



Certificate



I hereby certify that the project entitled "STUDIES ON PLANTS ASSOCIATED WITH NAKSHATRAVANA WITH SPECIAL REFERENCE TO MEDICINAL VALUE", submitted for the award of the Degree of MASTER OF SCIENCE in the faculty of Science & Technology (Botany), of Rashtrant Tukadol Maharaj Nagpur University, Nagpur embodies the results of bonafide research work, carried out by SWITY VISHWADIP SANGOLE, under my guidance and supervision.

Place: Lakhandur

Date : 28/06/23

Mr. D. S. LANJEWAR

Supervisor

Forwarded by:



Mr. D. S. LANJEWAR
Head
Department of Botany

Dr. J. V. Dade
Principal
Y.C. College Lakhandur

28/06/23

P. G. DEPARTMENT OF BOTANY
YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE
COLLEGE LAKHANDUR
AFFILIATED TO
RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR
2022-23



Certificate



I hereby certify that the project entitled " STUDY ON WEED DIVERSITY IN MAIZE FIELD ON SADAK ARJUNI, AT. KANHARTOLA, TA. SADAK ARJUNI ", submitted for the award of the Degree of MASTER OF SCIENCE in the faculty of Science & Technology (Botany), of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur embodies the results of bonafide research work, carried out by VAISHALI SANJAY MENDHE, under my guidance and supervision.

Place: Lakhandur

Date : 28/06/2023

Mr. D. N. LANJEWAR

Supervisor

Forwarded by:



Mr. D. N. LANJEWAR
Head
Department of Botany

Dr. J.V. Dadve
Principal
Y.C.College Lakhandur

28/06/23

DEPARTMENT OF BOTANY

YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE
COLLEGE LAKHANDUR

AFFILIATED TO
RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR

2022-23



Certificate



I hereby certify that the project entitled "Study of exotic plant species found in Sakoli Taluka", submitted for the award of the Degree of MASTER OF SCIENCE in the faculty of Science & Technology (Botany), of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur embodies the results of bonafide research work, carried out by Vidya Parasram Bahekar, under my guidance and supervision.

Place: Lakhanda

Date: 28/06/2023

Mr. D. N. LANJEWAR
OR
Dr. N.S. KAMBLE
Assistant Professor

Forwarded by:



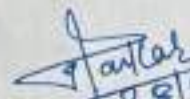
Mr. D. N. LANJEWAR
Head
Department of Botany

Dr. J. V. Dadve
Principal

25/06/23

CERTIFICATE

This is to certify that the work incorporated in this project entitled "**Qualitative phytochemical screening of praecitrullus fistulosus plant extract**" is satisfactory carried out and completed by **Miss. Aachal Ramesh Harinkhede**, M.Sc chemistry, post-graduation teaching department of chemistry, Yashwantrao Chawhan arts, commerce and science college lakhandur for the partial fulfilment of the degree of **Master of science in chemistry** in the faculty of science and technology, Rashtrasant Tukdoji Maharaj Nagpur university, Nagpur for session 2022-23. To the best of my knowledge and belief, this work has not been submitted earlier to this or any other university or institution for any research degree or diploma or certificate.


28/06/2023
Supervisor

Place: Lakhandur

Date: 30/06/2023

Mr. Kishor S. Itankar

Assistant professor

Yashwantrao Chawhan arts, commerce
and science college lakhandur dist. Bhandara

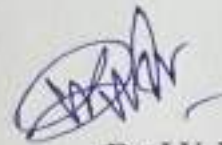

Forwarded by:

Dr. Sudhirkumar M. Maskey

Head & Assistant professor

Yashwantrao Chawhan arts, commerce
and science college lakhandur dist. Bhandara

Department Of Chemistry
Y.C. College, Lakhander
Dist-Bhandara-441003



Dr. J.V. Dadve

Principal

Y.C. College, Lakhander
Yashwantrao Chawhan arts, commerce
and science college lakhandur dist. Bhandara



CERTIFICATE

This is to certify that the work incorporated in this project entitled **"Layered double hydroxide: A brief review on synthesis and Application"** is satisfactory carried out and completed by **Mr. Akash Rastrapal Rodge**, M.Sc chemistry, post-graduation teaching department of chemistry, Yashwantrao Chawhan arts, commerce and science college Lakhandur for the partial fulfilment of the degree of **Master of science in chemistry** in the faculty of science and technology, Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur for session 2022-23. To the best of my knowledge and belief, this work has not been submitted earlier to this or any other university or institution for any research degree or diploma or certificate.



Supervisor

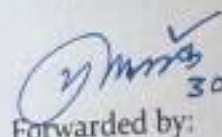
Mr. Shailesh K. Bhagat

Assistant professor

Yashwantrao Chawhan arts, commerce
and science college lakhandur Dist. Bhandara

Place: Lakhandur

Date: 30/06/2023

Forwarded by:  30/06/23
Head
Department Of Chemistry
Y.C. College. Lakhandur
Dist. Bhandara-441803

Dr. Sudhirkumar M. Maskey

Head & Assistant professor
Yashwantrao Chawhan arts, commerce
and science college lakhandur Dist. Bhandara



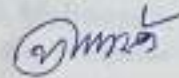
Dr. J.V. Dadve

Principal
PRINCIPAL
Yashwantrao Chawhan arts, commerce
and science college lakhandur Dist. Bhandara



Certificate

This is to certify that the project titled "*Synthesis, Characterizations and Practical Applicability of new Polymer MTUF*" is satisfactory carried out and completed by **Mr. Ashish Vishwanath Maske**, M.Sc. Chemistry, Post Graduate Teaching Department of Chemistry, Yashwantrao Chawhan Arts, Commerce and Science College, Lakhandur For the partial fulfillment of the Degree of Master of Science in Chemistry in the faculty of Science & Technology of Rashtrasant Tukadoji Maharaj Nagpur university, Nagpur in session 2022-2023. To the best of my knowledge and belief, this work has not been submitted earlier to this or any other University or Institution for any research degree or diploma or certificate.



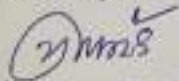
Supervisor

Dr. Sudhirkumar M. Maskey
Assistant Professor

Place:-Lakhandur

Date:- 30/06/2023

Forwarded By:



Dr. Sudhirkumar M. Maskey

Head

Department of Chemistry

Head

Department Of Chemistry
Y.C. College Lakhandur
Dist. Bhandara-441808



Dr. PRATIKPAL
Yashwantrao Chawhan College
Lakhandur Dist. Bhandara



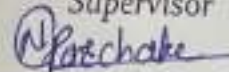
CERTIFICATE

This is to certify that the work incorporated in this project entitled "A Review on Biosynthesis of ZnO Nanoparticles and its Applications" is satisfactory carried out and completed by Miss. Bharti S. Chute, M.Sc. chemistry, post-graduation teaching department of chemistry, Yashwantrao Chawhan arts, commerce and science college Lakhandur for the partial fulfilment of the degree of Master of science in chemistry in the faculty of science and technology, Rashtrasant Tukdoji Maharaj Nagpur university, Nagpur for session 2022-23. To the best of my knowledge and belief, this work has not been submitted earlier to this or any other university or institution for any research degree or diploma or certificate.

Place: Lakhandur

Date: 30-6-23

Supervisor

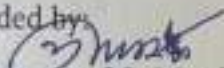


Miss. Nitu G. Parchake

Assistant professor

Yashwantrao Chawhan Arts, Commerce and
Science college Lakhandur dist. Bhandara

Forwarded by



Dr. Sudhir Kumar M. Maskey

Head & Assistant professor

Yashwantrao chawhan Arts, Commerce
And Science college Lakhandur

dist. Bhandara

Department of Chemistry
Y.C. College
Lakhandur
Dist. Bhandara-441803



Dr. V. Dadve
Principal
Y.C. College, Lakhandur
Dist. Bhandara

Yashwantrao chawhan Arts, Commerce
and Science college Lakhandur

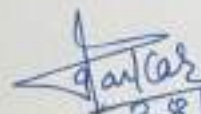
dist. Bhandara



CERTIFICATE

This is to certify that the work incorporated in this project entitled "Green synthesis and structural characterization of cadmium oxide nanoparticle using *G. Sepium* flower extract" satisfactory carried out and completed by **Mr. Bhavesh Sanjay Rahangdale**, M.Sc. chemistry, post-graduation teaching department of chemistry, Yashwantrao Chawhan arts, commerce and science college Lakhandur for the partial fulfilment of the degree of **Master of science in chemistry** in the faculty of science and technology, Rashtrasant Tukdoji Maharaj Nagpur university, Nagpur for session 2022-23. To the best of my knowledge and belief, this work has not been submitted earlier to this or any other university or institution for any research degree or diploma or certificate.

Place: Lakhandur
Date: 30/06/23


28/06/2023
Supervisor

Mr. Kishor S. Itankar

Assistant professor
Yashwantrao Chawhan arts, commerce
and science college Lakhandur dist. Bhandara


30.06.23
Department of Chemistry
Y.C. College Lakhandur
For 

Dr. Sudhirkumar M. Maskey
Head & Assistant professor

Yashwantrao Chawhan arts, commerce
and science college Lakhandur dist. Bhandara



Dr. J.V. Dadve
Principal

Yashwantrao Chawhan arts, commerce
and science college Lakhandur

PRINCIPAL
Yashwantrao Chawhan College
Lakhandur Dist. Bhandara



CERTIFICATE

This is to certify that the work incorporated in this project entitled **"Synthesis and Characterizations of Mg-Al-CO₃ Layered double hydroxide"** is satisfactory carried out and completed by **Miss. Diksha R. Dhoke**, M.Sc chemistry, post-graduation teaching department of chemistry, Yashwantrao Chawhan arts, commerce and science college lakhandur for the partial fulfilment of the degree of **Master of science in chemistry** in the faculty of science and technology, Rashtrasant Tukdoji Maharaj Nagpur university, Nagpur for session 2022-23. To the best of my knowledge and belief, this work has not been submitted earlier to this or any other university or institution for any research degree or diploma or certificate.



Supervisor

Mr. Shailesh K. Bhagat

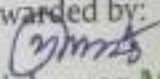
Assistant professor

Yashwantrao Chawhan arts, commerce
and science college lakhandur dist. Bhandara

Place: Lakhandur

Date: 30/06/2023


Forwarded by:



Dr. Sudhirkumar M. Maskey

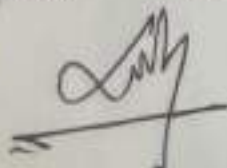
Head & Assistant professor
Yashwantrao Chawhan arts, commerce
and science college lakhandur dist. Bhandara

Head
Department Of Chemistry
V.C. College, Lakhandur
Dist. Bhandara-441 808



Dr. J.V. Dadve

Principal
V.C. College, Lakhandur
Yashwantrao Chawhan arts, commerce
and science college lakhandur dist. Bhandara



Certificate

This is to certify that the project entitled "*Synthesis, Characterizations and Practical Applicability of new Polymer RMF-1*" is satisfactory carried out and completed by **Miss. Miss. Dipali Mohan Mehendale**, M.Sc. Chemistry, Post Graduate Teaching Department of Chemistry, Yashwantrao Chawhan Arts, Commerce and Science College, Lakhandur For the partial fulfillment of the Degree of Master of Science in Chemistry in the faculty of Science & Technology of Rashtrasant Tukadoji Maharaj Nagpur university, Nagpur in session 2022-2023. To the best of my knowledge and belief, this work has not been submitted earlier to this or any other University or Institution for any research degree or diploma or certificate.



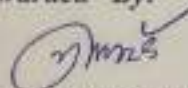
Supervisor

Dr. Sudhirkumar M. Maskey
Assistant Professor

Place:- Lakhandur

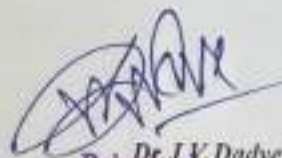
Date:- 30-06-2023

Forwarded By:



Dr. Sudhirkumar M. Maskey
Head

Department of Chemistry
Department Of Chemistry
Y.C. College, Lakhandur
Dist. Bhandara



Dr. J.V. Dadve
Principal
Y.C. College, Lakhandur
Dist. Bhandara



CERTIFICATE

This is to certify that the work incorporated in this project entitled "Qualitative phytochemical screening of *Gliricidia sepium* Flower extract" satisfactory carried out and completed by Miss. Kajal Ashok Humane, M.Sc. chemistry, post-graduation teaching department of chemistry, Yashwantrao Chawhan arts, commerce and science college Lakhandur for the partial fulfilment of the degree of Master of science in chemistry in the faculty of science and technology, Rashtrasant Tukdoji Maharaj Nagpur university, Nagpur for session 2022-23. To the best of my knowledge and belief, this work has not been submitted earlier to this or any other university or institution for any research degree or diploma or certificate.

Place: Lakhandur

Date: 30/06/2023

Place: Lakhandur

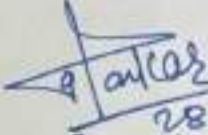
Date: 30/06/2023

Forwarded by:

Dr. Sudhirkumar M. Maskey

Head & Assistant professor
Yashwantrao Chawhan arts, commerce
and science college Lakhandur dist. Bhandara

Department Of Chemistry
Y.C. College, Lakhandur
Dist. Bhandara-441803


28/08/2023
Supervisor

Mr. Kishor S. Itankar

Yashwantrao Chawhan arts, commerce
and science college Lakhandur dist. Bhandara

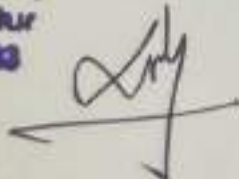
Miss. Kajal Ashok Humane


Dr. J.V. Dadve

Principal

Yashwantrao Chawhan arts, commerce
and science college Lakhandur

Principal
Y.C. College, Lakhandur
Dist. Bhandara



CERTIFICATE

This is to certify that the work incorporated in this project entitled "Effect of stirring time on Structure and Morphology of Mg-Al-CO₃ Layered Double Hydroxide" is satisfactory carried out and completed by Miss. Manisha Shivshankar Bhagat, M.Sc chemistry, post-graduation teaching department of chemistry, Yashwantrao Chawhan arts, commerce and science college Lakhandur for the partial fulfilment of the degree of Master of science in chemistry in the faculty of science and technology, Rashtrasant Tukdoji Maharaj Nagpur university, Nagpur for session 2022-23. To the best of my knowledge and belief, this work has not been submitted earlier to this or any other university or institution for any research degree or diploma or certificate.



Supervisor

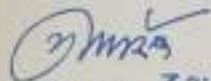
Mr. Shailesh K. Bhagat

Assistant professor

Yashwantrao Chawhan arts, commerce
and science college Lakhandur Dist. Bhandara

Place: Lakhandur

Date: 30-6-2023



Forwarded by: 30-06-23

Dr. Sudhirkumar M. Maskey

Head

Head & Assistant Professor

Department of Chemistry
Yashwantrao Chawhan Arts, Commerce
and Science College, Lakhandur - 441803
Dist. Bhandara



Dr. J.V. Dadve

Principal

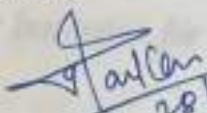
Yashwantrao Chawhan College
Arts, Commerce and Science
Lakhandur Dist. Bhandara



CERTIFICATE

DECLARATION

This is to certify that the work incorporated in this project entitled "Qualitative phytochemical investigation of root, stem, leaf, flower of *N. oleander* plant using petroleum extract" is satisfactory IV chemistry, post-graduation teaching department of chemistry, Yashwantrao Chawhan arts, commerce and science college lakhandur for the partial fulfilment of the degree of Master of science in chemistry in the faculty of science and technology, Rashtrasant Tukdoji Maharaj Nagpur university, Nagpur for session 2022-23. To the best of my knowledge and belief, this work has not been submitted earlier to this or any other university or institution for any research degree or diploma or certificate.


28/06/2023
Supervisor

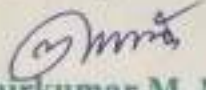
Place: Lakhandur


Date: 30-06-2023

Mr. Kishor S. Itankar

Assistant professor
Yashwantrao Chawhan arts, commerce
and science college, Lakhandur

Forwarded by:


Dr. Sudhirkumar M. Maskey
Head & Assistant professor
Yashwantrao Chawhan arts,
commerce and science college
Lakhandur


Dr. J.V. Dadve
Principal
Yashwantrao Chawhan arts,
commerce and science college,
Dist. Bhandara
Lakhandur

Head
Department Of Chemistry
Y.C. College, Lakhandur
Dist. Bhandara-441 999



Certificate

This is to certify that the project entitled "**Chlorpyrifos Pesticide Removal from Water Using Activated Carbon ANAC**" is satisfactory carried out and completed by **Miss. Nikita Rahishkumar Ninawe**, M.Sc. Chemistry, Post Graduate Teaching Department of Chemistry, Yashwantrao Chawhan Arts, Commerce and Science College, Lakhandur For the partial fulfillment of the Degree of Master of Science in Chemistry in the faculty of Science & Technology of Rashtrasant Tukadoji Maharaj Nagpur university, Nagpur in session 2022-2023. To the best of my knowledge and belief, this work has not been submitted earlier to this or any other University or Institution for any research degree or diploma or certificate.

Place:- Lakhandur

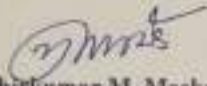
Date:- 30 June 2023



Supervisor

Dr. Sudhirkumar M. Maskey
Assistant Professor

Forwarded By:



Dr. Sudhirkumar M. Maskey
Head & Assistant Professor
Department of Chemistry
Department Of Chemistry
Y.C. College, Lakhandur
Dist. Bhandara-441803



Principal
Y. C. College, Lakhandur
Dist. Bhandara

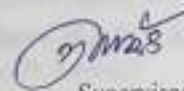


Certificate

This is to certify that the project entitled "*Removal of Malachite Green Dye Using Activated Carbon PMWAC*" is satisfactory carried out and completed by *Miss. Nilima Lekhchan Kore, M.Sc. Chemistry, Post Graduate Teaching Department of Chemistry, Yashwantrao Chawhan Arts, Commerce and Science College, Lakhandur* For the partial fulfillment of the Degree of Master of Science in Chemistry in the faculty of Science & Technology of Rashtrasant Tukadoji Maharaj Nagpur university, Nagpur in session 2022-2023. To the best of my knowledge and belief, this work has not been submitted earlier to this or any other University or Institution for any research degree or diploma or certificate.

Place:- Lakhandur

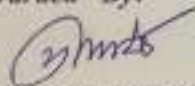
Date:- 30/06/2023



Supervisor

Dr. Sudhirkumar M. Maskey
Assistant Professor

Forwarded By:

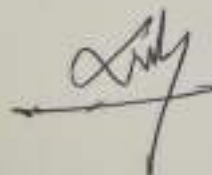


Dr. Sudhirkumar M. Maskey
Head
Department of Chemistry

Head
Department Of Chemistry
Y.C. College, Lakhandur
Dist. Bhandara - 441200



Pr. J. K. Daulve
Principal
Y. C. College, Lakhandur
Dist, Bhandara



Certificate

This is to certify that the project entitled "**Removal of Toxic As(III) by Using New Copolymer SAMF-I**" is satisfactory carried out and completed by **Mr. Pankaj Vishwanath Zode**, M.Sc. Chemistry, Post Graduate Teaching Department of Chemistry, Yashwantrao Chawhan Arts, Commerce and Science College, Lakhandur For the partial fulfillment of the Degree of Master of Science in Chemistry in the faculty of Science & Technology of Rashtrasant Tukadoji Maharaj Nagpur university, Nagpur in session 2022-2023. To the best of my knowledge and belief, this work has not been submitted earlier to this or any other University or Institution for any research degree or diploma or certificate.



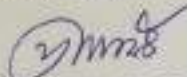
Supervisor

Dr. Sudhirkumar M. Maskey
Assistant Professor

Place:- Lakhandur

Date:- 30/06/2023

Forwarded By:



Dr. Sudhirkumar M. Maskey
Head
Department of Chemistry

Head
Department Of Chemistry
Y.C. College, Lakhandur
Dist. Bhandara-441383



Dr. J.V. Dadve

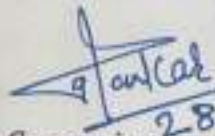
Principal

Yashwantrao Chawhan College
Lakhandur Dist. Bhandara



CERTIFICATE

This is to certify that the work incorporated in this project entitled "Qualitative phytochemical analysis of *Thithonia diversifolia* leaf extract" satisfactory carried out and completed by **Miss. Pooja Deochand walde**, M.Sc. chemistry, post-graduation teaching department of chemistry, Yashwantrao Chawhan arts, commerce and science college Lakhandur for the partial fulfilment of the degree of **Master of science in chemistry** in the faculty of science and technology, Rashtrasant Tukdoji Maharaj Nagpur university, Nagpur for session **2022-23**. To the best of my knowledge and belief, this work has not been submitted earlier to this or any other university or institution for any research degree or diploma or certificate.


Supervisor 28/06/2023

Place: Lakhandur

Date: 30/06/23

Mr. Kishor S. Itankar

Assistant professor

Yashwantrao Chawhan arts,
commerce and science college Lakhandur
dist. Bhandara

Place: Lakhandur

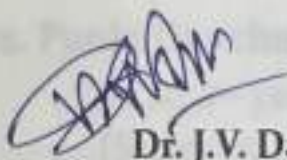

Forwarded by:

Dr. Sudhirkumar M. Maskey

Head & Assistant professor

Yashwantrao Chawhan arts, commerce
and science college Lakhandur dist. Bhandara

Place: Lakhandur

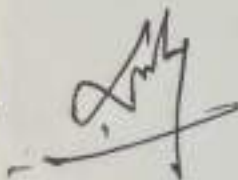


Dr. J.V. Dadve

Principal

Yashwantrao Chawhan arts, commerce
and science college Lakhandur
Dist. Bhandara
dist. Bhandara

Head
Department Of Chemistry
Y.C. College, Lakhandur
Dist. Bhandara-441803



Dedication

Certificate

This is to certify that the project entitled "**Removal of Hexavalent Chromium Using Activated Carbon CCAC**" is satisfactory carried out and completed by **Miss. Pranali Ramesh Lichade, M.Sc. Chemistry, Post Graduate Teaching Department of Chemistry, Yashwantrao Chawhan Arts, Commerce and Science College, Lakhandur** For the partial fulfillment of the Degree of Master of Science in Chemistry in the faculty of Science & Technology of Rashtrasant Tukadoji Maharaj Nagpur university, Nagpur in session 2022-2023. To the best of my knowledge and belief, this work has not been submitted earlier to this or any other University or Institution for any research degree or diploma or certificate.

Miss. Pranali Ramesh Lichade

Dr. Sudhirkumar M. Maskey

Place:- Lakhandur

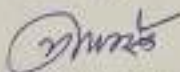
Date:- 30/06/2023



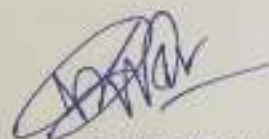
Supervisor

Dr. Sudhirkumar M. Maskey
Assistant Professor

Forwarded By:




Dr. Sudhirkumar M. Maskey
Head
Department of Chemistry



Prakash D. Dudve
Y. C. College, Lakhandur
Dist. Bhandara

Head
Department Of Chemistry
Y.C. College Lakhandur
Dist. Bhandara-441803



Certificate

This is to certify that the project entitled "*Synthesis, Characterizations and Practical Applicability of new Polymer RTUF-I*" is satisfactory carried out and completed by *Miss. Pratiksha Sadanand Kargate, M.Sc. Chemistry, Post Graduate Teaching Department of Chemistry, Yashwantrao Chawhan Arts, Commerce and Science College, Lakhandur* For the partial fulfillment of the Degree of Master of Science in Chemistry in the faculty of Science & Technology of Rashtrasant Tukadoji Maharaj Nagpur university, Nagpur in session 2022-2023. To the best of my knowledge and belief, this work has not been submitted earlier to this or any other University or Institution for any research degree or diploma or certificate.

Place:- Lakhandur

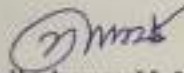
Date:- 30-08-2023



Supervisor

Dr. Sudhirkumar M. Maskey
Assistant Professor

Forwarded By:



Dr. Sudhirkumar M. Maskey
Head
Department of Chemistry

Head
Department of Chemistry
Y.C. College, Lakhandur
Dist. Bhandara-441803



Principal
Dr. J. S. Dhadve
Y.C. College, Lakhandur
Principal
Dist. Bhandara



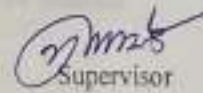
Declaration

Certificate

This is to certify that the project entitled "*Synthesis, Characterizations and Practical Applicability of new Polymer HASF-I*" is satisfactory carried out and completed by *Miss. Priti Tulsidas Chakole, M.Sc. Chemistry, Post Graduate Teaching Department of Chemistry, Yashwantrao Chawhan Arts, Commerce and Science College, Lakhandur* For the partial fulfillment of the Degree of Master of Science in Chemistry in the faculty of Science & Technology of Rashtrasant Tukadoji Maharaj Nagpur university, Nagpur in session 2022-2023. To the best of my knowledge and belief, this work has not been submitted earlier to this or any other University or Institution for any research degree or diploma or certificate.

Place:- Lakhandur

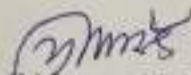
Date:- 30-06-2023



Supervisor

Dr. Sudhirkumar M. Maskey
Assistant Professor

Forwarded By:

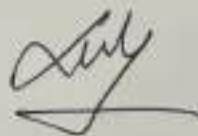


Dr. Sudhirkumar M. Maskey
Head
Department of Chemistry

Head
Department Of Chemistry
Y.C. College, Lakhandur
Dist. Bhandara-481003




Dr. V. Dadve
Principal
Y.C. College, Lakhandur
Dist. Bhandara



CERTIFICATE

This is to certify that the work incorporated in this project entitled "*Review On Bio based nano filler - A superior material for rubber composites*" is satisfactory carried out and completed by Miss. Priya Bharat Bahekar, M.Sc chemistry, post-graduation teaching department of chemistry, Yashwantrao Chawhan arts, commerce and science college lakhandur for the partial fulfillment of the degree of Master of science in chemistry in the faculty of science and technology, Rashtrasant Tukdoji Maharaj Nagpur university, Nagpur for session 2022-23. To the best of my knowledge and belief, this work has not been submitted earlier to this or any other university or institution for any research degree or diploma or certificate.

Forwarded by:

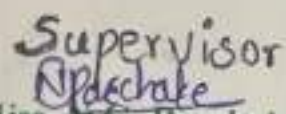

Dr. Sudhir Kumar M. Maskey
Head & Assistant professor

Yashwantrao Chawhan arts, commerce
and science college lakhandur dist. Bhandara

Department Of Chemistry
Y.C College, Lakh. Dist. Bhandara-441066

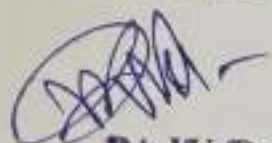
Place: Lakhandur

Date: 30/06/2023

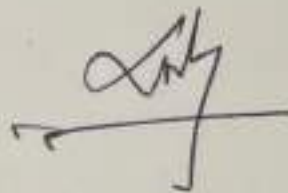
Supervisor

Miss. N.G. Parchake

Assistant professor

Yashwantrao Chawhan arts, commerce
and science college lakhandur dist. Bhandara

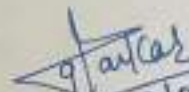

P. E. College Lakhandur
Principal
Dist. Bhandara

Yashwantrao Chawhan arts, commerce
and science college lakhandur dist. Bhandara



CERTIFICATE


This is to certify that the work incorporated in this project entitled "Green synthesis of silver nanoparticle using *Praecitrullus Fistulosus* leaf extract" satisfactory carried out and completed by Mr. Rahul Mulchand Kewat, M.Sc. chemistry, post-graduation teaching department of chemistry, Yashwantrao Chawhan arts, commerce and science college Lakhandur for the partial fulfilment of the degree of **Master of science in chemistry** in the faculty of science and technology, Rashtrasant Tukdoji Maharaj Nagpur university, Nagpur for session 2022-23. To the best of my knowledge and belief, this work has not been submitted earlier to this or any other university or institution for any research degree or diploma or certificate.


28/06/2023
Supervisor

Place: Lakhandur
Date: 30/06/2023

Mr. Kishor S. Itankar
Assistant professor

Yashwantrao Chawhan arts, commerce
and science college Lakhandur dist. Bhandara


30.06.23
Head
Department Of Chemistry
Y.C. College. Lakhandur
Dist. Bhandara-441803

Dr. Sudhirkumar M. Maskey

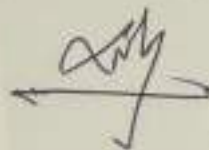
Head & Assistant professor
Yashwantrao Chawhan arts, commerce
and science college Lakhandur dist. Bhandara



Dr. J.V. Dadve

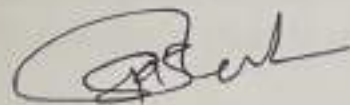
Principal
Yashwantrao Chawhan arts, commerce
and science college Lakhandur
dist. Bhandara

PRINCIPAL
Yashwantrao Chawhan College
Lakhandur Dist. Bhandara



CERTIFICATE

This is to certify that the work incorporated in this project entitled **Synthesis and Characterization of Calcinite Layered Double Hydroxide** is satisfactory carried out and completed by Mr. Ravikumar Chudaman Kargate, M.Sc. chemistry, post-graduation teaching department of chemistry, Yashwantrao Chawhan arts, commerce and science college Lakhandur for the partial fulfilment of the degree of **Master of science in chemistry** in the faculty of science and technology, Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur for session 2022-23. To the best of my knowledge and belief, this work has not been submitted earlier to this or any other university or institution for any research degree or diploma or certificate.



Supervisor

Mr. Shailesh K. Bhagat

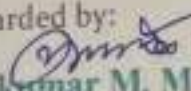
Assistant professor

Yashwantrao Chawhan arts, commerce
and science college Lakhandur Dist. Bhandara

Place: Lakhandur

Date: 30/06/23

Forwarded by:



Dr. Sudhirkumar M. Maskey

Head & Assistant professor
Yashwantrao Chawhan arts, commerce
and science college Lakhandur
Dist. Bhandara.

Head
Department Of Chemistry
Y.C. College, Lakhandur
Dist-Bhandara-441803



Dr. J.V. Dadve

Principal

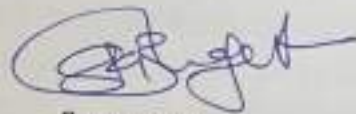
Yashwantrao Chawhan arts,
commerce and science college
Lakhandur Dist. Bhandara.

PRINCIPAL
Yashwantrao Chawhan College,
Lakhandur Dist. Bhandara



CERTIFICATE

This is to certify that the work incorporated in this project entitled "Effect of stirring rate on Structural Morphology of Mg-Al-CO₃ layered double hydroxide" satisfactory carried out and completed by Miss. Rupali S. Rahangdale, M.Sc. chemistry, post-graduation teaching department of chemistry, Yashwantrao Chawhan arts, commerce and science college Lakhandur for the partial fulfilment of the degree of Master of science in chemistry in the faculty of science and technology, Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur for session 2022-23. To the best of my knowledge and belief, this work has not been submitted earlier to this or any other University or Institution for any research degree or diploma or certificate.



Supervisor

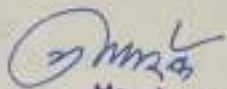
Mr. Shailesh K. Bhagat

Assistant professor

Yashwantrao Chawhan arts, commerce and science college Lakhandur Dist. Bhandara

Place: Lakhandur

Date: 30/06/2023



Head 30.6.23

Department Of Chemistry

Y.C. College, Lakhandur

Forwarded by
Phone Number-441893

Dr. Sudhirkumar M. Maskey

Head & Assistant professor

PRINCIPAL
Yashwantrao Chawhan arts, commerce and science college Lakhandur Dist. Bhandara

Yashwantrao Chawhan College
Lakhandur Dist. Bhandara

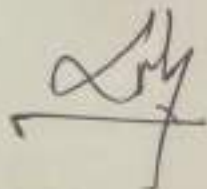


Dr. J.V. Dadve

Principal

Yashwantrao Chawhan arts, commerce and science college Lakhandur Dist. Bhandara

PRINCIPAL
Yashwantrao Chawhan College
Lakhandur Dist. Bhandara



Certificate

This is to certify that the project entitled "*Synthesis, Characterizations and Practical Applicability of new Polymer 8-HQTUF*" is satisfactory carried out and completed by **Mr. Rohit Vijay Fasate, M.Sc. Chemistry, Post Graduate Teaching Department of Chemistry, Yashwantrao Chawhan Arts, Commerce and Science College, Lakhandur** For the partial fulfillment of the Degree of Master of Science in Chemistry in the faculty of Science & Technology of Rashtrasant Tukadoji Maharaj Nagpur university, Nagpur in session 2022-2023. To the best of my knowledge and belief, this work has not been submitted earlier to this or any other University or Institution for any research degree or diploma or certificate.

Place:- Lakhandur

Date:- 30/06/2023

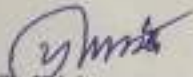


Supervisor

Dr. Sudhirkumar M. Maskey

Assistant Professor

Forwarded By:



Dr. Sudhirkumar M. Maskey

Head

Department of Chemistry

Head

Department of Chemistry

Y.C. College, Lakhandur

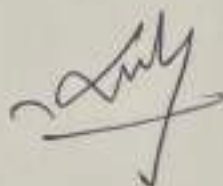
Bhaurdara-441802



Dr. J.V. Dade

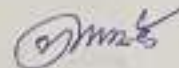
PRINCIPAL

Yashwantrao Chawhan College,
Lakhandur Dist. Bhaurdara



Certificate

This is to certify that the project entitled "**Removal of As(III) Using Activated Carbon MLAC**" is satisfactory carried out and completed by **Miss. Sakshi Vinayak Nawkhare, M.Sc. Chemistry, Post Graduate Teaching Department of Chemistry, Yashwantrao Chawhan Arts, Commerce and Science College, Lakhandur** For the partial fulfillment of the Degree of Master of Science in Chemistry in the faculty of Science & Technology of Rashtrasant Tukadoji Maharaj Nagpur university, Nagpur in session 2022-2023. To the best of my knowledge and belief, this work has not been submitted earlier to this or any other University or Institution for any research degree or diploma or certificate.



Supervisor

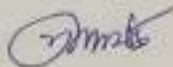
Dr. Sudhirkumar M. Maskey

Assistant Professor

Place:- Lakhandur

Date:- 22/06/2023

Forwarded By:



Dr. Sudhirkumar M. Maskey

Head

Department of Chemistry

Post

Department Of Chemistry

Y.C. College, Lakhandur

Dist. Bhandara-441808



Principal

Y.C. College, Lakhandur

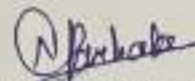
Dist. Bhandara



CERTIFICATE

This is to certify that the work incorporated in this project entitled "Review on Green Synthesis of Manganese Oxide Nanoparticles, Structural and Its Application" is satisfactory carried out and completed by Miss. Twinkal Yadora Kore, M.Sc chemistry, post-graduation teaching department of chemistry, Yashwantrao Chawhan arts, commerce and science college lakhandur for the partial fulfillment of the degree of Master of science in chemistry in the faculty of science and technology, Rashtrasant Tukdoji Maharaj Nagpur university, Nagpur for session 2022-23.

To the best of my knowledge and belief, this work has not been submitted earlier to this or any other university or institution for any research degree or diploma or certificate.



Miss. N.G. Parchake

Supervisor

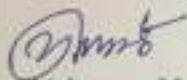
Assistant professor

Yashwantrao Chawhan Arts, Commerce
And Science College Lakhandur Dist. Bhandara

Place: Lakhandur

Date: 30/06/2023

Forwarded by:



Dr. Sudhirkumar M. Maskey

Head & Assistant professor

Yashwantrao Chawhan Arts, Commerce
And Science College Lakhandur Dist. Bhandara

Head
Department Of Chemistry
*C College, Lakhandur
Lakh-Bhandara-441803

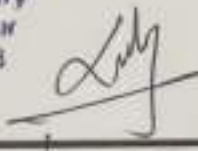


Dr. J.V. Dadve

Principal

Yashwantrao Chawhan Arts, Commerce
And Science College Lakhandur Dist. Bhandara

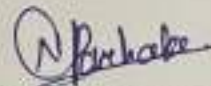
PRINCIPAL
Yashwantrao Chawhan College
Lakhandur Dist. Bhandara



CERTIFICATE

This is to certify that the work incorporated in this project entitled "Review on Green Synthesis of Manganese Oxide Nanoparticles, Structural and Its Application" is satisfactory carried out and completed by Miss. Twinkal Yadora Kore, M.Sc chemistry, post-graduation teaching department of chemistry, Yashwantrao Chawhan arts, commerce and science college Lakhandur for the partial fulfillment of the degree of Master of science in chemistry in the faculty of science and technology, Rashtrasant Tukdoji Maharaj Nagpur university, Nagpur for session 2022-23.

To the best of my knowledge and belief, this work has not been submitted earlier to this or any other university or institution for any research degree or diploma or certificate.



Miss. N.G. Parchake

Supervisor

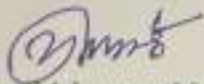
Assistant professor

Yashwantrao Chawhan Arts, Commerce
And Science College Lakhandur Dist. Bhandara

Place: Lakhandur

Date: 30/06/2023

Forwarded by:



Dr. Sudhirkumar M. Maskey

Head & Assistant professor

Yashwantrao Chawhan Arts, Commerce
And Science College Lakhandur Dist. Bhandara

Head
Department Of Chemistry
*C College, Lakhandur
Dist-Bhandara-441803

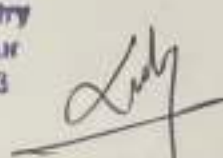


Dr. J.V. Dadve

Principal

Yashwantrao Chawhan Arts, Commerce
And Science College Lakhandur Dist. Bhandara

Principal
Yashwantrao Chawhan College
Lakhandur Dist. Bhandara



CERTIFICATE

This is to certify that the project entitle

**"PROFILE OF HYDROGEOLOGY FROM
WAINGANGARIVER WITH IMPACT OF HUMAN
ACTIVITIES AT-LAKHANDUR TAHSHIL, DISTRICT-
BHANDARA, MAHARASTRA"**

Submitted in partial fulfilments of the requirements for the degree of master of Science in Geology of the YASHWANTRAO CHAVHAN COLLEGE LAKHANDUR, R.T.M.N.U. Nagpur, is a recorded of project work carried out by **Lokman P. Diwathe** under my guidance and supervision.



Dr. J.V. DADVE Sir
Principal
Y.c. Collage Lakhandur



Guided By
Dr. S.G. JUARE Y.C.C.
And Head Department of
Geology

Dr. Snehal G. Juare
H.O.D.
Dept. of Geology
Yashwantrao Chavan College
Lakhandur

CERTIFICATE

This is to certify that **MISS. KARISHMA R. MESHRAM** has carried out his project work on the topic entitled of "**WATERSHED AND HYDROLOGY NEAR VIRLI VILLAGE AND AROUND, LAKHANDUR TALUKA DIST. BHANDARA, MAHARASHTRA** " during the academic session 2022-2023 under my supervision in the Post Graduate Department of Geology Yashwantrao Chawhan Arts Commerce, Science College Lakhandur This research work presented in this project is own work of the candidate.

Dr. Dr. S.G. JUARE
(Supervisor)

Dr. Snehal G. Juare
H.O.D.
Dept. of Geology
Yashwantrao Chawhan College
Lakhandur, Dist. Bhandara

[Signature]
28-6-23
Internal Examiner

[Signature]
28/6/23
External Examiner

[Signature]
Principal
Y. C. College, Lakhandur
Dist. Bhandara



YASHWANTRAO CHAWHAN COLLEGE , LAKHANDUR

CERTIFICATE

This is to certify that the thesis entitled “GROUND WATER POLLUTION AROUND INDUSTRIAL AND COAL MINING AREA .CHANDRAPUR DISTRICT MAHARASTRA” submitted by SHIVAM SUDHAKAR MANDHARE (Roll No:) in partial fulfilment of the requirements for the award of Master of Science degree in Geology at the YCC college lakhandur,dist. bhandara (RTM Nagpur university) is an authentic work carried out by him under my supervision and guidance.

To the best of my knowledge, the matter embodied in the thesis has not been submitted to any other University/Institute for the award of any Degree or Diploma.

Date: 20/06/2023

Dr. Snehal G. Juare
H.O.D.
Dept. of Geology
Yashwantrao Chawhan College
Lakhandur, Dist. Bhandara

Asst. Prof. S.S. GUDADHE
Assistant Professor
Department of Geology
Ycc college lakhandur
- 441803

28-6-23

Internal Examiner

Principal
Y. C. College, Lakhandu.
Dist, Bhandara

28/6/23

External Examiner

CERTIFICATE

This is to certify that the project entitle "Coal Quality Analysis From Wardha Valley Coalfield Chandrapur Area Dist. Chandrapur, Maharashtra "

Submitted in partial fulfilments of the requirements for the degree of master of Science in Geology of the **YASHWANTRAO CHAVHAN COLLEGE LAKHANDUR** affiliated to **R.T.M.N.U. Nagpur** , is a recorded of project work carried out by **Zakiya shireen mohammad** under my guidance and supervision.

Dr.J.V.DADVE

Principal

Y.C.C. COLLEGE LAKHANDUR



Guided By

Dr. Snehal G. Juare
Prof. Dr. S. G. JUARE

Dept. of Geology

Yashwantrao Chavhan College
Lakhandur, Dist. Bhandara

Department Of

Geology

Dadve
28-6-23

Internal Examiner

Bonny
28/6/23

External Examiner

[Signature]
Principal
Y. C. College, Lakhandur
Dist. Bhandara

Principal
Y. C. College, Lakhandur
Dist. Bhandara

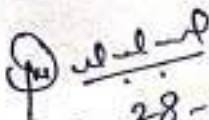
CERTIFICATE

This is to certify that **MISS. MANALI M. SONWANE** has carried out his project work on the topic entitled of **THE SEDIMENTARY ROCKS IN LAKHANDUR AREA DIST BHANDARA** during the academic session 2022-2023 under my supervision in the Post Graduate Department of Geology Yashwantrao Chawhan Arts, Commerce & Science College Lakhandur This research work presented in this project is own work of the candidate.



Dr. S. G. JUARE
(Supervisor)

Dr. Snehal G. Juare
H.O.D.
Dept. of Geology
Yashwantrao Chawhan College
Lakhandur, Dist. Bhandara


28-6-23
Internal Examiner


28/06/23
External Examiner


Principal
Y. C. College, Lakhandu.
Dist. Bhandara

CERTIFICATE

This is to certify that the project entitle "PRE-MONSOON GROUNDWATER LEVEL STUDY OF LAKHANDUR TOWN, MAHARASHTRA"

Submitted in partial fulfilments of the requirements for the degree of master of Science in Geology of the YASHWANTRAO CHAVHAN COLLEGE LAKHANDUR, R.T.M.N.U. Nagpur, is a recorded of project work carried out by Mr. Roshan S. Burde under my guidance and supervision.


Dr. S. S. GUDADHE
Principal
Lakhandur

Y.C.C. COLLEGE LAKHANDUR



Guided By

Dr. S. S. GUDADHE

Asst. Prof. Of

Department Of Geology


28-6-23
Internal Examiner

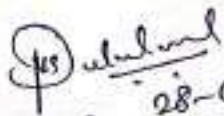

External Examiner
20/09/23

Certificate

This is to certify that Miss. Mayuri Dhakade has carried out his project work on the topic entitled of "HYDROGEOMORPHOLOGICAL STUDY OF LAKHANDUR TALUKA DIST. BHANDARA, MAHARASHTRA" during the academic session 2022-2023 under my supervision in the Post Graduate Department of Geology Yashwantrao Chawhan Arts, Commerce & Science College Lakhandur This research work presented in this project is own work of the candidate.



Dr. Swapnil S. Gudadhe
(Supervisor)


28-6-23

Internal Examiner



Principal
Y.C. College, Lakhandur
Dist. Bhandara


28/06/23

External Examiner




**POST GRADUATE DEPARTMENT OF GEOLOGY
YASHWANTRAO CHAWHAN ARTS COMMERCE
SCIENCE COLLEGE
LAKHANDUR DIST -BHANDARA
2022-2023 (M.S.) 441803**

Dr. S.G. JUARE
Head of Department
Mo No- 9175740864


Certificate

This is to certify that the dissertation thesis entitled
“GEOLOGICAL STUDY OF THE BASIC DYKES OCCURING IN THE
KURKHEDA AREA, GADCHIROLI DISTRICT, MAHARASHTRA” Being
submitted here as a part – fulfillment for the award of the degree of **Master of Science in
Geology, Faculty of Science, Yashwantrao Chawhan Arts, Commerce & Science College
Lakhandur, Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur, embodies result of
the bonafide research and field work carried out by MISS. MAYURI DHAKADE,
during 2022-23.**

I further certify that work has not formed the basis for the award of any such
degree, diploma or other title earlier.


Dr. S.G. JUARE
Professor & Head
Department of Geology,
YCACC Lakhandur

Date: 16/2023
Place: Lakhandur

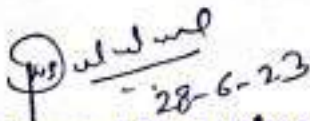

Principal
Y. C. College, Lakhandur
Dist, Bhandara

CERTIFICATE

This is to certify that MISS. SWATI D. GADEKAR has carried out his project work on the topic entitled of "Hydro geomorphological Study of Pauni Taluka Dist-Bhandara, Maharashtra" during the academic session 2022-2023 under my supervision in the Post Graduate Department of Geology Yashwantrao Chawhan Arts, Commerce & Science College Lakhandur This research work presented in this project is own work of the candidate.



Dr. Swapnil S. Gudadhe
(Supervisor)



28-6-23

Internal Examiner



28/6/23

External Examiner



Principal
Y. C. College, Lakhandur
Dist, Bhandara

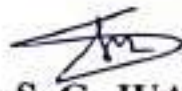


**POST GRADUATE DEPARTMENT OF GEOLOGY
YASHWANTRAO CHAWHAN ARTS COMMERCE
SCIENCE COLLEGE
LAKHANDUR DIST -BHANDARA
2022-2023 (M.S.) 441803**

Dr. S. G. JUARE
Head of Department
Mo No- 9175740864

Certificate

This is to certify that the dissertation thesis entitled
"Hydro geomorphological Study of Pauni Taluka Dist- Bhandara, Maharashtra "
Being submitted here as a part – fulfillment for the award of the degree of Master of
Science in Geology, Faculty of Science, Yashwantrao Chawhan Arts Commerce, Science
College Lakhandur, Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur, embodies
result of the bonafide research and field work carried out by MISS. SWATI D.
GADEKAR, during 2022-23.


Dr. S. G. JUARE
Professor & Head
Department of Geology,
YCACC Lakhandur

Date: 20/06/2023
Place: Lakhandur



**Principal
Y. C. College, Lakhandur
Dist, Bhandara**



**POST GRADUATE DEPARTMENT OF GEOLOGY
YASHWANTRAO CHAWHAN ARTS COMMERCE
SCIENCE COLLEGE**

LAKHANDUR DIST -BHANDARA

2022-2023 (M.S.) 441803

Dr. S.G. JUARE
Head of Department
Mo No- 9175740864

Certificate

This is to certify that the dissertation thesis entitled
“ **HYDROGEOMORPHOLOGICAL STUDY OF LAKHANDUR TALUKA DIST.
BHANDARA, MAHARASHTRA** ” Being submitted here as a part – fulfillment for the
award of the degree of **Master of Science in Geology, Faculty of Science, Yashwantrao
Chawhan Arts Commerce, Science College Lakhandur, Rashtrasant Tukadoji Maharaj
Nagpur University, Nagpur, embodies result of the bonafide research and field work
carried out by MISS. PALLAVI VINAYAK ITWALE, during 2022-23.**

I further certify that work has not formed the basis for the award of any such
degree, diploma or other title earlier.


Dr. S.G. JUARE
Professor & Head
Department of Geology,
YCACC Lakhandur

Principal
Y. C. College, Lakhandur
Dist. Bhandara

Date: 28/04/2023
Place: Lakhandur


CERTIFICATE

This is to certify that **MISS. MAHESHWARI N. BHALAVI** has carried out his project work on the topic entitled of **"PRE – MONSOON GROUNDWATER LEVEL STUDY OF SAKOLI TOWN OF BHANDARA DISTRICT, MAHARASHTRA"** during the academic session 2022-2023 under my supervision in the Post Graduate Department of Geology Yashwantrao Chawhan Arts, Commerce & Science College Lakhandur This research work presented in this project is own work of the candidate.


Dr. Swapnil S. Gudadhe
(Supervisor)

Internal Examiner


External Examiner


Principal
Y. C. College, Lakhandur
Dist, Bhandara




**POST GRADUATE DEPARTMENT OF GEOLOGY
YASHWANTRAO CHAWHAN ARTS COMMERCE
SCIENCE COLLEGE
LAKHANDUR DIST -BHANDARA
2022-2023 (M.S.) 441803**


Dr. S. G. JUARE
Head of Department
Mo No- 9175740864

Certificate

This is to certify that the dissertation thesis entitled
“PRE – MONSOON GROUNDWATER LEVEL STUDY OF SAKOLITOWN OF
BHANDARA DISTRICT, MAHARASHTRA” Being submitted here as a part –
fulfillment for the award of the degree of Master of Science in Geology, Faculty of
Science, Yashwantrao Chawhan Arts Commerce, Science College Lakhandur, Rashtrasant
Tukadoji Maharaj Nagpur University, Nagpur, embodies result of the bonafide research
and field work carried out by MISS. MAHESHWARI N. BHALAVI, during 2022-23.


Dr. S. G. JUARE
Professor & Head
Department of Geology,
YCACC Lakhandur

Date: 20/06/2023
Place: Lakhandur


Principal
Y. C. College, Lakhandur.
Dist, Bhandara




**POST GRADUATE DEPARTMENT OF GEOLOGY
YASHWANTRAO CHAWHAN ARTS COMMERCE
SCIENCE COLLEGE
LAKHANDUR DIST -GONDIA
2022-2023 (M.S.) 441803**

Dr. S. G. JUARE
Head of Department
Mo No- 9175740864


Certificate

This is to certify that the dissertation thesis entitled
**"GEOLOGICAL STUDY OF KYANITE-SILLIMANITE MINE OF DAHEGAO
VILLAGE TALUKA LAKHANDUR, DISTRICT BHANDARA, MAHARASHTRA"**
Being submitted here as a part – fulfillment for the award of the degree of Master of
Science in Geology, Faculty of Science, Yashwantrao Chawhan Arts, Commerce,
Science College Lakhandur, Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur,
embodies result of the bonafide research and field work carried out by **MISS. PRAGATI
A. PAWAR**, during 2022-23.

I further certify that work has not formed the basis for the award of any such degree,
diploma or other title earlier.


Dr. S. G. JUARE
Professor & Head
Department of Geology,
YCACC Lakhandur

Date: 20 / 6 / 2023
Place: Lakhandur


Principal
Y. C. College, Lakhandu.
Dist. Bhandara

CERTIFICATE

This is to certify that the project entitle "Geological mapping of Vairagad area near Armori in Gadchiroli District"

Submitted in partial fulfilments of the requirements for the degree of master of Science in Geology of the YASHWANTRAO CHAVHAN COLLEGE LAKHANDUR , R.T.M.N.U.Nagpur , is a recorded of project work carried out by Mr.Shivkumar R Ghaturkar under my guidance and supervision.

Principal
Y.C. College Lakhandur
Dist. Bhandara


Dr.J.V.DADVE

Principal

Y.C.C. COLLEGE LAKHANDUR

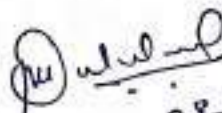


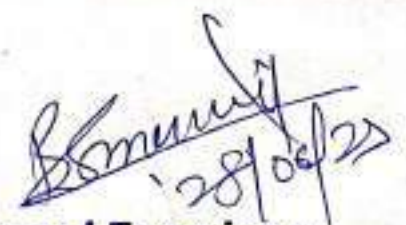
Guided By

Prof. Dr.S. G. JUARE

Head


Department Of Geology


28-6-2023
Internal Examiner


28/06/23
External Examiner

CERTIFICATE

This is to certify that MISS. PRAGATI A. PAWAR has carried out his project work on the topic entitled of "GEOLOGICAL STUDY OF KYANITE-SILLIMANITE MINE OF DAHEGAO VILLAGE TALUKA LAKHANDUR, DISTRICT BHANDARA, MAHARASHTRA" during the academic session 2022-2023 under my supervision in the Post Graduate Department of Geology Yashwantrao Chawhan Arts Commerce, Science College Lakhandur This research work presented in this project is own work of the candidate.


Dr. S. G. JUARE
(Supervisor)

Principal
Dr. S. G. Juare
Y. C. College, Lakhandur
Dept. of Geology
Yashwantrao Chawhan College
Lakhandur, Dist. Bhandara


28-6-23
Internal Examiner


28/6/23
External Examiner


Principal
Y. C. College, Lakhandur
Dist. Bhandara

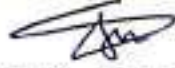


**POST GRADUATE DEPARTMENT OF GEOLOGY
YASHWANTRAO CHAWHAN ARTS COMMERCE
SCIENCE COLLEGE
LAKHANDUR DIST -GONDIA
2022-2023 (M.S.) 441803**

Dr. S. G. JUARE
Head of Department
Mo No- 9175740864

Certificate

This is to certify that the dissertation thesis entitled
“PRE – MONSOON GROUNDWATER LEVEL STUDY OF ARJUNI –MORGAON
TOWN OF GONDIA DISTRICT, MAHARASHTRA” Being submitted here as a part
– fulfillment for the award of the degree of Master of Science in Geology, Faculty of
Science, Yashwantrao Chawhan Arts Commerce, Science College Lakhandur, Rashtrasant
Tukadoji Maharaj Nagpur University, Nagpur, embodies result of the bonafide research
and field work carried out by **MISS. CHETANA A. PAWAR**, during 2022-23.


Dr. S. G. JUARE
Professor & Head
Department of Geology,
YCACC Lakhandur

Date: 20/06/2023
Place: Lakhandur


Principal
Y. C. College, Lakhandur,
Dist, Bhandara



**POST GRADUATE DEPARTMENT OF GEOLOGY
YASHWANTRAO CHAWHAN ARTS COMMERCE
SCIENCE COLLEGE
LAKHANDUR DIST -BHANDARA
2022-2023 (M.S.) 441803**

Dr. S.G. JUARE
Head of Department
Mo No- 9175740864

Certificate

This is to certify that the dissertation thesis entitled
“GEOLOGICAL STUDY OF THE DEWULGAO AREA TALUKA ARMORI,
GADCHIROLI DISTRICT, MAHARASHTRA” Being submitted here as a part –
fulfillment for the award of the degree of **Master of Science in Geology, Faculty of
Science, Yashwantrao Chawhan Arts, Commerce & Science College Lakhandur,
Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur, embodies result of the
bonafide research and field work carried out by MISS. SUPRIYA SHAMKUWAR,
during 2022-23.**


Dr. S.G. JUARE
Professor & Head
Department of Geology,
YCACC Lakhandur

Date: 20/ 6/2023
Place: Lakhandur

Principal
Y.C. College, Lakhandu.
Dist, Bhandara


CERTIFICATE

This is to certify that **Miss. Chetana A. Pawar** has carried out his project work on the topic entitled of **"Pre – Monsoon Groundwater Level Study of Arjuni –Morgaon Town of Gondia District, Maharashtra"** during the academic session 2022-2023 under my supervision in the Post Graduate Department of Geology Yashwantrao Chawhan Arts, Commerce & Science College Lakhandur This research work presented in this project is own work of the candidate.


Dr. Swapnil S. Gudadhe
(Supervisor)


Internal Examiner


External Examiner


Principal
Y. C. College, Lakhandur
Dist. Bhandara



POST GRADUATE DEPARTMENT OF GEOLOGY
YASHWANTRAO CHAWHAN ARTS COMMERCE SCIENCE
COLLEGE
LAKHANDUR DIST -BHANDARA
2022-2023 (M.S.) 441803

Dr. S.G. JUARE
Head of Department
Mo No- 9175740864

Certificate

This is to certify that the dissertation thesis entitled
“Geology and Chemistry of Titaniferous Iron Ore Deposited Form Khursipar
MSMC Mine and Adjoining Village in Tahsil Amgaon of Gondia District,
Maharashtra, India”. Being submitted here as a part – fulfillment for the award of the
degree of Master of Science in Geology, Faculty of Science, Yashwantrao Chawan
Arts, Commerce & Science College Lakhandur, Rashtrasant Tukadoji Maharaj Nagpur
University, Nagpur, embodies result of the bonafide research and field work carried out by
MR. AMIR S. SUKHADEVE, during 2022-23.

Dr. S.G. JUARE
Professor & Head
Department of Geology,
YCACC Lakhandur

Date 28/06/2023
Place: Lakhandur

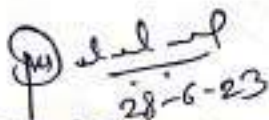
Principal
Y. C. College, Lakhandu.
Dist, Bhandara

Certificate

This is to certify that MISS. SUPRIYA SHAMKUWAR has carried out his project work on the topic entitled of "GEOLOGICAL STUDY OF THE DEWULGAO AREA TALUKA ARMORI, GADCHIROLI DISTRICT, MAHARASHTRA" during the academic session 2022-2023 under my supervision in the Post Graduate Department of Geology Yashwantrao Chawhan Arts, Commerce & Science College Lakhandur This research work presented in this project is own work of the candidate.



**Dr. Swapnil S. Gudadhe
(Supervisor)**



28-6-23

Internal Examiner



**Principal
Y. C. College, Lakhandur
Dist, Bhandara**



28/06/23

External Examiner

CERTIFICATE

This is to certify that, project work entitled "sedimentary rocks of kamptee area" is being submitted here as a partial fulfilment of the award of the degree of Master of Science in Geology, under the faculty of science, Rashtrasant Tukdoji Maharaj University, Nagpur, embodies the bonafide work carried out by Miss. Ashika Subhash Madne. The present report is based on extensive literature survey. The materials, such as texts, tables, and figures presented in this report are being used here solely for academic purpose after giving proper credit to the original authors. This report will not be used for drawing any commercial benefits or academic credentials. Therefore, this report, either completely or in part, will not lead to any infringement of the copyright or being considered as plagiarism within the context mentioned here in above. This certificate is issued within the scope and limit as stated above.

Guided by



SNEHAL JUARE

(Assistant Professor And Head Of Department Of Geology)
Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur, Bhandara District
Maharashtra

Dr. Snehal G. Juare

H.O.D.
Dept. of Geology

Y: 100

28/6/23


28-6-23
Internal Examiner


28/6/23
External Examiner


Principal
Y. C. College, Lakhandur
Dist. Bhandara

Certificate

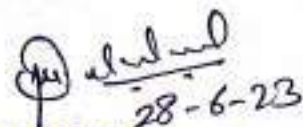
This is to certify that **Mr. Amir S. Sukhadeve** has carried out his project work on the topic entitled of **"Geology and Chemistry of Titaniferous Iron Ore Deposited Form Khursipar MSMC Mine and Adjoining Village in Tahsil Amgaon of Gondia District, Maharashtra, India"**. during the academic session 2022-2023 under my supervision in the Post Graduate Department of Geology Yashwantrao Chawhan Arts, Commerce & Science College Lakhandur This research work presented in this project is own work of the candidate.




Dr. Swapnil S. Gudadhe
(Supervisor)



External Examiner



Internal Examiner



Principal
Y. C. College, Lakhandur
Dist, Bhandara

CERTIFICATE

This is to certify that the project entitle
"HYDROGEOLOGICAL STUDISE IN SELECTED FIVE
VILLEGES OF LAKHANDUR TALUKA, BHANDARA DISTRICT,
MAHARASTRA"

Submitted in partial fulfilments of the requirements for the
degree of master of Science in Geology of the YASHWANTRAO
CHAVHAN COLLEGE LAKHANDUR, R.T.M.N.U. Nagpur, is a recorded
of project work carried out by **Vyankat H. Kapgate** under my
guidance and supervision.



Dr. J.V. DADVE Sir
Principal
Y.c. collage Lakhandur

Principal
Y.C. College, Lakhandu;
Dist, Bhandara



Guided By
Prof. Dr.S.G. JUARE Y.c.c. prof
and Head Department of
Geology

CERTIFICATE

This is to certify that the dissertation entitled "Isolation of Chickpea nodule Microsymbiont and screening for the potential plant growth promoting traits nearby Y. C. College Lakhandur, Bhandara, Maharashtra" submitted to Post Graduate Teaching Department of Microbiology, Yashwantrao Chawhan Arts, Commerce & Science College Lakhandur, Dist- Bhandara, for the Partial Fulfillment of the Degree of Master of Science in Microbiology embodies the result of the bonafide work carried out by Miss. Sandhya Yashwant Dahi under my Guidance and Supervision in the Post Graduate Teaching Department of Microbiology, Yashwantrao Chawhan Arts, Commerce & Science College Lakhandur, Dist- Bhandara, Maharashtra, India, Pin-441803.

This work was done under the Guidance and Supervision of Dr. Rakesh U. Thakare. This work is now ready for Examination.

Date: 20.06.2023

Place: Lakhandur



Dr. Rakesh U. Thakare,
Assistant Professor & Head

Dr. Rakesh U. Thakare
Assistant Professor & Head
Dept. of Microbiology
Y. C. College, Lakhandur,
Dist. Bhandara.



Principal
Dr. J. V. Dadve

Principal
Y. C. College, Lakhandur,
Dist. Bhandara



DEPARTMENT OF MICROBIOLOGY
YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE COLLEGE
LAKHANDUR
AFFILIATED TO
RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR



Certificate



This is to certify that the project entitled "Study on Effect of Plant growth promoting bacteria with Biochar on Plant Growth", is satisfactorily carried out and completed by Miss. Mayuri Madhoroa Ghanade, M.Sc. Microbiology, Yashwantrao Chawhan Arts, Commerce & Science College, Lakhadur, Dist. Bhandara for the partial fulfillment of the Degree of MASTER OF SCIENCE in MICROBIOLOGY in the faculty of Science & Technology of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur in the Year 2023.

Dr. RAJU GADPAYLE

Project Supervisor
Department of Microbiology

Dr. R.U. THAKARE

HOD
Department of Microbiology
Dr. Rakesh U. Thakare
Assistant Professor & Head
Dept. of Microbiology
Y. C. College, Lakhadur,
Dist. Bhandara.

Dr. J. V. DADVE

Principal

Principal
Y. C. College, Lakhadur
Dist. Bhandara



DEPARTMENT OF MICROBIOLOGY
YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE COLLEGE
LAKHANDUR
AFFILIATED TO
RASHTRASANT TUKADJI MAHARAJ NAGPUR UNIVERSITY NAGPUR



Certificate



This is to certify that the project entitled "Study on Antibacterial Activity of *Hibiscus sabdariffa* on Pathogenic Bacteria", is satisfactorily carried out and completed by Miss. Nandini Anant Gohane, M.Sc. Microbiology, Yashwantrao Chawhan Arts, Commerce & Science College, Lakhadur, Dist. Bhandara for the partial fulfillment of the Degree of MASTER OF SCIENCE in MICROBIOLOGY in the faculty of Science & Technology of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur in the Year 2023.

Dr. RAJU GADPAYLE

Project Supervisor
Department of Microbiology

Dr. R.U. THAKARE

HOD
Department of Microbiology
Dr. Rakesh U. Thakare
Assistant Professor & Head
Dept. of Microbiology
Y. C. College, Lakhadur,
Dist. Bhandara.

Dr. J. V. DADVE
Principal
Y. C. College, Lakhadur
Dist. Bhandara



DEPARTMENT OF MICROBIOLOGY
YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE COLLEGE
LAKHANDUR
AFFILIATED TO
RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR



Certificate



This is to certify that the project entitled "Study on the Antimicrobial Activity of *Withania somnifera* Extract", is satisfactorily carried out and completed by Miss. Neha Giridhar Fulbandhe, M.Sc. Microbiology, Yashwantrao Chawhan Arts, Commerce & Science College, Lakhadur, Dist. Bhandara for the partial fulfillment of the Degree of MASTER OF SCIENCE in MICROBIOLOGY in the faculty of Science & Technology of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur in the Year 2023.

Dr. RAJU GADPAYLE

Project Supervisor
Department of Microbiology

Dr. R.U. THAKARE

HOD
Department of Microbiology

Dr. Rakesh U. Thakare
Assistant Professor & Head
Dept. of Microbiology
Y. C. College, Lakhadur,
Dist. Bhandara.

Dr. J. V. DADVE
Principal
Y.C. College, Lakhadur
Dist. Bhandara



DEPARTMENT OF MICROBIOLOGY
YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE COLLEGE
LAKHANDUR
AFFILIATED TO
RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR



Certificate



This is to certify that the project entitled "Study on Effect of Plant growth promoting bacteria with Biochar on Plant Growth", is satisfactorily carried out and completed by Miss. Mayuri Madhorao Ghanade, M.Sc. Microbiology, Yashwantrao Chawhan Arts, Commerce & Science College, Lakhadur, Dist. Bhandara for the partial fulfillment of the Degree of MASTER OF SCIENCE in MICROBIOLOGY in the faculty of Science & Technology of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur in the Year 2023.

Dr. RAJU GADPAYLE

Project Supervisor
Department of Microbiology

Dr. R.U. THAKARE

HOD
Department of Microbiology
Dr. Rakesh U. Thakare
Assistant Professor & Head
Dept. of Microbiology
Y. C. College, Lakhadur,
Dist. Bhandara.

Dr. J. V. DADVE

Principal

Principal
Y. C. College, Lakhadur
Dist. Bhandara



DEPARTMENT OF MICROBIOLOGY
YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE COLLEGE
LAKHANDUR

AFFILIATED TO
RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR



Certificate



This is to certify that the project entitled "Isolation And Characterization of Plant Growth Promoting Rhizobacteria from Mimosa Root", is satisfactorily carried out and completed by Miss. Monali Tularam Naktode, M.Sc. Microbiology, Yashwantrao Chawhan Arts, Commerce & Science College, Lakhadur, Dist. Bhandara for the partial fulfillment of the Degree of MASTER OF SCIENCE in MICROBIOLOGY in the faculty of Science & Technology of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur in the Year 2023.

Dr. RAJU GADPAYLE

*Project Supervisor
Department of Microbiology*

Dr. R.U. THAKARE

*HOD
Department of Microbiology
Dr. Rakesh U. Thakare
Assistant Professor & Head
Dept. of Microbiology
Y. C. College, Lakhadur,
Dist. Bhandara.*

Dr. J. V. DADVE

Principal

Principal
Y. C. College, Lakhadur
Dist. Bhandara





Shri.Kisanrao Khobragade Eduaction Society Armori's

Yashwantrao Chawhan

POST GRADUATE DEPARTMENT OF MICROBIOLOGY

Arts, Commerce & Science College

LAKHANDUR, Dist-BHANDARA, (M.S.), INDIA-441 803

Accredited with 'B' Grade by NAAC, Bangalore

(Affiliated To Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)

Dr. Rakesh U. Thakare

Head of Department

Assistant Professor in Microbiology

M.Sc. Ph.D. in Microbiology

Dr. J. V. Dadve

Principal

Yashwantrao Chawhan

College, Lakhandur

CERTIFICATE

This is to certify that the project/dissertation report entitled "MICROBIAL SIDEROPHORES PRODUCTION FROM BACTERIUM BY ISOLATION AND DETECTION FROM SOIL SAMPLE FOR ITS APPLICATION IN AGRICULTURE" submitted to R.T.M. Nagpur University, as a Partial Fulfillment of the Degree of Masters of Science in Microbiology. Present project was bonafide and an original research work carried out by **Ms. Hrutuja Rajendra Chavhan** under the guidance and supervision of **Mr. Pravin Thikare**, Assistant Professor in Department of Microbiology during the academic year 2022-2023.

I further declare that no part of this project/dissertation has been submitted to any other university or institution for the award of any degree or diploma.

Dr. Rakesh U. Thakare

Head and Assistant Professor

Yashwantrao Chawhan Arts,

Commerce & Science College,

Lakhandur

Dr. J. V. Dadve

Principal

Yashwantrao Chawhan Arts,

Commerce & Science College,

Lakhandur

Principal

Y. C. College, Lakhandar

Dist. Bhandara



Dr. Rakesh U. Thakare
Assist. Professor & Head
Dept. of Microbiology
Y.C. College, Lakhandar,
Dist. Bhandara.

CERTIFICATE

This is to certify that project report entitled "ANTIBACTERIAL AND ANTICANCER ACTIVITY OF NYMPHAEA TUBER" is hereby submitted under the partial fulfillment of Master of Science Degree in microbiology in the Academic year of 2022-23.

The work presented here in the report has been carried out by **Miss. Priyanka Ashok Raut**, A student of semester IV M.Sc Microbiology, Yashwantrao chawhan Arts Commerce and Science college, Lakhandur (M.S.) under the guidance of **Mr. Pravin Thikre**, Assistant Professor, Yashwantrao chawhan Arts Commerce and Science College, Lakhandur (M.S.)



Mr. Pravin Thikre

Project Guide

Assistant Professor,

Department of Microbiology,

Yashwantrao Chawhan Arts, Commerce

and Science College Lakhandur (M.S.)



Dr. Rakesh U. Thakre

Head of Department, Microbiology

Yashwantrao Chawhan Arts, Commerce

and Science College Lakhandur (M.S.)



Dr. P. M. Dhadke

Y.C. College, Lakhandur
Principal Yashwantrao Chawhan Arts
Dist. Bilandara

Commerce and Science College Lakhandur (M.S.)



CERTIFICATE

This is to certify that project report entitled "ISOLATION OF PLANT GROWTH PROMOTING RHIZOBACTERIA AND THEIR EFFECT ON CROP PLANTS" is hereby submitted under the Partial Fulfillment of Master of Science Degree in Microbiology in the Academic Year 2021-22.

The work presented here in the report has been carried out by Miss. Rutuja Rajendra Marwade, a student of Semester IV M.Sc. Microbiology, Yashwantrao Chawhan Arts Commerce & Science College, Lakhandur (M.S) under the guidance of Mr. Pravin Thikre, Assistant Professor, Yashwantrao Chawhan Arts, Commerce & Science College, Lakhandur (M.S).

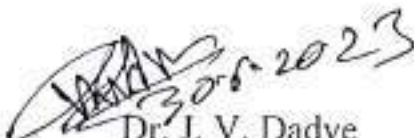


Mr. Pravin Thikre
Project Guide
Assistant Professor,
Department of Microbiology,
Yashwantrao Chawhan Arts, Commerce
& Science College, Lakhandur.



Dr. Rakesh U. Thakre
Head of Department of Microbiology
Yashwantrao Chawhan Arts, Commerce
& Science College, Lakhandur.
Dr. Rakesh U. Thakre
Assistant Professor & Head
Dept. of Microbiology
Y. C. College, Lakhandur,
Dist. Bhandara.




30.08.2023
Dr. J. V. Dadve
PRINCIPAL
Yashwantrao Chawhan Arts, Commerce
& Science College, Lakhandur.
Principal
Y. C. College, Lakhandur
Dist, Bhandara



DEPARTMENT OF MICROBIOLOGY
YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE COLLEGE
LAKHANDUR
AFFILIATED TO
RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR



Certificate



This is to certify that the project entitled "Isolation And Characterization of Plant Growth Promoting Rhizobacteria from Mimosa Root", is satisfactorily carried out and completed by Miss. Monali Tularam Naktode, M.Sc. Microbiology, Yashwantrao Chawhan Arts, Commerce & Science College, Lakhadur, Dist. Bhandara for the partial fulfillment of the Degree of MASTER OF SCIENCE in MICROBIOLOGY in the faculty of Science & Technology of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur in the Year 2023.

Dr. RAJU GADPAYLE

Project Supervisor
Department of Microbiology

Dr. R.U. THAKARE

HOD
Department of Microbiology
Dr. Rakesh U. Thakare
Assistant Professor & Head
Dept. of Microbiology
Y. C. College, Lakhadur,
Dist. Bhandara.

Dr. J. V. DADVE

Principal

Principal
Y. C. College, Lakhadur
Dist. Bhandara



DEPARTMENT OF MICROBIOLOGY
YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE COLLEGE
LAKHANDUR
AFFILIATED TO
RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR.



Certificate



This is to certify that the project entitled "Study on Phytochemical Extraction and Antimicrobial Activity of *Melissa officinalis*", is satisfactorily carried out and completed by Miss. Priti Lalchand Meshram, M.Sc. Microbiology, Yashwantrao Chawhan Arts, Commerce & Science College, Lakhadur, Dist. Bhandara for the partial fulfillment of the Degree of MASTER OF SCIENCE in MICROBIOLOGY in the faculty of Science & Technology of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur in the Year 2023.

Dr. RAJU GADPAYLE

Project Supervisor
Department of Microbiology

Dr. R.U. THAKARE

HOD
Department of Microbiology
Dr. Rakesh U. Thakare
Assistant Professor & Head
Dept. of Microbiology
Y. C. College, Lakhadur,
Dist. Bhandara.

Dr. J. V. DADVE
Principal
Y. C. College, Lakhadur,
Dist. Bhandara

CERTIFICATE

This is to certify that project report entitled "ISOLATION OF PLANT GROWTH PROMOTING RHIZOBACTERIA AND THEIR EFFECT ON CROP PLANTS" is hereby submitted under the Partial Fulfillment of Master of Science Degree in Microbiology in the Academic Year 2021-22.

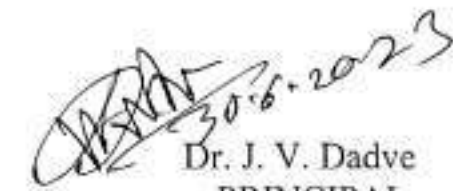
The work presented here in the report has been carried out by **Miss. Rutuja Rajendra Marwade**, a student of Semester IV M.Sc. Microbiology, Yashwantrao Chawhan Arts Commerce & Science College, Lakhandur (M.S) under the guidance of **Mr. Pravin Thikre**, Assistant Professor, Yashwantrao Chawhan Arts, Commerce & Science College, Lakhandur (M.S).



Mr. Pravin Thikre
Project Guide
Assistant Professor,
Department of Microbiology,
Yashwantrao Chawhan Arts, Commerce
& Science College, Lakhandur.



Dr. Rakesh U. Thakre
Head of Department of Microbiology
Yashwantrao Chawhan Arts, Commerce
& Science College, Lakhandur.
Assistant Professor & Head
Dept. of Microbiology
Y. C. College, Lakhandur,
Dist. Bhandara.



Dr. J. V. Dadve
PRINCIPAL
Yashwantrao Chawhan Arts, Commerce
& Science College, Lakhandur.

Principal
Y. C. College, Lakhandur
Dist. Bhandara



CERTIFICATE

This is to certify that the dissertation entitled "**Growth Media Development from Different Fruit Peels Waste and Their Optimization for *Aspergillus Species***" submitted to Post Graduate Teaching Department of Microbiology, Yashwantrao Chawhan Arts, Commerce & Science College Lakhandur, Dist- Bhandara, for the Partial Fulfillment of the Degree of Master of Science in Microbiology embodies the result of the bonafide work carried out by **Miss. Pooja Tikeshwar Bhujade** under my Guidance and Supervision in the **Post Graduate Teaching Department of Microbiology**, Yashwantrao Chawhan Arts, Commerce & Science College Lakhandur, Dist- Bhandara, Maharashtra, India, Pin-441803.

This work was done under the Guidance and Supervision of **Dr. R.U. Gadpayle**. This work is now ready for Examination.

Date: 20/06/2023

Place: Lakhandur



Dr. R. U. Gadpayle
Assistant Professor



Principal
Y. C. College, Lakhandur
Dist. Bhandara
Principal
Dr. J. V. Dadve



Dr. Rakesh U. Thakare
Assistant Professor & Head
Dept. of Microbiology
Y. C. College, Lakhandur,
Dist. Bhandara.



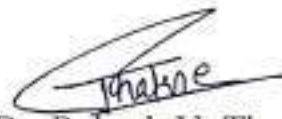
CERTIFICATE

This is to certify that project report entitled "ISOLATION OF PLANT GROWTH PROMOTING RHIZOBACTERIA AND THEIR EFFECT ON CROP PLANTS" is hereby submitted under the Partial Fulfillment of Master of Science Degree in Microbiology in the Academic Year 2021-22.


The work presented here in the report has been carried out by **Miss. Sakshi Govinda Khadse**, a student of Semester IV M.Sc. Microbiology, Yashwantrao Chawhan Arts Commerce & Science College, Lakhandur (M.S) under the guidance of **Mr. Pravin Thikre**, Assistant Professor, Yashwantrao Chawhan Arts, Commerce & Science College, Lakhandur (M.S).



Mr. Pravin Thikre
Project Guide
Assistant Professor,
Department of Microbiology,
Yashwantrao Chawhan Arts, Commerce
& Science College, Lakhandur.



Dr. Rakesh U. Thakre
Head of Department of Microbiology
Yashwantrao Chawhan Arts, Commerce
& Science College, Lakhandur.
Dr. Rakesh U. Thakre
Assistant Professor & Head
Dept. of Microbiology
Y. C. College, Lakhandur,
Dist. Bhandara.



Dr. J. V. Dadve
PRINCIPAL
Yashwantrao Chawhan Arts, Commerce
& Science College, Lakhandur.

Principal
Y. C. College, Lakhandur
Dist. Bhandara



CERTIFICATE

This is to certify that project report entitled "ISOLATION OF PLANT GROWTH PROMOTING RHIZOBACTERIA AND THEIR EFFECT ON CROPLANTS" is hereby submitted under the Partial Fulfillment of Master of Science degree in Microbiology in the Academic Year 2021-22.

The work presented here in the report has been carried out by **Miss. Priyanka Ashok Raut**, a student of Semester IV M.Sc. Microbiology, Yashwantrao Chawhan Arts Commerce & Science College, Lakhandur (M.S) under the guidance of **Mr. Pravin Thikre**, Assistant Professor, Yashwantrao Chawhan Arts, Commerce & Science College, Lakhandur (M.S).




Mr. Pravin Thikre
Project Guide
Assistant Professor,
Department of Microbiology,
Yashwantrao Chawhan Arts, Commerce
& Science College, Lakhandur.



Dr. Rakesh U. Thakre
Head of Department of Microbiology
Yashwantrao Chawhan Arts, Commerce
& Science College, Lakhandur.
Dept. of Microbiology
Y. C. College, Lakhandur,
Dist. Bhandara.




Dr. J. V. Dadve
PRINCIPAL
Yashwantrao Chawhan Arts, Commerce
& Science College, Lakhandur.

Principal
Y.C. College, Lakhandur
Dist, Bhandara



CERTIFICATE

This is to certify that project report entitled "ANTIBACTERIAL AND ANTICANCER ACTIVITY OF SYMPHAEA SOUCHALI TUBER" is hereby submitted under the Partial Fulfillment of Master of Science Degree in Microbiology in the Academic Year 2021-22.

The work presented here in the report has been carried out by **Miss. RAJNANDINI PRASHANT BHURE**, a student of Semester IV M.Sc. Microbiology, Yashwantrao Chawhan Arts Commerce & Science College, Lakhandur (M.S) under the guidance of **Mr. Pravin Thikre**, Assistant Professor, Yashwantrao Chawhan Arts, Commerce & Science College, Lakhandur (M.S).



Mr. Pravin Thikre
Project Guide
Assistant Professor,
Department of Microbiology,
Yashwantrao Chawhan Arts, Commerce
& Science College, Lakhandur.



Dr. Rakesh U. Thakre
Head of Department of Microbiology
Yashwantrao Chawhan Arts, Commerce
& Science College, Lakhandur.
Dr. Rakesh U. Thakre
Assistant Professor & Head
Dept. of Microbiology
Y. C. College, Lakhandur,
Dist. Bhandara.



Dr. J. V. Dadve
PRINCIPAL
Yashwantrao Chawhan Arts, Commerce
& Science College, Lakhandur.
Principal
Y. C. College, Lakhandur
Dist. Bhandara





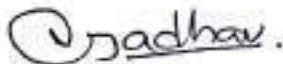
CERTIFICATE

This is to certify that the dissertation Report Entitled "**Isolation and Screening of Amylase producing bacteria**" submitted to the Department of Microbiology Yashwantrao Chawhan arts, commerce and science college, Lakhandur Affiliated to RTMN University, Nagpur for the partial fulfillment of Master of Science Degree in Microbiology under The Faculty of Science is the Record of original Research work carried out by **Miss. Tejaswini Panjabrao Kshirsagar** Under my Guidance.

This Dissertation Embodies the work of Candidate herself and no Part thereof have been previously Submitted to degree of this or Any Other University/ Institution.

Place : Lakhandur

Date : 20/6/2023



Mr. Vishnu Ganesh Jadhav

Project Supervisor
Assistant Professor
Department of Microbiology
Yashwantrao Chawhan Arts, Commerce
and Science college lakhandur



Dr. Rakesh U. Thakare

Head & Assistant professor
Department of Microbiology
Yashwantrao Chawhan Arts,
Commerce and science college
Lakhandur





Dr. J. V. Dadve

Principal

Yashwantrao Chawhan Arts Commerce &
Science College, Lakhandur.

Principal
Y. C. College, Lakhandur
Dist, Bhandara





CERTIFICATE

This is to certify that the dissertation Report Entitled "**Isolation and Screening of lipase producing bacteria**" submitted to the Department of Microbiology Yashwantrao Chawhan arts, commerce and science college, Lakhandur Affiliated to RTMN University, Nagpur for the partial fulfillment of Master of Science Degree in Microbiology under The Faculty of Science is the Record of original Research work carried out by **Miss Sukanya Sewak Hume** Under my Guidance.

This Dissertation Embodies the work of Candidate herself and no Part thereof have been previously Submitted to degree of this or Any Other University/ Institution.

Place : Lakhandur

Date :

Mr. Vishnu Ganesh Jadhav

Project Supervisor
Assistant Professor
Department of Microbiology
Yashwantrao Chawhan Arts, Commerce
and Science college lakhandur

Dr. Rakesh U. Thakare

Head & Assistant professor
Department of Microbiology
Yashwantrao Chawhan Arts,
Commerce and science college
Lakhandur

Dr. J. V. Dadve

Principal

Yashwantrao Chawhan Arts Commerce &
Science College, Lakhandur.

Principal
Y. C. College, Lakhandur
Dist. Bhandara





CERTIFICATE

This is to certify that the dissertation Report Entitled "The Ongoing Battle Against HIV/AIDS: Understanding the Epidemic, Current Progress on Vaccine, and Future Challenges" submitted to the Department of Microbiology Yashwantrao Chawhan arts, commerce and science college, Lakhandur Affiliated to RTMN University, Nagpur for the partial fulfillment of Master of Science Degree in Microbiology under The Faculty of Science is the Record of original Research work carried out by **Miss. Vrunda Vasanta Ther** Under my Guidance.

This Dissertation Embodies the work of Candidate herself and no Part thereof have been previously Submitted to degree of this or Any Other University/ Institution.

Place : Lakhandur

Date : 20/6/2023



Mr. Vishnu Ganesh Jadhav

Project Supervisor
Assistant Professor
Department of Microbiology
Yashwantrao Chawhan Arts, Commerce
and Science college lakhandur



Dr. Rakesh U. Thakare

Head & Assistant professor
Department of Microbiology
Yashwantrao Chawhan Arts,
Commerce and science college
Lakhandur





Dr. J. V. Dadve

Principal

Yashwantrao Chawhan Arts Commerce &
Science College, Lakhandur.

Principal
Y. C. College, Lakhandur
Dist. Bhandara





CERTIFICATE

This is to certify that the dissertation Report Entitled "A Review of Literature On Bioluminescence of Bacteria And Fungi" submitted to the Department of Microbiology Yashwantrao Chawhan arts, commerce and science college, Lakhandur Affiliated to RIMN University, Nagpur for the partial fulfillment of Master of Science Degree in Microbiology under The Faculty of Science is the Record of original Research work carried out by Miss. Yamini Prabhakar Zode Under my Guidance

This Dissertation Embodies the work of Candidate herself and no Part thereof have been previously Submitted to degree of this or Any Other University/ Institution

Place : Lakhandur

Date : 20/06/2023

Mr. Vishnu Ganesh Jadhav

Project Supervisor
Assistant Professor
Department of Microbiology
Yashwantrao Chawhan Arts, Commerce
and Science college Lakhandur

Dr. Rakesh U. Thakare

Head & Assistant professor
Department of Microbiology
Yashwantrao Chawhan Arts,
Commerce and science college
Lakhandur

Dr. J. V. Dadve

Principal

Yashwantrao Chawhan Arts Commerce &
Science College, Lakhandur

Principal
Y. C. College, Lakhandur
Dist. Bhandara





CERTIFICATE

This is to certify that the dissertation Report Entitled "**Siderophore Production, Screening, Quantitative Estimation, Detection, Types & Application – A review**" submitted to the Department of Microbiology Yashwantrao Chawhan arts, commerce and science college, Lakhandur Affiliated to RTMN University, Nagpur for the partial fulfillment of Master of Science Degree in Microbiology under The Faculty of Science is the Record of original Research work carried out by **Miss. Yukta Devrao Faye** Under my Guidance.

This Dissertation Embodies the work of Candidate herself and no Part thereof have been previously Submitted to degree of this or Any Other University/ Institution.

Place : Lakhandur

Date : 20-06-2023

Mr. Vishnu Ganesh Jadhav

Project Supervisor
Assistant Professor
Department of Microbiology
Yashwantrao Chawhan Arts, Commerce
and Science college lakhandur

Dr. Rakesh U. Thakare

Head & Assistant professor
Department of Microbiology
Yashwantrao Chawhan Arts,
Commerce and science college
Lakhandur

Dr. J. V. Dadve

Principal

Yashwantrao Chawhan Arts Commerce &
Science College, Lakhandur.
Principal
Y. C. College, Lakhandur
Dist, Bhandara





CERTIFICATE

This is to certify that the dissertation Report Entitled "**Role of Key Microorganism in Bioremediation- A Review**" submitted to the Department of Microbiology Yashwantrao Chawhan arts, commerce and science college, Lakhandur Affiliated to RTMN University, Nagpur for the partial fulfillment of Master of Science Degree in Microbiology under The Faculty of Science is the Record of original Research work carried out by **Miss. Shivani Shalikram Kamble** Under my Guidance.

This Dissertation Embodies the work of Candidate herself and no Part thereof have been previously Submitted to degree of this or Any Other University/ Institution.

Place: Lakhandur

Date: 20/6/2023


Mr. Vishnu Ganesh Jadhav

Project Supervisor
Assistant Professor
Department of Microbiology
Yashwantrao Chawhan Arts, Commerce
and Science college lakhandur


Dr. Rakesh U. Thakare

Head & Assistant professor
Department of Microbiology
Yashwantrao Chawhan Arts,
Commerce and science college
Lakhandur




Dr. J. V. Dadve

Principal

Yashwantrao Chawhan Arts Commerce &
Science College, Lakhandur.

Y. C. College, Lakhandur
Dist. Bhandara





Shri.KisanraoKhobragade Education Society,Armori, Dist.-Gadcholi

(Reg. No. F/1693-Gad-92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur
Dist.-Bhandara (M.S.) Pin- 441803**

NAAC Accreditation 'B' Grade

Principal
Dr. J.V. Dadve
M.A., M.Phil., Ph.D.

E-mail:yccl_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

Ref. No.

Date:

CERTIFICATE

This is to certify that the project report entitled "SYNTHESIS AND CHARACTERISATION OF CONDUCTING POLYMER POLYANILINE" being submitted by Ms. Nikita Barde in partial fulfillment of the requirements for the degree of Master of Science in Physics from Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur is an authentic work carried out by her under my supervision and guidance.

In my opinion, this is a fit piece of work for the degree of Master of Science. To the best of my knowledge, the matter embodied in the project report has not been submitted to any other University / Institute for the award of any Degree or Diploma.

Date: 28/06/2023

Place: Lakhandur

Mr. SUMIT D. ROKADE
Supervisor
Department of Physics

Head of Department
Dept. of Physics
Y. C. College, Lakhandur
Dist. Bhandara (M.S.)
Mr. M. S. BIEN
Head of Department
Department of Physics

Forwarded by
Principal
Y. C. College, Lakhandur
Dist. Bhandara

30/06/23

Yashwantrao Chawhan Arts, Commerce and Science College, Lakhandur.

30/06/2023

Shri.KisanraoKhobragade Education Society,Armori, Dist.-Gadcholi

(Reg. No. F/1693-Gad-92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur**

Dist.-Bhandara (M.S.) Pin- 441803

NAAC Accreditation 'B' Grade

Principal

Dr. J.V. Dadve

M.A., M.Phil., Ph.D. E-mail:yccl_260112@rediffmail.com

STD: 07181

Off: 260112

Res.: 260585

Ref. No.

Date:

CERTIFICATE

This is to certify that the project report entitled " **TO STUDY THE SEMICONDUCTOR METAL OXIDE FOR GAS SENSING APPLICATION:A REVIEW** " being submitted by **Ms. Kajal H.Borkar** in partial fulfillment of the requirements for the degree of **Master of Science in Physics** from **Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur** is an authentic work carried out by her under my supervision and guidance. In my opinion, this is a fit piece of work for the degree of Master of Science. To the best of my knowledge, the matter embodied in the project report has not been submitted to any other University / Institute for the award of any Degree or Diploma.

Date: 28/06/2023

Place: Lakhandur

Mr. SUMIT D.ROKADE

Supervisor

Department of Physics

Head
Dept. of Physics
Y. C. College, Lakhandur
Dist. Bhandara (M.S.)
Head of Department
Department of Physics

Forwarded by

Principal
Y. C. College, Lakhandur
Dr. J.V. Dadve
Dist. Bhandara
Principal

Yashwantrao Chawhan Arts, Commerce and Science College, Lakhandur.

Shri.KisanraoKhobragade Education Society,Armori, Dist.-Gadcholi
(Reg. No. F/1693-Gad-92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur**



Dist.-Bhandara (M.S.) Pin- 441803

NAAC Accreditation 'B' Grade

Principal
Dr. J.V. Dadve
M.A., M.Phil., Ph.D.

E-mail:yccl_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

Ref. No.

Date:


CERTIFICATE

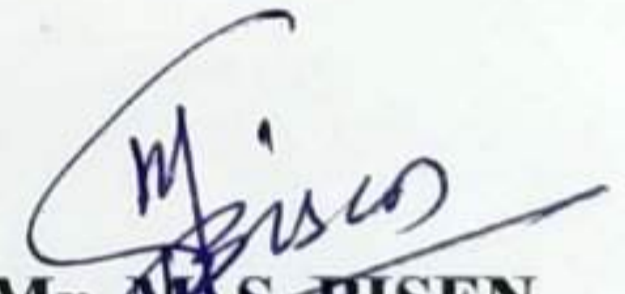
This is to certify that the project report entitled "SYNTHESIS AND CHARACTERISATION OF TITANIUM DIOXIDE AND CONDUCTING POLYANILINE NANOCOMPOSITE " being submitted by **Ms. Yashashri S. Borkar** in partial fulfillment of the requirements for the degree of **Master of Science in Physics** from **Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur** is an authentic work carried out by her under my supervision and guidance.

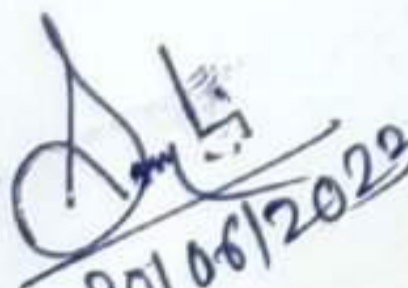

In my opinion, this is a fit piece of work for the degree of Master of Science. To the best of my knowledge, the matter embodied in the project report has not been submitted to any other University / Institute for the award of any Degree or Diploma.

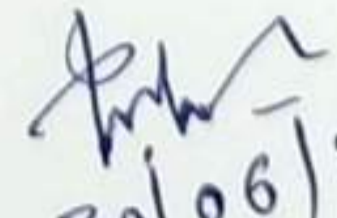
Date: 28/06/2023

Place: Lakhandur


Mr. Sumit D. Rokade
Supervisor
Department of Physics


Mr. M.S. BISEN
Head
Department of Physics
Y.C. College, Lakhandur
Dist. Bhandara (M.S.)


30/06/2023

Forwarded by
Principal
Dr. J.V. Dadve
Y.C. College, Lakhandur
Dist. Bhandara
Principal
Yashwantrao Chawhan Arts, Commerce and Science College,
Lakhandur.


30/06/23



Yashwantrao Chawhan Arts, Commerce & Science College, Lakhandur

Dist.-Bhandara (M.S.) Pin- 441803

NAAC Accreditation 'B' Grade

Principal
Dr. J.V. Dadve
M.A., M.Phil., Ph.D.

E-mail: ycccl_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

Ref. No.

Date:

CERTIFICATE

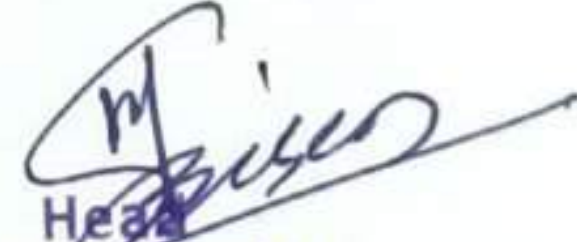
This is to certify that the project report entitled "TO STUDY SYNTHESIS AND CHARACTERIZATION OF TITANIUM DIOXIDE (TiO₂)" being submitted by **Ms. Shital T. Deshmukh** in partial fulfillment of the requirements for the degree of **Master of Science in Physics** from **Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur** is an authentic work carried out by her under my supervision and guidance.

In my opinion, this is a fit piece of work for the degree of Master of Science. To the best of my knowledge, the matter embodied in the project report has not been submitted to any other University / Institute for the award of any Degree or Diploma.


Date: 28/06/2023

Place:

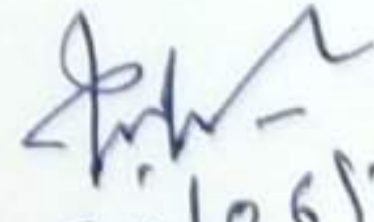
Mr. S. D. ROKADE
Supervisor
Department of Physics


Head
Dept. of Physics
Y. C. College, Lakhandur
Dist. Bhandara (M.S.)
Head of Department
Department of Physics

Forwarded by


30/06/2023


Principal
Dr. J.V. Dadve
Y. C. College, Lakhandur
Dist. Bhandara


30/06/23

Yashwantrao Chawhan Arts, Commerce and Science College, Lakhandur



Shri.KisanraoKhobragade Education Socioty,Armori, Dist.-Gadchioli

(Reg. No. F/1693-Gad-92)

Yashwantrao Chawhan Arts, Commerce & Science

College, Lakhandur

Dist.-Bhandara (M.S.) Pin- 441803

NAAC Accreditation 'B' Grade

Principal

STD: 07181

Dr. J.V. Dadve

Off: 260112

M.A., M.Phil., Ph.D.

E-mail:yccl_260112@rediffmail.com

Res.: 260585

Ref. No.

Date:

CERTIFICATE

This is to certify that the project report entitled

"TO STUDY THE MULTIFUNCTIONAL APPLICABILITY OF CARBON BASED MATERIALS SUCH AS GRAPHENE" being submitted by **Mr. Sumit D. Patle** in partial fulfillment of the requirements for the degree of **Master of Science in Physics** from **Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur** is an authentic work carried out by her under my supervision and guidance.

In my opinion, this is a fit piece of work for the degree of Master of Science. To the best of my knowledge, the matter embodied in the project report has not been submitted to any other University / Institute for the award of any Degree or Diploma.

Date: 28/06/2023

Place: Lakhandur

Mr. S.D.ROKADE

Supervisor

Department of Physics

Mr. M.S. BISEN

Head

Head of Department
Y. C. College, Lakhandur
Department of Physics

Principal
Forwarded by
Y. C. College, Lakhandur
Dr. J.V. Dadve
Dist. Bhandara
Principal

Yashwantrao Chawhan Arts, Commerce and Science College, Lakhandur.

Internal
Examiner
30/06/2023

2

External
Examiner
30/06/23



Shri.KisanraoKhobragade Education Society, Armori, Dist. -Gadcholi

(Reg. No. F/1693-Gad-92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur**

Dist.-Bhandara (M.S.) Pin- 441803

NAAC Accreditation 'B' Grade

Principal

Dr. J.V. Dadve

M.A., M.Phil., Ph.D.

E-mail: ycccl_260112@rediffmail.com

STD: 07181

Off: 260112

Res.: 260585

Ref. No.

Date:

CERTIFICATE

This is to certify that the project report entitled "TO STUDY THE MULTIFUNCTIONAL APPLICABILITY OF CARBON NANOTUBE (A REVIEW)" being submitted by **Mr. Unmesh D Raut** in partial fulfillment of the requirements for the degree of **Master of Science in Physics** from **Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur** is an authentic work carried out by her under my supervision and guidance.

In my opinion, this is a fit piece of work for the degree of Master of Science. To the best of my knowledge, the matter embodied in the project report has not been submitted to any other University / Institute for the award of any Degree or Diploma.

Date: 28/06/2023

Place: Lakhandur

Mr. SUMIT.D.ROKADE

Supervisor

Department of Physics

Head of Department
Y. C. College, Lakhandur
Dist. Bhandara (M.S.)

Yashwantrao Chawhan Arts, Commerce and Science College, Lakhandur.

Internal Examiner
30/06/2023

External Examiner
30/06/2023



**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur
Dist.-Bhandara (M.S.) Pin- 441803**

NAAC Accreditation 'B' Grade

Principal
Dr. J.V. Dadve
M.A., M.Phil., Ph.D.

E-mail: yccel_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

Ref. No.

Date:

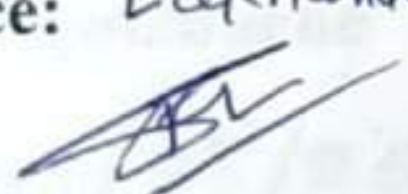
CERTIFICATE

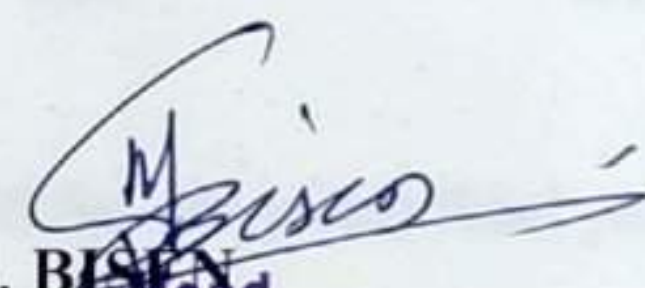
This is to certify that the project report entitled "POLYANILINE FOR GAS SENSING APPLICATION" TO REVIEW BASED STUDY ON CONDUCTING POLYMER being submitted by **Ms. Dimpal B. Bandebuche** in partial fulfillment of the requirements for the degree of **Master of Science in Physics** from **Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur** is an authentic work carried out by her under my supervision and guidance.

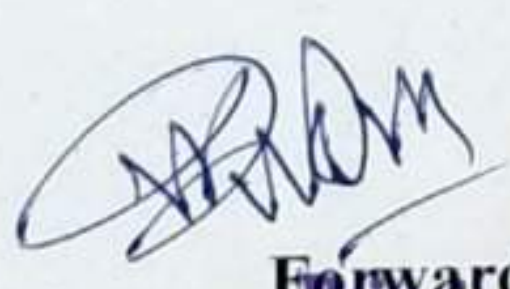
In my opinion, this is a fit piece of work for the degree of Master of Science. To the best of my knowledge, the matter embodied in the project report has not been submitted to any other University / Institute for the award of any Degree or Diploma.

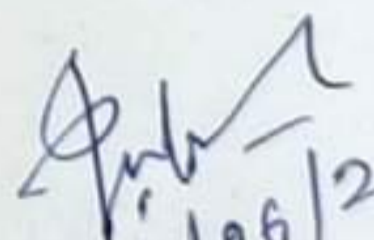
Date: 28/06/2023

Place: Lakhandur


Mr. SUMIT ROKDE
Supervisor
Department of Physics


Mr. M. S. BISEN
Head
Department of Physics
Y.C. College, Lakhandur
Dist. Bhandara (M.S.)


Forwarded by
Principal
Y.C. College, Lakhandur
Dr. J.V. Dadve
Dist. Bhandara
Principal


30/06/23

Yashwantrao Chawhan Arts, Commerce and Science College, Lakhandur.



Shri.Kisanrao Khobragade Education Society, Armori, Dist.-Gadchiroli

(Reg. No. F/1693-Gad-92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur**

Dist.-Bhandara (M.S.) Pin- 441803

NAAC Accreditation 'B' Grade

Principal
Dr. J.V. Dadve
M.A., M.Phil., Ph.D.

E-mail:yccl_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

Ref. No.

Date:

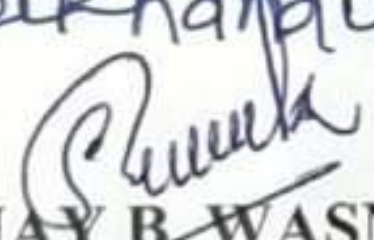
CERTIFICATE

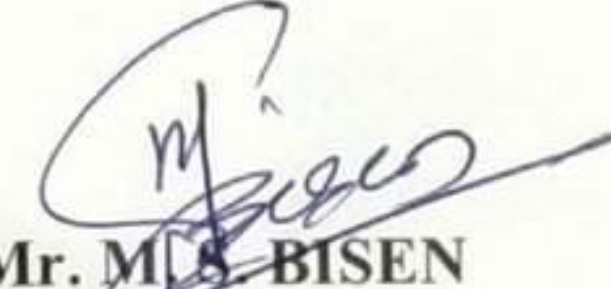
This is to certify that the project report entitled "SYNTHESIS AND CHARACTERISATION OF $\text{Cu}_{0.5}\text{Zn}_{0.5}\text{Fe}_{1.4}\text{Al}_{0.6}\text{O}_4$ FERRITE" being submitted by **Ms. Dipali J. Meshram** in partial fulfillment of the requirements for the degree of **Master of Science in Physics** from **Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur** is an authentic work carried out by her under my supervision and guidance.


In my opinion, this is a fit piece of work for the degree of Master of Science. To the best of my knowledge, the matter embodied in the project report has not been submitted to any other University / Institute for the award of any Degree or Diploma.

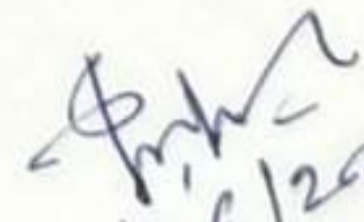
Date: 28/06/2023

Place: Lakhandur


Mr. PRANAY B. WASNIK
Supervisor
Department of Physics


Mr. M. S. BISEN
Head of Department
Department of Physics


ForWARDED by
Y. C. College, Lakhandur
Dist. Bhandara
Dr. J.V. Dadve
Principal


30/06/2023

Yashwantrao Chawhan Arts, Commerce and Science College, Lakhandur.



Shri. Kisanrao Khobragade Education Society, Armori, Dist.-Gadcholi

(Reg. No. F/1693-Gad-92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur**

Dist.-Bhandara (M.S.) Pin- 441803

NAAC Accreditation 'B' Grade

Principal
Dr. J.V. Dadve
M.A., M.Phil., Ph.D.

E-mail: yccl_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

CERTIFICATE

This is to certify that the project report entitled "REVIEW BASED STUDY OF SYNTHESIS AND CHARECTERIZATION OF NICKEL ZINC COPPER (NCZ) SPINEL FERRITE" being submitted by **Ms. Nikita H. Shahare** in partial fulfillment of the requirements for the degree of **Master of Science in Physics** from **Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur** is an authentic work carried out by her under my supervision and guidance.

In my opinion, this is a fit piece of work for the degree of Master of Science. To the best of my knowledge, the matter embodied in the project report has not been submitted to any other University / Institute for the award of any Degree or Diploma.

Place: Lakhandur

Date: 28-06-2023

MR. PRANAY B. WASNIK

Supervisor

Department of Physics

Mr. M. BISEN

Head
Dept. of Physics
Y. C. College, Lakhandur
Dist. Bhandara (M.S.)
Department of Physics

Principal
Y. C. College, Lakhandur
Dist. Bhandara
Dr. J. V. Dadve

Principal

30/06/2023

30/06/23

Shri.KisanraoKhobragade Education Society,Armori, Dist.-Gadcholi

(Reg. No. F/1693-Gad-92)

Yashwantrao Chawhan Arts, Commerce & Science

College, Lakhandur

Dist.-Bhandara (M.S.) Pin- 441803

NAAC Accreditation 'B' Grade

Principal
Dr. J.V. Dadve
M.A., M.Phil., Ph.D.

E-mail:yccl_260112@rediffmail.com

STD: 07181

Off: 260112

Res.: 260585

Ref. No.

Date:

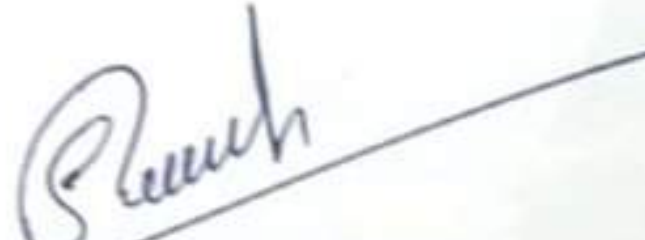
CERTIFICATE

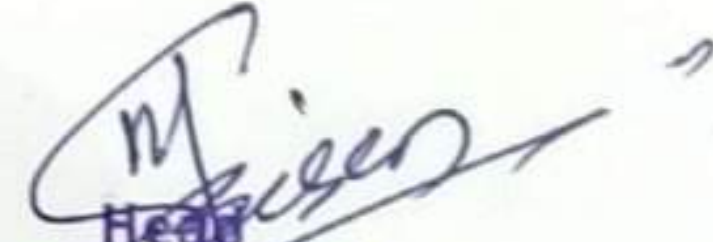
This is to certify that the project report entitled "SYNTHESIS AND CHARACTERISATION OF ALUMINIUM SUBSTITUTED COPPER ZINC SPINAL FERRITE" being submitted by **Ms. Utkarsha B. Sarve** in partial fulfillment of the requirements for the degree of **Master of Science in Physics** from **Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur** is an authentic work carried out by her under my supervision and guidance.

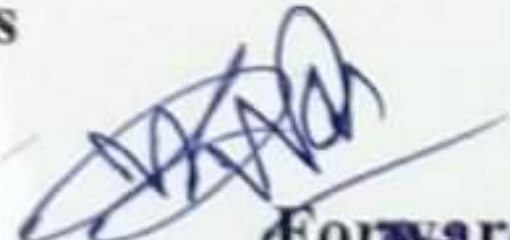
In my opinion, this is a fit piece of work for the degree of Master of Science. To the best of my knowledge, the matter embodied in the project report has not been submitted to any other University / Institute for the award of any Degree or Diploma.

Date:


Place:

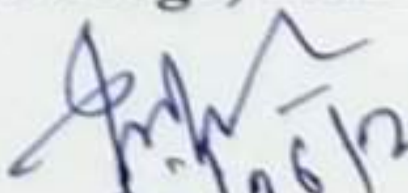

Mr. PRANAY B. WASNIK
Supervisor
Department of Physics


Head
Dept. of Physics
Y. C. College, Lakhandur
Dist. Bhandara (M.S.)
Mr. M. S. BISEN
Head of Department
Department of Physics


Forwarded by
Principal
Y. C. College, Lakhandur
Dist. Bhandara
Principal

Yashwantrao Chawhan Arts, Commerce and Science College, Lakhandur.


30/06/2023


30/06/23



Shri.Kisanrao Khobragade Education Society, Armori, Dist.-Gadcholi

(Reg. No. F/1693-Gad-92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur
Dist.-Bhandara (M.S.) Pin- 441803**

NAAC Accreditation 'B' Grade

Principal
Dr. J.V. Dadve
M.A., M.Phil., Ph.D.

E-mail: ycccl_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

Ref. No.

Date:

CERTIFICATE

This is to certify that the project report entitled "SYNTHESIS AND CHARACTERISATION OF $Cu_{0.5}Zn_{0.5}Fe_{1.1}Al_{0.9}O_4$ FERRITE BY SOL-GEL METHOD" being submitted by **Ms. Shital R. Dani** in partial fulfillment of the requirements for the degree of **Master of Science in Physics** from **Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur** is an authentic work carried out by her under my supervision and guidance.

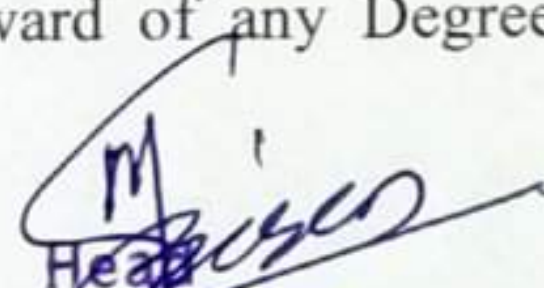
In my opinion, this is a fit piece of work for the degree of Master of Science. To the best of my knowledge, the matter embodied in the project report has not been submitted to any other University / Institute for the award of any Degree or Diploma.


Date: 28/6/2023

Place: Lakhandur

Mr. Pranay B. Wasnik
Supervisor

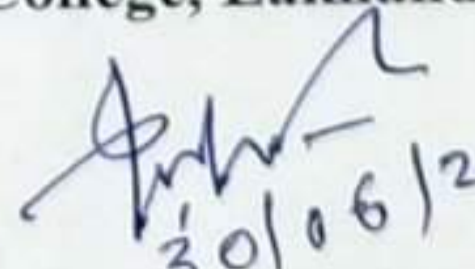
Department of Physics


Head
Dept. of Physics
Y.C. College, Lakhandur
Dist. Bhandara (M.S.)
Department of Physics


Forwarded by
Y.C. College, Lakhandur
Dist. Bhandara

Yashwantrao Chawhan Arts, Commerce and Science College, Lakhandur


30/06/2023


30/06/23

Shri.KisanraoKhobragade Education Society,Armori, Dist.-Gadcholi

(Reg. No. F/1693-Gad-92)



**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur
Dist.-Bhandara (M.S.) Pin- 441803**

NAAC Accreditation 'B' Grade

Principal
Dr. J.V. Dadve
M.A., M.Phil., Ph.D.

E-mail:yccl_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

Ref. No.

Date:

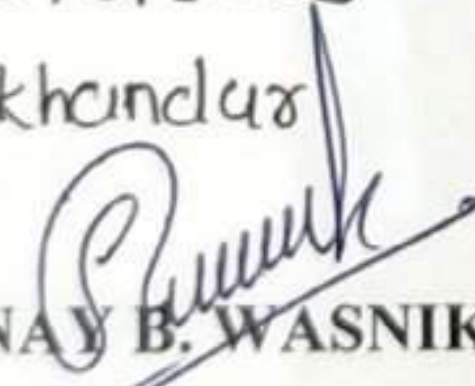
CERTIFICATE

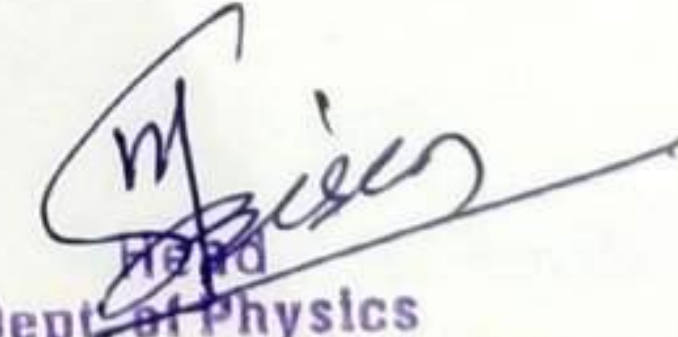
This is to certify that the project report entitled "**REVIEW BASED STUDY OF SYNTHESIS AND CHARACTERIZATION OF COBALT FERRITE , SPINEL FERRITE**" being submitted by **Ms. Bhavana Raju Shende** in partial fulfillment of the requirements for the degree of **Master of Science in Physics** from **Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur** is an authentic work carried out by her under my supervision and guidance.

In my opinion, this is a fit piece of work for the degree of Master of Science. To the best of my knowledge, the matter embodied in the project report has not been submitted to any other University / Institute for the award of any Degree or Diploma.

Date: 28/6/2023

Place: Lakhandur


Mr. PRANAY B. WASNIK
Supervisor
Department of Physics


Head
Dept. of Physics
Y. C. College, Lakhandur
Dist. Bhandara (M.S.)
MR. M. S. BISEN
Head of Department
Department of Physics


Forwarded by
Principal
Y. C. College, Lakhandur
Dist. Bhandara
Principal

Yashwantrao Chawhan Arts, Commerce and Science College, Lakhandur.

Shri.Kisanrao Khobragade Education Socioty,Armori, Dist.-Gadcholi

(Reg. No. F/1693-Gad-92)



**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur**

Dist.-Bhandara (M.S.) Pin- 441803

NAAC Accreditation 'B' Grade

Principal

Dr. J.V. Dadve

M.A., M.Phil., Ph.D

E-mail:yccl_260112@rediffmail.com

STD: 07181

Off: 260112

Res.: 260585

Ref. No.

Date-

CERTIFICATE

This is to certify that the project report entitled “Review Based Study of synthesis and characterization of zinc spinel ferrite” being submitted by Ms. **Sanjana H. Bawankar** in partial fulfillment of the requirements for the degree of **Master of Science in Physics** from **Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur** is an authentic work carried out by her under my supervision and guidance.

In my opinion, this is a fit piece of work for the degree of Master of Science. To the best of my knowledge, the matter embodied in the project report has not been submitted to any other University / Institute for the award of any Degree or Diploma.

Date: 28/6/2023

Place: Lakhandur

Mr. PRANAY B. WASNIK

Supervisor

Department of Physics

Mr. M. S. BISEN

Head of Department

Department of Physics

Forwarded by

Principal

Y. C. College, Lakhandur

Dist. Bhandara

Principal

Yashwantrao Chawhan Arts, Commerce and Science College,
Lakhandur.

Signature
30/06/2023

Signature
30.06.23





Shri.KisanraoKhobragade Education Society,Armori, Dist.-Gadcholi

(Reg. No. F/1693-Gad-92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur**

Dist.-Bhandara (M.S.) Pin- 441803

NAAC Accreditation 'B' Grade

Principal
Dr. J.V. Dadve
M.A., M.Phil., Ph.D.

E-mail:yccl_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

Ref. No.

Date:

CERTIFICATE

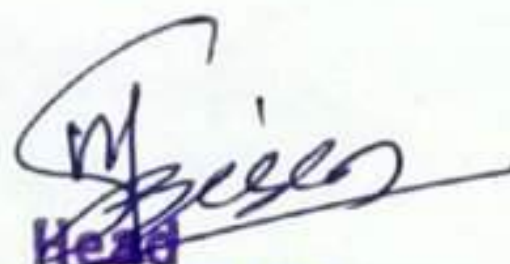
This is to certify that the project report entitled "SYNTHESIS AND CHARACTERISATION OF $Cu_{0.6}Cd_{0.4}Fe_2O_4$ BY SOL-GEL AUTO-COMBUSTION METHOD" being submitted by Ms. Asha M. Gudewar in partial fulfillment of the requirements for the degree of Master of Science in Physics from Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur is an authentic work carried out by her under my supervision and guidance.


In my opinion, this is a fit piece of work for the degree of Master of Science. To the best of my knowledge, the matter embodied in the project report has not been submitted to any other University / Institute for the award of any Degree or Diploma.

Date: 28-06-2023

Place: Lakhandur

Mr. M. S. BISEN
Supervisor
Department of Physics


Head
Dept. of Physics
Y. C. College, Lakhandur
Dist. Bhandara (M.S.)
Head of Department
Department of Physics


Forwarded by
Principal
Dr. J.V. Dadve
Y. C. College, Lakhandur
Dist. Bhandara

Yashwantrao Chawhan Arts, Commerce and Science College, Lakhandur.



Shri. Kisanrao Khobragade Education Society, Armori, Dist.- Gadchiroli.

(Reg. No. F/1693-Gnd-92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur
Dist.-Bhandara (M.S.) Pin- 441803**

NAAC Accreditation 'B' Grade

Principal
Dr. J.V. Dadve
M.A., M.Phil., Ph.D.

E-mail: yecl_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

Ref. No.

Date:

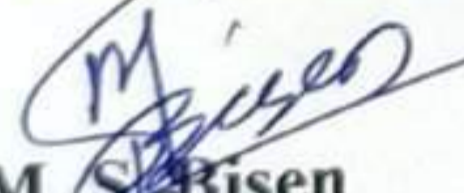
CERTIFICATE


This is to certify that the project report entitled "SYNTHESIS AND CHARACTERISATION OF $Cu_{0.7}Cd_{0.3}Fe_2O_4$ BY SOL-GEL METHOD" being submitted by **Ms. Dipty R. Katre** in partial fulfillment of the requirements for the degree of **Master of Science in Physics** from **Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur** is an authentic work carried out by her under my supervision and guidance.

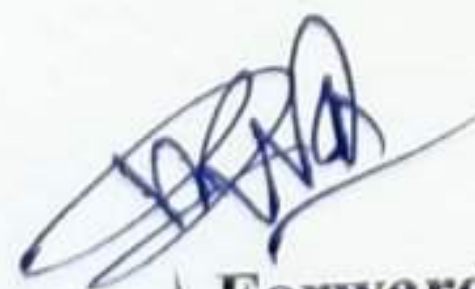
In my opinion, this is a fit piece of work for the degree of Master of Science. To the best of my knowledge, the matter embodied in the project report has not been submitted to any other University/Institute for the award of any Degree or Diploma.

Date: 26/06/2023

Place: Lakhandur


Mr. M. S. Bisen
Supervisor
Department of Physics


Mr. M. S. Bisen
Head of Department
Department of Physics
Dept. of Physics
Y. C. College, Lakhandur
Dist. Bhandara (M.S.)


Forwarded by
Principal
Y. C. College, Lakhandur
Dist. Bhandara

Yashwantrao Chawhan Arts, Commerce and Science College, Lakhandur.

Shri. Kisanrao Khobragade Education Society ,Armori, Dist.- Gadcholi



(Reg. No. F/1693-Gad-92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur**

Dist.-Bhandara (M.S.) Pin- 441803

NAAC Accreditation 'B' Grade

Principal
Dr. J.V. Dadve
M.A., M.Phil., Ph.D.

E-mail: ycccl_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

Ref. No.

Date: 28/06/2023


CERTIFICATE

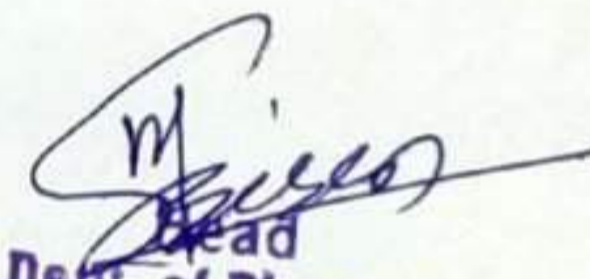
This is to certify that the project report entitled "REVIEW ON THE STUDY OF CADMIUM DOPING IN COPPER NANO SPERIEL FERITE" being submitted by Mrs. Pooja Hemant Thakare in partial fulfillment of the requirements for the degree of Master of Science in Physics from Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur is an authentic work carried out by her under my supervision and guidance.


In my opinion, this is a fit piece of work for the degree of Master of Science. To the best of my knowledge, the matter embodied in the project report has not been submitted to any other University / Institute for the award of any Degree or Diploma.

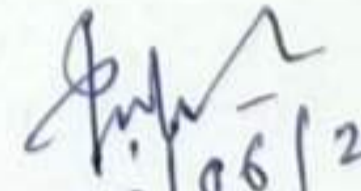
Date: 28/06/2023

Place: Lakhandur


Mr. M. S. BISEN
Supervisor
Department of Physics


Head
Dept. of Physics
Y. C. College, Lakhandur
Dist. Bhandara (M.S.)
Mr. M. S. BISEN
Head of Department
Department of Physics


Forwinded by
Y. C. College, Lakhandur
Dr. J.V. Dadve
Principal


30/06/23

Yashwantrao Chawhan Arts, Commerce and Science College, Lakhandur.



Shri.Kisanrao Khobragade Education Society, Armori, Dist.-Gadchiroli

(Reg. No. F/1693-Gad-92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur**

Dist.-Bhandara (M.S.) Pin- 441803

NAAC Accreditation 'B' Grade

Principal

Dr. J.V. Dadve

M.A., M.Phil., Ph.D.

E-mail:yccl_260112@rediffmail.com

STD: 07181

Off: 260112

Res.: 260585

Ref. No.

Date:

CERTIFICATE

This is to certify that the project report entitled "SYNTHESIS AND CHARACTERISATION OF $Cu_{0.65}Cd_{0.35}Fe_2O_4$ BY SOL-GEL METHOD" being submitted by **Ms. Shivani A. Pilare** in partial fulfillment of the requirements for the degree of **Master of Science in Physics** from **Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur** is an authentic work carried out by her under my supervision and guidance.

In my opinion, this is a fit piece of work for the degree of Master of Science. To the best of my knowledge, the matter embodied in the project report has not been submitted to any other University / Institute for the award of any Degree or Diploma.

Date:

Place:

Mr. M. S. BISEN

Supervisor

Department of Physics

Mr. M. S. BISEN
Head
Dept. of Physics
Y. C. College, Lakhandur
Dist. Bhandara (M.S.)
Head of Department

Department of Physics

Forwarded by
Principal
Dr. J.V. Dadve
Y. C. College, Lakhandur
Dist. Bhandara

Yashwantrao Chawhan Arts, Commerce and Science College, Lakhandur.

30/06/2023

30/06/23



Shri.Kisanrao Khobragade Education Society, Armori, Dist.- Gadchiroli
(Reg. No. F/1693-Gad-92)

Yashwantrao Chawhan Arts, Commerce & Science College, Lakhandur
Dist.- Bhandara (M.S.) Pin- 441803

NAAC Accreditation 'B' Grade

Principal
Dr. J.V. Dadve
M.A., M.Phil., Ph.D.

E-mail: ycecl_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

Ref. No.

Date:


CERTIFICATE

This is to certify that the project report entitled "REVIEW BASED STUDY OF SYNTHESIS AND CHARACTERIZATION OF CADMIUM SUBSTITUTED ZINC COBALT FERRITE" being submitted by **Mr. Lakki B. Thikare** in partial fulfillment of the requirements for the degree of **Master of Science in Physics** from **Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur** is an authentic work carried out by her under my supervision and guidance.

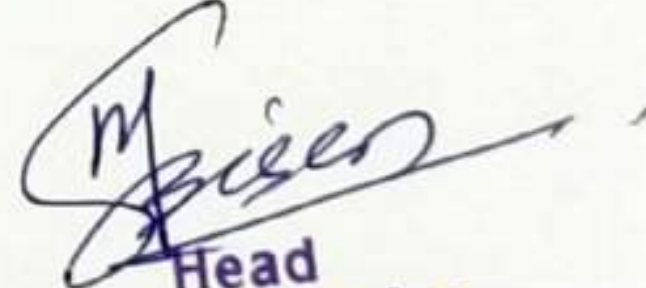
In my opinion, this is a fit piece of work for the degree of Master of Science. To the best of my knowledge, the matter embodied in the project report has not been submitted to any other University / Institute for the award of any Degree or Diploma.

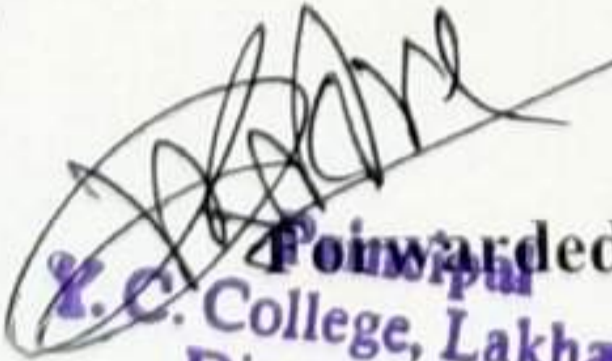
Date: 28/06/2023

Place: Lakhandur


Mr. M. S. BISEN

Supervisor
Department of Physics


Head
Dept. of Physics
Mr. M. S. BISEN
Dist. Bhandara (M.S.)
Head of Department
Department of Physics


Forwarded by
Y.C. College, Lakhandur
Dist. Bhandara
Dr. J.V. Dadve
Principal

Yashwantrao Chawhan Arts, Commerce and Science College, Lakhandur.


Internal
Examiner


External
Examiner

Shri.KisanraoKhobragade Education Socioty,Armori, Dist.-Gadcholi

(Reg. No. F/1693-Gad-92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur
Dist.-Bhandara (M.S.) Pin- 441803**

NAAC Accreditation 'B' Grade

Principal
Dr. J.V. Dadve
M.A., M.Phil., Ph.D.

E-mail:yccl_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

Ref. No.

Date:

CERTIFICATE

This is to certify that the project report entitled "REVIEW BASED STUDY OF SYNTHESIS AND CHARACTERISATION TECHNUQUES OF W-TYPE HEXA FERRITE" being submitted by Ms. Bhagyashri G. Raghorte in partial fulfillment of the requirements for the degree of Master of Science in Physics from Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur is an authentic work carried out by her under my supervision and guidance.

In my opinion, this is a fit piece of work for the degree of Master of Science. To the best of my knowledge, the matter embodied in the project report has not been submitted to any other University / Institute for the award of any Degree or Diploma.

Date:

Place:

Mr. PRANAY B. WASNIK

**Supervisor
Department of Physics**

**Dept. of Physics
Y. C. College, Lakhandur
Dist. Bhandara (M.S.)
Mr. M. S. BISEN**

**Head of Department
Department of Physics**

**Forwarded by
Principal
Y. C. College, Lakhandur
Dist. Bhandara
Principal**

Yashwantrao Chawhan Arts, Commerce and Science College, Lakhandur.

Shri.KisanraoKhobragade Education Society,Armori, Dist.-Gadcholi

(Reg. No. P/1693-Gad-92)

**YashwantraoChawhan Arts, Commerce & Science
College, Lakhandur**

Dist.-Bhandara (M.S.) Pin- 441803

NAAC Accreditation 'B' Grade

Principal
Dr. J.V. Dadve
M.A., M.Phil., Ph.D.

E-mail:yccl_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

Ref. No.

Date:

CERTIFICATE

This is to certify that the project report entitled "To the study electrical and magnetic properties of the rare earth doped nano spinal farite" the review being submitted by **Ms. Samir S. Meshram** in partial fulfillment of the requirements for the degree of **Master of Science in Physics** from **Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur** is an authentic work carried out by her under my supervision and guidance.

In my opinion, this is a fit piece of work for the degree of Master of Science. To the best of my knowledge, the matter embodied in the project report has not been submitted to any other University / Institute for the award of any Degree or Diploma.

Date: 28/06/2023

Place: Lakhandur

Mr. PRANAY B. WASNIK
Supervisor
Department of Physics

Mr. M. S. BIEN
Head of Department
Department of Physics

Principal
Y.C. College, Lakhandur
Dist. Bhandara
Dr. J.V. Dadve

Principal Yashwantrao Chawhan Arts, Commerce and Science College, Lakhandur.

**Internal
Examiner**

**External
Examiner**

Shri.KisanraoKhobragade Education Socioty,Armori, Dist.-Gadcholi

(Reg. No. F/1693-Gad-92)



**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur**

Dist.-Bhandara (M.S.) Pin- 441803

NAAC Accreditation 'B' Grade

Principal
Dr. J.V. Dadve
M.A., M.Phil., Ph.D.

E-mail:yccl_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

Ref. No.

Date:

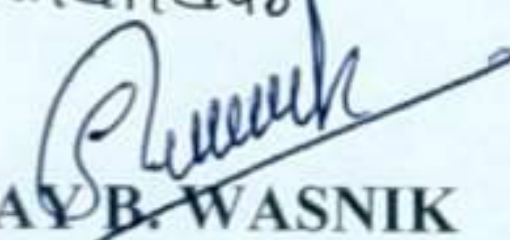
CERTIFICATE

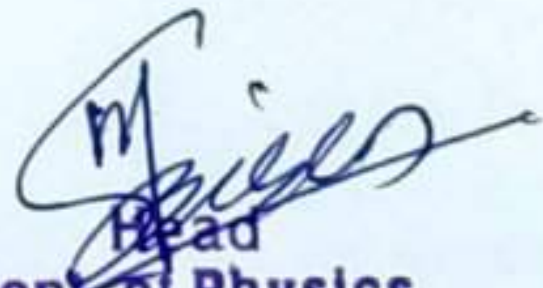
This is to certify that the project report entitled "**REVIEW BASED STUDY OF SYNTHESIS AND CHARACTERIZATION OF COBALT FERRITE , SPINEL FERRITE**" being submitted by **Ms. Bhavana Raju Shende** in partial fulfillment of the requirements for the degree of **Master of Science in Physics** from **Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur** is an authentic work carried out by her under my supervision and guidance.


In my opinion, this is a fit piece of work for the degree of Master of Science. To the best of my knowledge, the matter embodied in the project report has not been submitted to any other University / Institute for the award of any Degree or Diploma.

Date: 28/6/2023

Place: Lakhandur


Mr. PRANAY B. WASNIK
Supervisor
Department of Physics


Head
Dept. of Physics
Y. C. College, Lakhandur
Dist. Bhandara (M.S.)
Head of Department
Department of Physics


Forwarded by
Principal
Y. C. College, Lakhandur
Dist. Bhandara
Principal

Yashwantrao Chawhan Arts, Commerce and Science College, Lakhandur.

Shri.Kisanrao Khobragade Education Society, Armori, Dist.-Gadchiroli
(Reg. No. F/1093-Gad-92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur**

Dist.-Bhandara (M.S.) Pin- 441803

Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.



E-mail: ycel_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

CERTIFICATE

This is to certify that the dissertation entitled "**Studies on Life Cycle of Tropical Silkworm Anthera mylitta**" is carried out by **Pallavi Dayaram Thakare** under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date: 30-6-2023

Place: Lakhandur

Dr. J. V. Dadve
Principal

Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur Dist.-Bhandara

Principal
Y. C. College, Lakhandur
Dist. Bhandar.

Dr. M. R. Thengare
Supervisor

Assistant Professor & Head
Department of Zoology,
Head
Dept. of Zoology
Y. C. College, Lakhandur
Dist. Bhandara (M.S.)

Shri.Kisanrao Khobragade Education Society, Armori, Dist.-Gadcholi
(Reg. No. F/1093-Gad.02)

Yashwantrao Chawhan Arts, Commerce & Science College, Lakhandur

Dist.-Bhandara (M.S.) Pin- 441803

Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.



E-mail:yccl_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

CERTIFICATE

This is to certify that the dissertation entitled "To Study and Ecology & Diversity of Fresh Water Molluscs from Adyal Lake, Ta. Bramhapuri Dist. Chandrapur " is carried out by Miss. Kajal Pralhad Sukhdeve under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date: 24.06.2023

Place: Lakhandur

Dr. M. R. Thengare

Supervisor

Assistant Professor & Head
Department of Zoology,
Y. C. College, Lakhandur,
Dist. Bhandara (M. S.)

Dr. J. V. Dadve

Principal

Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur, Dist. Bhandara

Y. C. College, Lakhandur
Dist. Bhandara

Shri.Kisanrao Khobragade Education Society, Armori, Dist.-Gadchiroli
(Reg. No. F/1693-Gad-92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur
Dist.-Bhandara (M.S.) Pin- 441803**

Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.



E-mail:yccl 260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

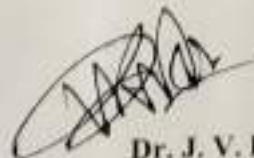
CERTIFICATE

This is to certify that the dissertation entitled "Ichthyofaunal diversity of Wainganga River near by Lakhandur, District-Bhandara Maharashtra" is carried out by **Sneha Someshwar Bhagadkar** under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date: 24/06/2023
Place: Lakhandur


Dr. M. R. Thengare
Supervisor
Assistant Professor & Head
Department of Zoology,
Y. C. College, Lakhandur
Dist. Bhandara (M.S.)


Dr. J. V. Dadve
Principal
Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur Dist.-Bhandara
Principal
Y. C. College, Lakhandur
Dist. Bhandara

Shri.Kisanrao Khobragade Education Society, Armori, Dist.-Gadcholi
(Reg. No. F/1691-Gad-92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur
Dist.-Bhandara (M.S.) Pin- 441803**



Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.

E-mail:ycel_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

CERTIFICATE

This is to certify that the dissertation entitled "**An Epidemiological analysis of Lymphatic filariasis in Bhandara district, Maharashtra**" is carried out by **Mayuri Rajkumar Bawankar** under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date: 26.06.2023

Place: Lakhandur

Dr. M. R. Thengare
Supervisor
Assistant Professor & Head
Dept. of Zoology
Yashwantrao Chawhan Arts, Commerce & Science College,
Dist. Bhandara (M.S.)

Dr. J. V. Dadve
Principal
Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur Dist.-Bhandara
Dist. Bhandara

Shri.Kisanrao Khobragade Education Society, Armori, Dist.-Gadchiroli
(Reg. No. F/1893-Gad-92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur
Dist.-Bhandara (M.S.) Pin- 441803**



Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.

E-mail: ycccl_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

CERTIFICATE

This is to certify that the dissertation entitled "An Epidemiological analysis of Lymphatic filariasis in Bhandara district, Maharashtra" is carried out by **Apeksha Rajkumar Bawankar** under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date: 25.06.2023

Place: Lakhandur

Dr. M. R. Thengare
Supervisor

Assistant Professor & Head
Dept. of Zoology
Y. C. College, Lakhandur
Dist. Bhandara (M.S.)

Dr. J. V. Dadve
Principal

Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur Dist. Bhandara
Y.C. College, Lakhandur
Dist. Bhandara

Shri.Kisanrao Khobragade Education Society, Armori, Dist.-Gadcholi
(Reg. No. F/1093-Gad-92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur
Dist.-Bhandara (M.S.) Pin- 441803**

Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.



E-mail: ycecl_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

CERTIFICATE

This is to certify that the dissertation entitled "**Ichthyofaunal diversity of Wainganga River near by Lakhandur, District-Bhandara Maharashtra**" is carried out by **Akshata Dakram Ukey** under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date: 26.06.2023
Place: Lakhandur

Dr. J. V. Dadve
Principal

Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur
Dist. Bhandara

Dr. M. R. Thengare
Supervisor

Assistant Professor & Head
Department of Zoology,
Dept. of Zoology,
Y. C. College, Lakhandur
Dist. Bhandara (M.S.)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur**
Dist.-Bhandara (M.S.) Pin- 441803

Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.



E-mail:yccl_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

CERTIFICATE

This is to certify that the dissertation entitled "STUDIES ON FISH CAGE CULTURE IN ITIADOH RESERVOIRS, GONDIA DISTRICT" is carried out by **Ashit Ravindra Gadpayle** under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date: 25.06.2023
Place: Lakhandur

Dr. J. V. Dadve
Principal

Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur Dist.-Bhandara

Dr. M. R. Thengare
Supervisor

Assistant Professor & Head
Department of Zoology,
V. C. College, Lakhandur
Dist. Bhandara (M.S.)

Shri.Kisanrao Khobragade Education Society, Armori, Dist.-Gadchiroli
(Reg. No. T/1693-Gad-92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur
Dist.-Bhandara (M.S.) Pin- 441803**

Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.
260585



E-mail:yccl_260112@rediffmail.com

STD: 07181
Off: 260112

Res.:

CERTIFICATE

This is to certify that the dissertation entitled "**Prevalence of Anemia and Hemoglobin Percentage in College going Students**" is carried out by **Vicky Ganesh Kondamwar** under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date: 24/05/2023
Place: Lakhandur

Dr. J. V. Dadve
Principal
Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur, Dist.-Bhandara

Dr. M. R. Thehgare
Supervisor
Assistant Professor & Head
Department of Zoology,
Y. C. College, Lakhandur,
Dist. Bhandara (M.S.)

Shri.Kisanrao Khobragade Education Society, Armori, Dist.-Gadchiroli
(Reg. No. F/1993-Gad-02)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur
Dist.-Bhandara (M.S.) Pin- 441803**

Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.



E-mail:yccl_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

CERTIFICATE

This is to certify that the dissertation entitled "**Studies on Life Cycle of Tropical Silkworm Anthera mylitta**" is carried out by **Omprakash Arvind Sahare** under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date: 19/06/2023
Place: Lakhandur

Dr. J. V. Dadve
Principal
Yashwantrao Chawhan Arts, Commerce &
Science College, Bhandara Dist. Bhandara
Principal
Y. C. College, Lakhandur
Dist. Bhandara

Dr. M. R. Thengare
Supervisor
Assistant Professor & Head
Department of Zoology,
Head
Dept. of Zoology
Y. C. College, Lakhandur
Dist. Bhandara (M.S.)

Shri.Kisanrao Khobragade Education Society, Armori, Dist.-Gadcholi
(Reg. No. F/1993-Gad92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur
Dist.-Bhandara (M.S.) Pin- 441803**

Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.



E-mail: yecl_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

CERTIFICATE

This is to certify that the dissertation entitled "**Biodiversity of snakes nearby Sakoli District Bhandara**" is carried out by **Nikita Tulshidas Darwade** under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date: 19-6-23
Place: Lakhandur

Dr. J. V. Dadve
Principal

Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur Dist.-Bhandara

Principal
Y.C. College, Lakhandur
Dist. Bhandara

Dr. M. R. Thengare
Head
Supervisor
Dept. of Zoology
Assistant Professor & In-charge
Department of Zoology,

Shri.Kisanrao Khobragade Education Society, Armori, Dist.-Gadcholi
(Reg. No. F/1693-Gad-02)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur
Dist.-Bhandara (M.S.) Pin- 441803**

Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.



E-mail: ycc_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

CERTIFICATE

This is to certify that the dissertation entitled "**Studies on Gobar Gas Plant as a Renewable Source of Energy: Case Study**" is carried out by **Prashant Babuji Bankar** under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date: 30.08.2023
Place: Lakhandur

Dr. J. V. Dadve

Principal
Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur Dist.-Bhandara

Dr. M. R. Thengare
Supervisor

Assistant Professor & Head
Department of Zoology,
Dept. of Zoology
Y. C. College, Lakhandur
Dist. Bhandara (M.S.)

Shri.Kisanrao Khobragade Education Society, Armori, Dist.-Gadchiroli
(Reg. No. F/1693-Qad-92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur
Dist.-Bhandara (M.S.) Pin- 441803**



Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.
260585

E-mail:yccl_260112@rediffmail.com

STD: 07181
Off: 260112

Res.:

CERTIFICATE

This is to certify that the dissertation entitled "**Prevalence of Anemia and Hemoglobin Percentage in College going Students**" is carried out by **Swati Mangalmurti Uprakar** under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date: 19-6-2023
Place: Lakhandur

Dr. J. V. Dadve
Principal
Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur
Dist.-Bhandara

Dr. M. R. Thengare
Supervisor
Assistant Professor & Head
Dept. of Zoology
Y. C. College, Lakhandur
Dist. Bhandara (M.S.)

Sri.Kisanrao Khobragade Education Society, Armori, Dist.-Gadcholi
(Reg. No. F/1993-Gad/02)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur
Dist.-Bhandara (M.S.) Pin- 441803**



Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.

E-mail: yceel_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

CERTIFICATE

This is to certify that the dissertation entitled "Studies on Gobar Gas Plant as a Renewable Source of Energy: Case Study" is carried out by **Payal Vinod Thakare** under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date: 30.06.2023
Place: Lakhandur

Dr. M. R. Thengare
Supervisor
Assistant Professor & Head
Department of Zoology,
Dept. of Zoology
Y. C. College, Lakhandur
Dist. Bhandara (M.S.)

Dr. J. V. Dadve
Principal
Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur Dist.-Bhandara

Shri.Kisanrao Khobragade Education Society, Armori, Dist.-Gadchiroli
(Reg. No. F1893-Gad-92)

Yashwantrao Chawhan Arts, Commerce & Science College, Lakhandur

Dist.-Bhandara (M.S.) Pin- 441803



Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.

E-mail:ycel_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

CERTIFICATE

This is to certify that the dissertation entitled "An Epidemiological Analysis of Malarial cases in Bhandara district & it's Talukas (Maharashtra) India" is carried out by Mrudul Narendra Meshram under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date: 19/06/2023

Place: Lakhandur

Dr. J. V. Dadve
Principal

Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur - Bhandara
Dist, Bhandara

Dr. M. R. Thengare
Supervisor

Assistant Professor & Head
Dept. of Zoology,
Y. C. College, Lakhandur
Dist. Bhandara (M.S.)

Shri.Kisanrao Khobragade Education Society, Armori, Dist.-Gadcholi
(Reg. No. F/1693-Gad-92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur**
Dist.-Bhandara (M.S.) Pin- 441803



Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.

E-mail:yecl 260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

CERTIFICATE

This is to certify that the dissertation entitled "Study On Vermi-Technology (Vermiculture-Method, Beneficial Effects)" is carried out by **Rashmi Janardhan Chaudhari** under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date: 19.06.2023
Place: Lakhandur

Dr. J. V. Dadve
Principal
Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur, Dist. Bhandara
M.S.

Dr. M. R. Thengare
Supervisor
Assistant Professor & Head
Department of Zoology,
Dept. of Zoology
Y. C. College, Lakhandur
Dist. Bhandara (M.S.)

Shri.Kisanrao Khobragade Education Society, Armori, Dist.-Gadchiroli
(Reg. No. F/1091-Gad-92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur
Dist.-Bhandara (M.S.) Pin- 441803**

Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.



E-mail: ycccl_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

CERTIFICATE

This is to certify that the dissertation entitled “**STUDY ON BUTTERFLY DIVERSITY IN AROUND SAKOLI TALUKA DISTRICT BHANDARA**” is carried out by **Madhavi Arvind Zode** under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date: 19-06-2023
Place: Lakhandur

Dr. J. V. Dadve
Principal
Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur Dist.-Bhandara
Principal
Y. C. College, Lakhanda,
Dist, Bhandara

Dr. M. R. Thengare
Supervisor
Assistant Professor & Head
Dept. of Zoology
Y. C. College, Lakhandur
Dist. Bhandara (M.S.)

Shri.Kisanrao Khobragade Education Society, Armori, Dist.-Gadchiroli
(Reg. No. F1193-Gad-02)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur**
Dist.-Bhandara (M.S.) Pin- 441803



Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.

E-mail:yccl_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

CERTIFICATE

This is to certify that the dissertation entitled "**TECHNIQUE OF ORGANIC FARMING AND ITS IMPORTANCE**" is carried out by **Sneha Dadaji Yerne** under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date: 19 / 06 / 2023

Place: Lakhandur

Dr. J. V. Dadve
Principal

Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur Dist.-Bhandara
V.C. College, Lakhandur
Dist. Bhandara

Dr. M. R. Thengare
Supervisor

Assistant Professor & Head
Department of Zoology,
Y. C. College, Lakhandur
Dist. Bhandara (M.S.)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur**

Dist.-Bhandara (M.S.) Pin- 441803

Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.



E-mail: ycecl_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

CERTIFICATE

This is to certify that the dissertation entitled "**Biodiversity of snakes nearby Sakoli District Bhandara**" is carried out by **Kajal Dayaram Nawakhare** under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date: 19 - 06 - 23
Place: Lakhandur

Dr. J. V. Dadve
Principal

Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur Dist.-Bhandara

Principal
Y. C. College, Lakhandur
Dist, Bhandara

Dr. M. R. Thengare
Supervisor

Assistant Professor & Head
Department of Zoology,
Y. C. College, Lakhandur
Dist. Bhandara (M.S.)

Shri.Kisanrao Khobragade Education Society, Armori, Dist.-Gadchiroli
(Reg. No. F/1993-Gad-92)

Yashwantrao Chawhan Arts, Commerce & Science College, Lakhandur

Dist.-Bhandara (M.S.) Pin- 441803



Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.

E-mail: yecl_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

CERTIFICATE

This is to certify that the dissertation entitled "STUDIES ON FISH CAGE CULTURE IN ITIADOH RESERVOIRS, GONDIA DISTRICT" is carried out by **Harsha Dinesh Wadhai** under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date: 19.06.2023
Place: Lakhandur

Dr. M. R. Thengare
Supervisor
Assistant Professor & Head
Department of Zoology,
Y. C. College, Lakhandur
Dist. Bhandara (M.S.)

Dr. J. V. Dadve
Principal
Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur, Dist.-Bhandara

Principal
Y. C. College, Lakhandur
Dist. Bhandara

Shri.Kisanrao Khobragade Education Society, Armozi, Dist.-Gadchiroli
(Reg. No. T/1693-Gad-92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur
Dist.-Bhandara (M.S.) Pin- 441803**



Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.

E-mail: yeccl_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

CERTIFICATE

This is to certify that the dissertation entitled “**Study On Vermi-Technology (Vermiculture-Method, Beneficial Effects)**” is carried out by **Sakshi Nayankumar Badole** under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.


The work embodies in this project has not been submitted for any degree or diploma.

Date: 19/06/2023
Place: Lakhandur



Dr. J. V. Dadve
Principal

Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur Dist.-Bhandara
Principal
Y. C. College, Lakhandur
Dist, Bhandara



Dr. M. R. Thengare
Supervisor
Assistant Professor & Head
Department of Zoology,
Dept. of Zoology
Y. C. College, Lakhandur
Dist. Bhandara (M.S.)

Shri.Kisanrao Khobragade Education Society, Armori, Dist.-Gadchiroli
(Reg. No. P/1693-Gad-92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur
Dist.-Bhandara (M.S.) Pin- 441803**



Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.

E-mail:yccl_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

CERTIFICATE

This is to certify that the dissertation entitled "Study of Aquatic plants/Hydrophytes in a pond nearby village" is carried out by **Satyam Naresh Meshram** under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date: 19/06/2023

Place: Lakhandur

Dr. J. V. Dadve
Principal
Y.C. College, Lakhandur
Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur Dist.-Bhandara

Dr. M. R. Hegde
Head
Dept. of Zoology
Y. C. College, Lakhandur
Dist. Bhandara (M.S.)
Assistant Professor
Department of Zoology,

Shri.Kisanrao Khobragade Education Society, Armori, Dist.-Gadchiroli
(Reg. No. P/1403-Gad-02)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur
Dist.-Bhandara (M.S.) Pin- 441803**



Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.

E-mail:yccl_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

CERTIFICATE

This is to certify that the dissertation entitled "**Study of Aquatic plants/Hydrophytes in a pond nearby village**" is carried out by **Sayali Uddhav Rokade** under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date: 19/04/2023
Place: Lakhandur

Dr. M. R. Thengare
Supervisor
Assistant Professor & Head
Department of Zoology,
Dept. of Zoology
Y. C. College, Lakhandur
Dist. Bhandara (M.S.)

Dr. J. V. Dadve
Principal
Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur Dist.-Bhandara

Principal
Y. C. College, Lakhandur
Dist. Bhandara

Shri.Kisanrao Khobragade Education Society, Armori, Dist.-Gadchiroli
(Reg. No. F/1693-Gad-92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur
Dist.-Bhandara (M.S.) Pin- 441803**



Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.

E-mail:yecl_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

CERTIFICATE

This is to certify that the dissertation entitled "Study of Biodiversity & Distribution of Butterfly of the Wadsa Region Dist. Gadchiroli" is carried out by Miss. Sweety Ganesh Dhote under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date: 30/6/2023
Place: Lakhandur

Dr. M. R. Thengare
Head
Dept. of Zoology
Xs. Govt. Prof. Sak. Natl. Coll.
Dist. Bhandara
Department of Zoology.

Dr. J. V. Dadve
Principal
Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur, Dist.-Bhandara

Shri.Kisanrao Khobragade Education Society, Armori, Dist.-Gadchiroli
(Reg. No. F1693-Gad-92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur**

Dist.-Bhandara (M.S.) Pin- 441803

Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.



E-mail: ycel_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

CERTIFICATE

This is to certify that the dissertation entitled "Study of Biodiversity & Distribution of Butterfly of the Wadsa Region Dist. Gadchiroli" is carried out by Miss. Switi Rashtrapal Lonare under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date: 30-6-2023

Place: Lakhandur

Dr. M. R. Thengare
Supervisor

Assistant Professor & Head
Department of Zoology,
Head
Dept. of Zoology
Y. C. College, Lakhandur
Dist. Bhandara (M.S.)

Dr. J. V. Dadve
Principal

Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur Dist.-Bhandara

Principal
Y. C. College, Lakhandur
Dist. Bhandara

Shri.Kisanrao Khobragade Education Society, Armori, Dist.-Gadchiroli
(Reg. No. P/1095-Gad-92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur
Dist.-Bhandara (M.S.) Pin- 441803**



Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.

E-mail:yccl_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

CERTIFICATE

This is to certify that the dissertation entitled "STUDIES ON FISH CAGE CULTURE IN ITIADOH RESERVOIRS, GONDIA DISTRICT" is carried out by **Ashit Ravindra Gadpayle** under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date: 25.06.2023
Place: Lakhandur

Dr. J. V. Dadve
Principal

Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur Dist.-Bhandara

Dr. M. R. Thengare

Supervisor

Assistant Professor & Head

Department of Zoology,

Y. C. College, Lakhandur

Dist. Bhandara (M.S.)



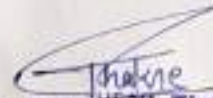
DEPARTMENT OF MICROBIOLOGY
LIST OF M.Sc. PROJECT STUDENTS
SESSION 2022-2023

1	AANCHAL MADHORA SHIVANKAR
2	AISHWARYA RAVINDRA KUTHE
3	ANKITA RAMDAS DANGE
4	GUNESHWARI PRAKASH KAPGATE
5	HRUTUJA RAJENDRA CHAVHAN
6	KAJAL GANGARAM DHAWALE
7	LINA BUDHRAM BAWANKAR
8	MAYURI MADHORA GHANADE
9	MONALI TULARAM NAKTODE
10	NANDINI ANANT GOHANE
11	NEHA GIRIDHAR FULBANDHE
12	PALLAVI LALCHAND ROKADE
13	POOJA TIKESHWAR BHUJADE
14	PRITI LALCHAND MESHRAM
15	PRIYANKA ASHOK RAUT
16	RAJNANDINI PRASHANT BHURE
17	RUPESH PRABHAKAR DONODE
18	RUTUJA RAJENDRA MARWADE
19	SAKSHI GOVINDRAO KHADSE
20	SANDHYA YASHWANT DANI
21	SHIVANI SHALIKRAM KAMBLE
22	SUKANYA SEWAK HUME
23	TEJSWINI PANJABRAO KSHIRSAGAR
24	VRUNDA VASANTA THER
25	YAMINI PRABHAKAR ZODE
26	YUKTA DEORAO FAYE



प्राचार्य

यशवंतराव चव्हाण महाविद्यालय
लाखांदुर जि. भंडारा



Dr. Rakesh U. Thakare
Assistant Professor & HOD
Dept. of Microbiology
Y. C. College, Lakhandur,
Dist. Bhandara.

DEPARTMENT OF GEOLOGY
LIST OF M.Sc. PROJECT STUDENTS
SESSION 2022-2023

1	WAZUL SAMSHUL KHAN
2	VYANKAT HIWARAJ KAPGATE
3	ROSHAN SHEKAR BHOYAR
4	MONALI RAMU THOTE
5	PALLAVI VINAYAK ITWALE
6	PRANAY GAUTAM RAUT
7	SHIVKUMAR REVANKUMAR GHATURKAR
8	LOKMAN PRABHAKAR DIWATHE
9	MANALI MADHUKAR SONWANE
10	PRIYANKA PRADIP DESHPANDE
11	KARISHMA RUPCHAND MESHARAM
12	SHARIF SHANTDIL BORKAR
13	MAYURI NARENDRA DHAKADE
14	AMIR SHANTANU SUKHADEWE
15	RAKESH MANIK NAKADE
16	ROSHAN SUDHAKAR BURDE
17	YOGESH AMBADAS KASAR
18	ZAKIYA SHIREEN MUHAMAD NOORUDDIN
19	SWATI DHARMA GADEKAR
20	PRAGATI AJAYSINGH PAWAR
21	CHETANA AJAYSINGH PAWAR
22	MAHESHWARI NITARAM BHALAVI
23	SHIVAM SUDHAKAR MANDHARE
24	SUPRIYA YASHWANT SHAMKUWAR
25	ASHIKA SUBHASH MADNE



प्राचार्य
यशवंतराव चव्हाण महाविद्यालय
लाखांदुर जि. भंडारा



HEAD

Dr. Snehal G. Juare
H.O.D.
Dept. of Geology
Yashwantrao Chawhan Coll.
Laxandur, Dist. Bhandara

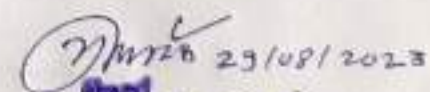
DEPARTMENT OF CHEMISTRY
LIST OF M.Sc. PROJECT STUDENTS
SESSION 2022-2023

1	SAKSHI VINAYAK NAWKHARE
2	TUSHAR RUSHIKESH PATANWAR
3	ASHISH VISHWANATH MASKE
4	MANISHA SHIVSHANKAR BHAGAT
5	AKASH RASTRAPAL RODGE
6	RAHUL MULCHAND KEWAT
7	AACHAL RAMESH HARINKHEDE
8	PRIYA BHARAT BAHEKAR
9	ROHIT VIJAY FASATE
10	BHAVESH SANJAY RAHANGADALE
11	RUPALI SURYABHAN RAHANGADALE
12	PRATIKSHA SADANAND KAPGATE
13	DIPALI MOHAN MEHENDALE
14	DIKSHA RAJESH DHOKE
15	PANKAJ VISHWANATH ZODE
16	POOJA DEOCHAND WALDE
17	PRANALI RAMESH LICHADE
18	NILIMA LEKHRAM KORE
19	BHARTI SANTOSH CHUTE
20	KAJAL ASHOK HUMANE
21	TWINKAL YADORAO KORE
22	MEGHA SUBHASH HATWAR
23	RAVIKUMAR CHUDAMAN KAPGATE
24	NIKITA RAHISKUMAR NINAWA
25	PRITI TULSHIDAS CHAKOLE



प्राचार्य

यशवंतराव चव्हाण महाविद्यालय
लाखांदुर जि. भंडारा


29/08/2023
Head
Department Of Chemistry
Y.C. College, Lakhandur
Dist-Bhandara-441803

DEPARTMENT OF GEOGRAPHY
LIST OF M.Sc. PROJECT STUDENTS
SESSION 2022-2023

1	AKSHAY JAYDEO WAKEKAR
2	AKSHAY NAGORAO CHICHMALKAR
3	AMAR PRADIP UKEY
4	BHAGYASHRI SANTOSH AMBADE
5	DAMODHAR TULARAM ZOLE
6	DIPAK MOHAN SURSAUT
7	GAURI PARSHURAM LENGURE
8	GUNWANTA RAMESH KAMBLE
9	HARSHA MOHAN BHAGADKAR
10	HARSHAD SHRAWAN NANHE
11	HEMANT RAMESH KOHALE
12	KOYAL DHANRAJ YERNE
13	MANISHA RAJKUMAR SAYAM
14	MAYUR SOPAN SANGODE
15	MEENAKSHI KISAN TARONE
16	MURTI RAJU WADGURE
17	NALINA KHUSHAL VAIDHYA
18	PAYAL KESHAV DHAKATE
19	PAYAL TEKRAM CHIWARTKAR
20	PRAFULLA DAMODHAR KAMBALI
21	PRAMANAND DEORAO SHAHARE
22	PRATIK SHANKARRAO TANNILWAR
23	PRATIKSHA MANOHAR KAMBLE
24	PRIYANKA PRAMOD BHOWATE
25	PUJA TULARAM SUKHADEVE
26	RAMCHANDRA ARJUN WAGHDHARE
27	SANJANA RAVIKANTSINGH CHANDEL
28	SANJAY DASARATH RAUT
29	SHISHIR BHOURAO DHALE
30	SHUBHAM BHOJARAJ THAKARE
31	SHUBHANGI DADARAM KARTALE
32	SHUBHANGI SUNIL SAMRIT
33	SUPRIYA VITTHAL SHELARE
34	VAISHALI KAILAS RAMTEKE
35	YOGITA HARIDAS RAUT


प्राचार्य
यशवंतराव चव्हाण महाविद्यालय
लाखांदुर जि. भंडारा


मुख्य विद्यालय प्रमुख
एच.एस. लाखांदुर, जि. भंडारा

DEPARTMENT OF BOTANY
LIST OF M.Sc. PROJECT STUDENTS
SESSION 2022-2023

1	AISHWARYA DIPAK SHIVANKAR
2	AKANKSHA DHANANJAY FULE
3	BHAGYASHRI JAGESHWAR RAUT
4	BHUPESH TUKARAM DAKHANE
5	DEEPA RAMU DESHMUKH
6	DIMPALTAI CHARANDAS FUNDE
7	JANHAVI RAJIV KAMDI
8	MADHAVI MAHENDRA RAKHADE
9	MANISHA DHANRAJ LANJEWAR
10	NANDINI MILIND DONODE
11	NIKITA PRABHU NAKADE
12	PAVAN NARESH BUDGEWAR
13	PORNIMA BHOJRAM SELOKAR
14	PRACHI BHOJRAJ HUKARE
15	PRATIKSHA JAGESHWAR KHOBRAGADE
16	PRATIKSHA PRADEEP BADWAIK
17	PRIYANKA PRAKASH MOHURLE
18	PRIYANKA MADHORA CHACHANE
19	PRIYANKA RAJESHWAR NAKHATE
20	PUJA PRAKASH AGASHE
21	SHUBHANGI HARIDAS BHOYAR
22	SNEHA REWAJI FATE
23	SWEETI VISHWAJIT SANGOLE
24	VAISHALI SANJAY MENDHE
25	VIDYA PARASRAM BAHEKAR



प्रचार्य
यशवंतराव चव्हाण महाविद्यालय
लाखंदुर जि. भंडारा

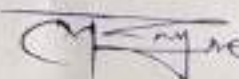


HEAD OF DEPARTMENT
Head
Department of Botany
Y.C. College Lakhandur
Dist Bhandara

DEPARTMENT OF ZOOLOGY
LIST OF M.Sc. PROJECT STUDENTS
SESSION 2022-2023

1	AKSHATA DAKRAM UKEY
2	APEKSHA RAJKUMAR BAWANKAR
3	ASHIT RAVINDRA GADPAYLE
4	HARSHA DINESH WADHAI
5	KAJAL DAYARAM NAWAKHARE
6	KAJAL PRALHAD SUKHADEVE
7	MADHAVI ARVIND ZODE
8	MAYURI RAJKUMAR BAWANKAR
9	MRUDUL NARENDRA MESHRAM
10	NIKITA TULASHIDAS DARWADE
11	OMPRAKASH ARVIND SAHARE
12	PALLAVI DAYARAM THAKARE
13	PAYAL VINOD THAKARE
14	PRASHANT BABUJI BANKAR
15	RASHMI JANARDHAN CHAUDHARI
16	SAKSHI NAYANKUMAR BADOLE
17	SATYAM NARESH MESHRAM
18	SAYALI UDDHAV ROKADE
19	SIRUTI PRAKASH KHANDAIT
20	SNEHA DADAJI YERNE
21	SNEHA SOMESHWAR BHAGADKAR
22	SUPRIYA JAYKRISHNA BANGARE
23	SWATI CHANDRAPRAKASH MESHRAM
24	SWATI MANGALMURTI UPRIKAR
25	SWEETY GANESH DHOTE
26	SWITI RASHTRAPAL LONARE
27	VICKY GANESH KONDAMWAR


प्रचार्य
यशवंतराव चव्हाण महाविद्यालय
लाखांदुर जि. भंडारा


HEAD
Dept. of Zoology
Y. C. College, Lakhandur
Dist. Bhandara (M.S.)

DEPARTMENT OF PHYSICS
LIST OF M.Sc. PROJECT STUDENTS
SESSION 2022-2023

ASHA MANOHAR GUDEWAR
BHAGYASHRI GANGADHAR RAGHORTE
BHAVANA RAJU SHENDE
DIMPAL BAKARAM BANDEBUCHÉ
DIPALI JAGDISH MESHRAM
DIPTY REOCHAND KATRE
KAJAL HIRAMAN BORKAR
LAKKI BHASKAR THIKARE
NIKITA GOVINDRAO BARDE
NIKITA HEMRAJ SHAHARE
POOJA HEMANT THAKARE
RUSHIKESH BHARAT BHONDE
SAMIR SURESH MESHRAM
SANJANA HIRALAL BAWANKAR
SHITAL RAVINDRA DANI
SHITAL TEJRAM DESHMUKH
SHIVANI ANIL PILARE
SUMIT DADI PATLE
UNMESH DINKAR RAUT
UTKARSHA BHUSHAN SARWE
YASHASHRI SHRIDHAR BORKAR


प्रचार्य
यशवंतराव चव्हाण महाविद्यालय
लाखांदुर जि. भंडारा


Head
Dept. of Physics
Y. C. College, Lakhandur
Dist. Bhandara (M.S.)

राष्ट्रसंत तुकडोजी महाराज नागपूर विद्यापीठ, नागपूर
श्री किसनराव खोब्रागडे शिक्षण संस्था, आरमोरी, जि. गडचिरोली
द्वारा संचालित



यशवंतराव चव्हाण कला, वाणिज्य व विज्ञान
महाविद्यालय लाखांदूर, जि. भंडारा
पदव्युत्तर भूगोल विभाग

शैक्षणिक सर्वेक्षण वृत्तांत

भंडारा जिल्हयामधिल लाखांदूर तालुक्यातील जैतपूर (बारका)
गावातील लोकसंख्येचे सामाजिक-आर्थिक अध्ययन :- एक भौगोलिक अभ्यास

राष्ट्रसंत तुकडोजी महाराज नागपूर विद्यापीठांतर्गत एम.ए. द्वितीय वर्षे (भूगोल) चतुर्थसेम
शैक्षणिक सत्र २०२१-२२ परिक्षेकरिता सादर.

❖ सादरकर्ता ❖

शुकेशनी विठोबा गडपायले

मार्गदर्शक
प्रा. डॉ. जी. एल. धोटे
(भूगोल विभाग)

यशवंतराव चव्हाण कला, वाणिज्य व विज्ञान
महाविद्यालय, लाखांदूर, जि. भंडारा



मार्गदर्शक व भूगोल विभाग प्रमुख
प्रा. डॉ. के. बापू ठाकरे
(भूगोल विभाग)

यशवंतराव चव्हाण कला, वाणिज्य व विज्ञान
महाविद्यालय, लाखांदूर, जि. भंडारा

शैक्षणिक सर्वेक्षण वृत्तांत

भंडारा जिल्हयामधिल लाखांदूर तालुक्यातील
जैतपूर (बारका) गावातील लोकसंख्येचे
सामाजिक-आर्थिक अध्ययन:- एक भौगोलिक
अभ्यास

मार्गदर्शक

डॉ. जी.एल.धोटे

यशवंतराव चव्हाण कला, वाणिज्य व विद्यान
महाविद्यालय, लाखांदूर

भुगोल विभाग प्रमुख पि.एच.डी. मार्गदर्शक

डॉ. के.वाय.ठाकरे

यशवंतराव चव्हाण कला, वाणिज्य व विद्यान
महाविद्यालय, लाखांदूर

सादरकर्ते

राष्ट्रसंत तुकडोजी महाराज नागपूर विद्यापिठ, नागपूर
श्री किसनराव खोब्रागडे शिक्षण संस्था, आरमोरी, जि. गडचिरोली



यशवंतराव चव्हाण कला, वाणिज्य व विज्ञान
महाविद्यालय लाखांदूर, जि. भंडारा

पदव्युत्तर भूगोल विभाग

सन २०२१-२२

...प्रमाणपत्र...

राष्ट्रसंत तुकडोजी महाराज नागपूर विद्यापीठांतर्गत येणाऱ्या एम.ए.
द्वितीय वर्ष, चतुर्थ सेम, भूगोल विषयांतर्गत सन २०२१-२२ या शैक्षणिक
सत्राकरिता सादर करण्यात आलेला "क्षेत्रीय सर्वेक्षण वृत्तांत" एम.ए. अंतिम वर्षाच्या
विद्यार्थी-विद्यार्थिनींनी पूर्ण केला.

हा वृत्तांत स्वतः त्यांनी लिहिलेला असून एम.ए. (द्वितीय वर्ष) चतुर्थ
सेम, भूगोल पदव्युत्तर परीक्षेला सादर करण्यात आलेला आहे.

मार्गदर्शक
प्रा. डॉ. जी. एल. धोटे

(भूगोल विभाग)

यशवंतराव चव्हाण महाविद्यालय,
लाखांदूर, जि. भंडारा

मार्गदर्शक व भूगोल विभाग प्रमुख
प्रा. डॉ. के. वाय. ठाकरे

(भूगोल विभाग)

यशवंतराव चव्हाण महाविद्यालय,
लाखांदूर, जि. भंडारा

अंतर्गत परीक्षक

बहिःशाल परीक्षक

(R. K. Dangal)

अ.क	शिर्षक	पान क.
४	प्रकरण ४ वे : जैतपूर गावातील शेतीचे वैशिष्ट्ये ४.१ प्रस्तावना ४.२ शेतकरी व शेतमजूर ४.३ भूमीधारणेचा प्रकार ४.४ शेतीवर कुटूंबाचा खर्च ४.५ रासायनिक खताचा वापर ४.६ किटकनाशकांचा वापर ४.७ पारंपारीक कृषि अवजारे ४.८ आधुनिक कृषि अवजारे ४.९ कृषि मार्गदर्शन	२८-३६
५	प्रकरण ५ वे : जैतपूर गावातील शेतीचे स्वरूप ५.१ प्रास्ताविक ५.२ विविध पिकाखालील सिंचित क्षेत्र ५.३ विविध साधनांद्वारे सिंचित क्षेत्र ५.४ सुधारीत बी.बीयाने ५.५ कृषी साधनांची खरेदी ५.६ श्रेसर यंत्रापासून मिळणारे उत्पान्न व खर्च	३७-४१
६	प्रकरण ६ वे : समस्या, उपायोजना व सारांश ६.१ प्रस्ताविक ६.२ समस्या ६.३ उपाययोजना ६.४ सारांश	४२ - ४५
	* संदर्भ ग्रंथ सूची	४६



Shri Kisanrao Khobragade Education Society
YASHWANTRAO CHAWHAN ARTS, COMMERCE & SCIENCE COLLEGE

LAKHANDUR, DIST. BHANDARA

Student Admission Report

From Date 01/01/2020 To 14/12/2022

Session : 2021-2022

Course : M.A.(GEO) SEM 4

Sr. No.	Roll No	Student Id	STUDENT NAME
M.A.(GEO) SEM 4			
1		2863561	AJAY DNYANESHWAR TIRPUDE
2		2863763	AKASH SURESH BADOLE
3		2886877	AKSHAY ARUN KHANDEKAR
4		2864308	ANKITA VINAYAK BHALEROO
5		2864879	ASHWINI NAMDEO SHAHARE
6		2887573	BHARTI SURESH HUKARE
7		2864271	CHITRAGANDHA PANDHARI BANKAR
8		2863635	GAUTAMI CHANDRAMANI MESHRAM
9		2865345	GAYATRI EKNATH CHUTE
10		2865382	HINA SUBHASH SAYAM
11		2865333	HINA VASANT FUNDE
12		2864251	HUMESHWARI OMPRAKASH KHOBRADE
13		2865328	KAJAL RAVIMDRA TIWADE
14		2865207	KANCHAN DADARAM GAYDHANE
15		2864295	KARTIK SAJAN TICHKULE
16		2884605	KAVISHWAR PRALHAD KHOBRADE
17		2873420	LEENA KEWALRAM NAKHATE
18		2864263	MADHURI BENIRAM BHENDARKAR
19		2886912	MAHESH PURUSHOTTAM PRADHAN
20		2866900	MAHESHWARI BALDEO BHURLE
21		2864098	MANGESH MANOHAR KAWALE
22		2889284	NARENDRA NANAJI DHOORE
23		2863378	NIVRUTTI CHARANDAS MOHURLE
24		2865368	OMIKA PANDHARI DIGHORE
25		2865338	PAPIHA NARESH BAGMARE
26		2873119	PARAG DIGAMBAR KOHARE
27		2863218	PAREKH HEMIKANT BAGMARE
28		2863662	PAWAN SUNIL SHIVANKAR
29		2865472	PAWAN TUKARAM ILPATE
30		2887784	PRADIP YASHWANT BHENDARKAR
31		2884763	PRADUM SHAMRAO BAHEKAR
32		2864242	PRANAY DAKARAM KHOBRADE
33		2864291	PRATIBHA MANIK MESHRAM
34		2885217	PRITI HIRALAL MISAR
35		2887583	RAKESHWAR HIRALAL BAGMARE
36		2865351	REENA PRAKASH BADOLE
37		2889387	SANHGDEEP RAJKUMAR HUMANE
38		2863249	SANKUL ISHWAR SHAHARE
39		2887596	SHISHUPAL ZADU PARWATE
40		2865312	SHRADDHA UDARAM KOTANGALE

Sr. No.	Roll No	Student Id	STUDENT NAME
41		2865177	SHUBHANGI GIRIDHAR KHOPE
42		2866710	SUKESHINI VITHOBA GADPAYLE
43		2863628	SUSHANT SUNIL SHIL
44		2873069	TANUJA HIVARAJ SHIVANKAR
45		2865650	TIRTHESHWARI HEMANT POWALE
46		2863370	TRUPTI RAMLAL NAKHATE
47		2885273	VIDYA SATYAPAL BAGMARE
48		2864311	VIJETA HANSRAJ RAMTEKE
49		2866735	VIJU NAVLAJI RAUT
50		2865306	VRUNDAVANI BHOJRAJ BANSOD
51		2885097	WARSHA SUKHADEO KHAWASKAR



Shri Kisanrao Khobragade Education Society
YASHWANTRAO CHAWHAN ARTS, COMMERCE & SCIENCE COLLEGE

LAKHANDUR, DIST. BHANDARA

Student Admission Report

From Date 01/01/2020 To 14/12/2022

Session : 2021-2022

Course : M.SC. (BOT) - 4

Sr. No.	Roll No	Student Id	STUDENT NAME
M.SC. (BOT) - 4			
1		2849964	BHARTI NARENDRA KHOTELE
2		2846317	DIMPAL DHANESH TEMBHARE
3		2850392	DINESH DEWAJI PARSHURAMKAR
4		2850935	DNYANESHWARI SANJAY BHONDE
5		2846866	GEETA LOBHAN RAUT
6		2857856	KANCHAN MANOHAR LANJEWAR
7		2911985	KRUPALI TOTARAM KATRE
8		2866431	MAYURI BHAGWAN SHENDE
9		2846655	MINAKSHI MANGALDAS GAHANE
10		2847749	MONIKA VIJAY MENDHE
11		2856609	PRIYANKA JAGDISH SHINGADE
12		2846534	RUTUJA SANTOSH GHUGE
13		2846549	SANDEEP MAHESHKUMR MACHHIRKE
14		2847180	SIDDHU CHUNNILAL PARDHI
15		2866432	SUVIDHA DEORAM BARSE
16		2866433	SWATI HARIRAM HUKARE
17		2848110	TANUJA DNYANESHWAR ROKADE
18		2850035	TOSHIKA DEOCHAND SHENDE
19		2856472	UJWALA PRAKASH SHIWANKAR
20		2857852	UTKARSHA JAGDISH DONGARE
21		2866430	VAISHNAVI ASHOK DIWATE
22		2911717	VISHAL SHANKAR DAMAHE

DEPARTMENT OF BOTANY
YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE
COLLEGE LAKHANDUR
AFFILIATED TO
RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR



Certificate



I hereby certify that the project entitled " Diversity of Trees in Rengepar Forest", submitted for the award of the Degree of MASTER OF SCIENCE in the faculty of Science & Technology (Botany), of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur embodies the results of bonafide research work, carried out by Rutuja Santosh Ghuge, under my guidance and supervision.

Place : Lakhandur

Date : 26/06/2022

Mr. D. N. LANJEWAR
Assistant Professor

Forwarded by:

Mr. D. N. LANJEWAR
Head
Department of Botany

Dr. J. V. Dadve
Principal

DEPARTMENT OF BOTANY

YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE

COLLEGE LAKHANDUR

AFFILIATED TO

RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR



Certificate



I hereby certify that the project entitled "**DENSITY AND DIVERSITY OF PLANTS IN CHAPRAD / PAHADI TEMPLE**" ubmitted for the award of the Degree of MASTER OF SCIENCE in the faculty of Science & Technology (Botany), of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur embodies the results of bonafide research work, carried out by **Mr. Siddhu Chunnilal Pardhi** in session 2021-2022 under my guidance and supervision.

Place : Lakhandur

Date : 27/06/2022

Mr. D. N. LANJEWAR

Assistant Professor

Forwarded by:

Mr. D. N. LANJEWAR

Head Department of Botany

Dr. J. V. Dadve

Principal

DEPARTMENT OF BOTANY
YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE
COLLEGE LAKHANDUR
AFFILIATED TO
RASHTRASANTI TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR



Certificate



I hereby certify that the project entitled
"DIVERSITY OF CROP PLANTS IN SALEKASA TALUKA",
submitted for the award of the Degree of MASTER OF SCIENCE
in the faculty of Science & Technology (Botany), of Rashtrasant
Tukadoji Maharaj Nagpur University, Nagpur embodies the results
of bonafide research work, carried out by **Mr. VISHAL SHANKAR
DAMAHE**, under my guidance and supervision.

Place : Lakhandur

Date : 27/06/2022

Mr. D. N. Lanjewar

Assistant Professor

Forwarded by:

Mr. D. N. LANJEWAR

Head

Department of Botany

Dr. J. V. Dadve

Principal

DEPARTMENT OF BOTANY
YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE
COLLEGE LAKHANDUR
AFFILIATED TO
RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR



Certificate



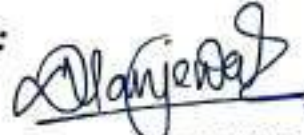
I hereby certify that the project entitled "DIVERSITY AND DENSITY OF TREES IN AGRICULTURE LAND IN TIRKHURI VILLAGE (DIST-BHANDARA) - A SERVY ", submitted for the award of the Degree of **MASTER OF SCIENCE** in the faculty of Science & Technology (Botany), of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur embodies the results of bonafide research work, carried out by Miss. **MAYURI B. SHENDE** In academic Session 2021 – 2022, under my guidance and supervision.

Place : Lakhandur

Date : 27/06/2022


Mr. D. N. LANJEWAR
Assistant Professor

Forwarded by:


Mr. D. N. LANJEWAR
Head
Department of Botany


Dr. J. V. Dadve
Principal



DEPARTMENT OF BOTANY

YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE
COLLEGE LAKHANDUR

AFFILIATED TO
RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR



Certificate



I hereby certify that the project entitled "**DISEASES OF FRUITS IN PIMPALGAON/KOHALI VILLAGE (DIST.-BHANDARA) - A SURVEY**" submitted for the award of the Degree of **MASTER OF SCIENCE** in the faculty of Science & Technology (**Botany**), of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur embodies the results of bonafide research work, carried out by **Mr. Dinesh Dewaji Parshuramkar** in session 2021-2022 under my guidance and supervision.

Place : Lakhandur

Date : 27/06/2022

Mr. D. N. LANJEWAR
Assistant Professor

Forwarded by:

Mr. D. N. LANJEWAR
Head Department of Botany

Dr. J. V. Dadve
Principal

DEPARTMENT OF BOTANY

**YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE
COLLEGE LAKHANDUR**

AFFILIATED TO
RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR



Certificate



I hereby certify that the project entitled "*Potential use of wild edible plant*", submitted for the award of the Degree of **MASTER OF SCIENCE** in the faculty of Science & Technology (**Botany**), of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur embodies the results of bonafide research work, carried out by **Kanchan Manohar Lanjewar** -, under my guidance and supervision.

Place : Lakhandur

Date : 28/06/2022

Mr. D. N. LANJEWAR

Assistant Professor

Forwarded by:

Mr. D. N. LANJEWAR

Head

Department of Botany

Dr. J. V. Dadve

Principal

DEPARTMENT OF BOTANY
YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE
COLLEGE LAKHANDUR

AFFILIATED TO
RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR



Certificate



I hereby certify that the project entitled "Studies on Diseases on Rice Wheat and Maize Crops in Lakhandur Area", submitted for the award of the Degree of MASTER OF SCIENCE in the faculty of Science & Technology (Botany), of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur embodies the results of bonafide research work, carried out by Priyanka Jagdish Shingade, in the session 2021-2022 under my guidance and supervision.

Place : Lakhandur

Date : 28/06/2022

Mr. D. N. LANJEWAR
Assistant Professor

Forwarded by:

Mr. D. N. LANJEWAR
Head
Department of Botany

Dr. J. V. Dadve
Principal

DEPARTMENT OF BOTANY

**YASHWANTRAO CHAWHAN ARTS COMMERCE AND
SCIENCE COLLEGE LAKHANDUR**

AFFILIATED TO

RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR



CERTIFICATE



I hereby certify that the project entitled "**DIVERSITY & DENSITY OF TREES IN AGRICULTURAL LAND IN CHIKHALI VILLAGE (DIST.-GONADIA)-A SURVEY**" submitted for the award of the Degree of MASTER OF SCIENCE in the faculty of Science & Technology (Botany), of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur embodies the results of bonafide research work, carried out by Ku. Geeta L.Raut in session 2021-2022 under my guidance and supervision.

Place : Lakhandur

Date : 27-06-2022

Forwarded by:

Mr. D. N. LANJEWAR

Head Department of Botany


Mr. D. N. Lanjewar
Supervisor


Dr. J. V. Dadve

Principal



DEPARTMENT OF BOTANY

YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE

COLLEGE LAKHANDUR

AFFILIATED TO

RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR



Certificate



I hereby certify that the project entitled " INVESTIGATION OF FIBER YIELDING PLANTS IN LAKHANDUR TALUKA DISTRICT BHANDARA ", submitted for the award of the Degree of **MASTER OF SCIENCE** in the faculty of Science & Technology (**Botany**), of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur embodies the results of bonafide research work, carried out by Miss Monika Vijay Mendhe, in session 2021-2022 under my guidance and supervision.

Place : Lakhandur

Date : 27/06/2022

Mr. D. N. LANJEWAR
Assistant Professor

Forwarded by:

Mr. D. N. LANJEWAR
Head
Department of Botany

Dr. J. V. Dadve
Principal

DEPARTMENT OF BOTANY

YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE
COLLEGE LAKHANDUR

AFFILIATED TO
RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR



Certificate



I hereby certify that the project entitled "DIVERSITY & DENSITY OF TREES IN AGRICULTURAL LAND IN MENDHA VILLAGE (DIST.-BHANDARA) - A SURVEY" submitted for the award of the Degree of **MASTER OF SCIENCE** in the faculty of Science & Technology (**Botany**), of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur embodies the results of bonafide research work, carried out by **Miss. Suvidha D. Barse** in session 2021-2022 under my guidance and supervision.

Place : Lakhandur

Date : 27/06/2022

Mr. D. N. LANJEWAR

Assistant Professor

Forwarded by:

Mr. D. N. LANJEWAR
Head Department of Botany

Dr. J. V. Dadve
Principal

DEPARTMENT OF BOTANY
YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE
COLLEGE LAKHANDUR
AFFILIATED TO
RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR



Certificate



I hereby certify that the project entitled "*Studies on weed diversity in rice field of kohalitola ta. Sadak arjuni*", submitted for the award of the Degree of **MASTER OF SCIENCE** in the faculty of Science & Technology (*Botany*), of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur embodies the results of bonafide research work, carried out by *Bharti Narendra Khotele*, in academic session 2021-2022 under my guidance and supervision.

Place : Lakhadur

Date : 27/06/2022

Mr. D. N. LANJEWAR
Assistant Professor

Forwarded by:

Mr. D. N. LANJEWAR
Head
Department of Botany

Dr. J.V. Dadve
Principal

DEPARTMENT OF BOTANY

YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE

COLLEGE LAKHANDUR

AFFILIATED TO

RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR



Certificate



I hereby certify that the project entitled "NAKSHATRAVANA" submitted for the award of the Degree of MASTER OF SCIENCE in the faculty of Science & Technology (Botany), of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur embodies the results of bonafide research work, carried out by VAISHNAVI A. DIWATE, in academic session 2021-2022 under my guidance and supervision.

Place : Lakhandur

Date : 27/06/2022

Mr. D. N. LANJEWAR

Assistant Professor

Forwarded by:

Mr. D. N. LANJEWAR

Head

Department of Botany

Dr. J. V. Dadve

Principal

DEPARTMENT OF BOTANY

YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE
COLLEGE LAKHANDUR

AFFILIATED TO
RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR



Certificate



I hereby certify that the project entitled "**DISEASES OF CROPS AND VEGETABLES**" submitted for the award of the Degree of **MASTER OF SCIENCE** in the faculty of Science & Technology (**Botany**), of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur embodies the results of bonafide research work, carried out by **Miss. Swati Hariram Hukare** in session 2021-2022 under my guidance and supervision.

Place : Lakhandur

Date : 27/06/2022

Mr. D. N. LANJEWAR
Assistant Professor

Forwarded by:

Mr. D. N. LANJEWAR
Head Department of Botany

Dr. J. V. Dadve
Principal

DEPARTMENT OF BOTANY

**YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE
COLLEGE LAKHANDUR**

**AFFILIATED TO
RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR**



Certificate



I hereby certify that the project entitled " 12 RASHI PLANT ", submitted for the award of the Degree of MASTER OF SCIENCE in the faculty of Science & Technology (Botany), of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur embodies the results of bonafide research work, carried out by UJWALA PRAKASH SHIVANKAR -, under my guidance and supervision.

Place : Lakhandur

Date : 27/06/2022

Mr. D. N. LANJEWAR

Assistant Professor

Forwarded by:

Mr. D. N. LANJEWAR
*Head
Department of Botany*

Dr. J. V. Dadve
Principal

DEPARTMENT OF BOTANY
YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE
COLLEGE LAKHANDUR
AFFILIATED TO
RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR



Certificate



*I hereby certify that the project entitled
" INVESTIGATION OF SACRED PLANTS IN LAKHANDUR
AREA WITH RESPECT TO SACRED AND MEDICINAL VALUE",
submitted for the award of the Degree of MASTER OF SCIENCE in the
faculty of Science & Technology (Botany), of Rashtrasant Tukadoji
Maharaj Nagpur University, Nagpur embodies the results of bonafide
research work, carried out by Miss. DNYANESHWARI S. BHONDE,
under my guidance and supervision.*

Place : Lakhandur

Date : 27/06/2022

Mr. D. N. LANJEWAR

Assistant Professor

Forwarded by:

Mr. D. N. LANJEWAR
Head
Department of Botany

Dr. J. V. Dadv
Principal

DEPARTMENT OF BOTANY
YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE
COLLEGE LAKHANDUR
AFFILIATED TO
RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR.



Certificate



I hereby certify that the project entitled "**DIVERSITY OF TIMBER PLANTS**", submitted for the award of the Degree of **MASTER OF SCIENCE** in the faculty of Science & Technology (**Botany**), of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur embodies the results of bonafide research work, carried out by **Miss. Utkarsha Jagdish Dongare** In academic Session 2021 – 2022, under my guidance and supervision.

Place : Lakhandur

Date : 27/06/2022

Dr. N.S. KAMBLE
Assistant Professor

Forwarded by:

Mr. D. N. LANJEWAR
Head
Department of Botany

Dr. J. V. Dadve
Principal

DEPARTMENT OF BOTANY

YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE

COLLEGE LAKHANDUR

AFFILIATED TO

RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR



Certificate



I hereby certify that the project entitled "**SACRED AND RITUAL PLANT IN BHANDARA DISTRICT**", submitted for the award of the Degree of **MASTER OF SCIENCE** in the faculty of Science & Technology (**Botany**), of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur embodies the results of bonafide research work, carried out by Miss. **Tanuja D. Rokade** In academic Session 2021 – 2022, under my guidance and supervision.

Place : Lakhandur

Date :

Dr. N.S. KAMBLE
Assistant Professor

Forwarded by:

Mr. D. N. LANJEWAR
Head
Department of Botany

Dr. J. V. Dadve
Principal

DEPARTMENT OF BOTANY
YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE
COLLEGE LAKHANDUR
AFFILIATED TO
RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR



Certificate




I hereby certify that the project entitled "**DIVERSITY OF AQUATIC PLANT AROUND LAKE OF SALEKASA THALUKA DISTRICT GONDIA-**", submitted for the award of the Degree of **MASTER OF SCIENCE** in the faculty of Science & Technology (Botany), of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur embodies the results of bonafide research work, carried out by **Mr.SANDEEP MAHESH MACHHIRKE**, under my guidance and supervision.

Place : Lakhandur

Date : 27/06/2022


Dr. N.S. KAMBLE
Assistant Professor

Forwarded by:


Mr. D. N. LANJEWAR
Head
Department of Botany




Dr. J. V. Dadve
Principal

DEPARTMENT OF BOTANY
YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE
COLLEGE, LAKHANDUR
AFFILIATED TO
RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY, NAGPUR



Certificate




I hereby certify that the project entitled "TO STUDY THE MYCOFLORA FROM MEDICINAL PLANT MENTHA PIPERITA L", submitted for the award of the Degree of MASTER OF SCIENCE in the faculty of Science & Technology (Botany), of Rashtrasant Tukadoji Maharaj Nagpur, University, Nagpur embodies the results of bonafide research work, carried out by Miss. DIMPAL.D.TEMBHARE, under my guidance and supervision.

Place : Lakhandur

Date : 27/06/2022


Dr. N.S. KAMBLE
Assistant Professor

Forwarded by:


Mr. D. N. LANJEWAR
Head
Department of Botany


Dr. J. V. Dadve
Principal

DEPARTMENT OF BOTANY

YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE
COLLEGE LAKHANDUR

AFFILIATED TO
RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR



CERTIFICATE



I hereby certify that the project entitled "**NON - TIMBER TREES IN FOREST
AREA OF LAKHANDUR IN BHANDARA DISTRICT**"

submitted for the award of the Degree of **MASTER OF SCIENCE** in the faculty of
Science & Technology (**Botany**), of Rashtrasant Tukadoji Maharaj Nagpur University,
Nagpur embodies the results of bonafide research work, carried out by **Ku. Minakshi
M Gahane** in session 2021-2022 under my guidance and supervision.

Place : Lakhandur

Date: 27/06/2022

Dr. N. S. Kamble

Supervisor

Forwarded by:

Mr. D. N. LANJEWAR

Head Department of Botany

Dr. J. V. Dadve

Principal

DEPARTMENT OF BOTANY
YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE COLLEGE
LAKHANDUR
AFFILIATED TO
RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR



Certificate




I hereby certify that the project entitled "**DIVERSITY OF ALGAE**", submitted for the award of the Degree of **MASTER OF SCIENCE** in the faculty of Science & Technology (**Botany**), of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur embodies the results of bonafide research work, carried out by **Miss. Krupali T. Katre**, in academic session **2021-22** under my guidance and supervision.

Place : Lakhandur

Date : 27/06/2022


Dr. N.S. KAMBLE
Assistant Professor

Forwarded by:


Mr. D. N. LANJEWAR
Head
Department of Botany


Dr. J.V. Dadve
Principal



Shri Kisanrao Khobragade Education Society
YASHWANTRAO CHAWHAN ARTS, COMMERCE & SCIENCE COLLEGE

LAKHANDUR, DIST. BHANDARA

Student Admission Report

From Date 01/01/2020 To 14/12/2022

Session : 2021-2022

Course : M.SC. (MICRO) - 4

Sr. No.	Roll No	Student Id	STUDENT NAME
M.SC. (MICRO) - 4			
1		2919927	ANJALI ABHAY DIGHORE
2		2845927	ASHWINI NAMDEO KUDEGAVE
3		2846060	BHAGYASHREE KHUSHAL MESHRAM
4		2850345	DAMINI NILKANTH BORKAR
5		2871482	DEVENDRA GANESH FUNDE
6		2858102	DISHA RAJNIKANT PATEL
7		2915038	DULARI ANIL HAJARE
8		2849821	DULESHWARI VISHWAJIT HATZADE
9		2866436	KALYANI AMRUTLAL BRAMHANKAR
10		2866437	MAHESHKUMAR PUNDLIK KUTE
11		2866438	MEGHANA VINOD NAKADE
12		2866435	MRUNALI VILAS SALVE
13		2847934	MRUNMAYEE NEMICHAND LANJEWAR
14		2910594	NIDHI ANIL PASHINE
15		2844952	PALLAVI PARAYAN DANI
16		2846603	PRANAY DEWRAM LANJEWAR
17		2851533	PRIYANKA GANESH INGALE
18		2845186	PRIYANKA RAVINDRA MUNDLE
19		2848669	ROHIT RAMESH SAKHARE
20		2850266	RUCHITA HIRALAL DHORE
21		2847190	SAURABH AMBARDAS VAIDHYA
22		2858047	SONAM MADHUKAR DHARGAVE
23		2846829	TUSHAR VINAYAK ZADE
24		2866439	VAISHALI CHANDRAPRAMOD RAUT
25		2866440	VIVEK VILAS NAKTODE

DEPARTMENT OF MICROBIOLOGY
YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE
COLLEGE LAKHANDUR

AFFILIATED TO
RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR



Certificate



This is to certify that the project entitled “**Isolation, Characterization, and Pigment Producing Bacteria Isolated From Waste**”, is satisfactorily carried out and completed by **Mr. Maheshkumar P. Kute**, M.Sc. Microbiology, Yashwantrao Chawhan Arts, Commerce & Science College, Lakhadur, Dist. Bhandara for the partial fulfillment of the Degree of **MASTER OF SCIENCE in MICROBIOLOGY** in the faculty of Science & Technology of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur in the Year 2022.

Dr. RAJU GADPAYLE

Project Supervisor
Department of (Microbiology)

Dr. R.U. THAKARE

Head of Department
Department of (Microbiology)
Y. C. College, Lakhadur
Dist. Bhandara

Dr. J. V. DADVE

Principal
Yashwantrao Chawhan Science
College, Lakhadur
Dist. Bhandara

YASHWANTRAO CHAVHAN ARTS COMMERCE AND SCIENCE COLLEGE

LAKHANDUR

AFFILIATED TO

RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR



Certificate



I hereby certify that the project entitled *Analysis of COVID-19 suspected samples in VDRL lab by using RT-PCR test.*, submitted for the award of the Degree of **MASTER OF SCIENCE** in the faculty of Science & Technology (**Microbiology**), of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur embodies the results of confide research work, carried out by **Mr. Rohit Ramesh Sakhre**, under my guidance and supervision.

Place : Lakhandur

Date : 1/7/2022

V.G. Jadhav
Mr. V.G. JADHAV
Research Guide

Thakare
DR. R. U. THAKARE
H.O.D. Of Microbiology

DEPARTMENT OF Microbiology

[Signature]
Principal
Y.C. College, Lakhandur
Dist. Bhandara

[Signature]

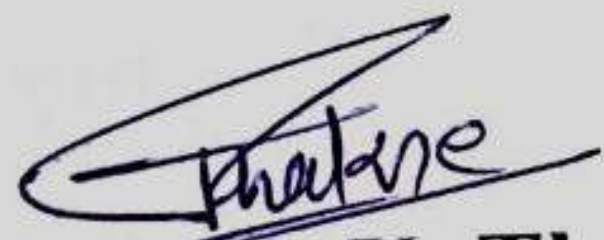
CERTIFICATE

This is to certify that the dissertation entitled "**Exploration of antagonistic potential of Vetiver plant derived oil**" submitted to Post Graduate Teaching Department of Microbiology, Yashwantrao Chawhan Arts, Commerce & Science College Lakhandur, Dist- Bhandara, for the Partial Fulfillment of the Degree of Master of Science in Microbiology embodies the result of the bonafide work carried out by **Miss. Anjali Abhay Dighore** under my Guidance and Supervision in the **Post Graduate Teaching Department of Microbiology**, Yashwantrao Chawhan Arts, Commerce & Science College Lakhandur, Dist- Bhandara, Maharashtra, India, Pin-441803.

This work was done under the Guidance and Supervision of **Dr. Rakesh U. Thakare**. This work is now ready for Examination.

Date: 30/06/2022

Place: Lakhandur



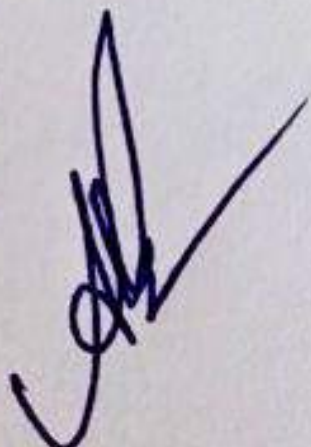
Dr. Rakesh U. Thakare
Assistant Professor & Head

Head
Dept. of Microbiology
Y. C. College, Lakhandur
Dist. Bhandara



Principal
Dr. J. V. Dadve

Principal
Y. C. College, Lakhandur
Dist. Bhandara



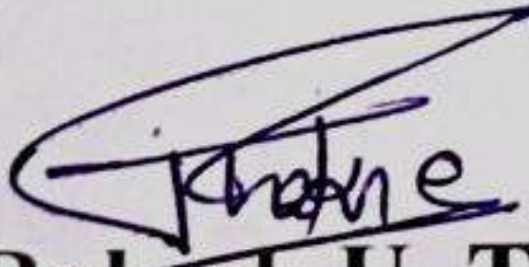
CERTIFICATE

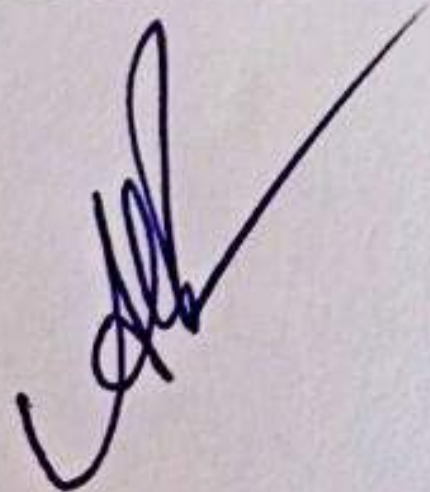
This is to certify that the dissertation entitled "**Biogenic Silica Production by Vetiver Plant and its Characterization**" submitted to Post Graduate Teaching Department of Microbiology, Yashwantrao Chawhan Arts, Commerce & Science College Lakhandur, Dist- Bhandara, for the Partial Fulfillment of the Degree of Master of Science in Microbiology embodies the result of the bonafide work carried out by **Miss. Priyanka Ravindra Mundle** under my Guidance and Supervision in the **Post Graduate Teaching Department of Microbiology, Yashwantrao Chawhan Arts, Commerce & Science College Lakhandur, Dist- Bhandara, Maharashtra, India, Pin-441803.**


This work was done under the Guidance and Supervision of **Dr. Rakesh U. Thakare.** This work is now ready for Examination.

Date:

Place:


Dr. Rakesh U. Thakare,
Assistant Professor & Head

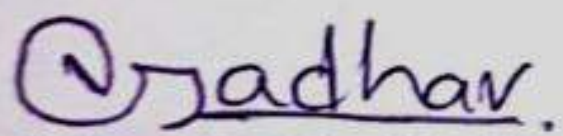



Principal
Dr. J. V. Dadve
Principal
Y. C. College, Lakhandur
Dist, Bhandara

CERTIFICATE

This is to certify that project report entitled "**Identification and Characterization of Pathogenic Bacteria From fruits**" is hereby submitted under the Partial Fulfillment of Master of Science Degree in Microbiology in the Academic Year 2021 – 22.

The work presented here in the report has been carried out by Mr. Tushar Vinayak Zade, a student of Semester – IV M.Sc. Microbiology, Yashwantrao Chawhan Arts, Commerce & Science College, Lakhandur (M.S) under the guidance of **Mr. Vishnu. G. Jadhav**, Assistant Professor, Yashwantrao Chawhan Arts, Commerce & Science College, Lakhandur & **Dr. Rajendra C. Shah**, Department of Microbiology, J. M. Patel Arts, Commerce & Science College, Bhandara (M.S).



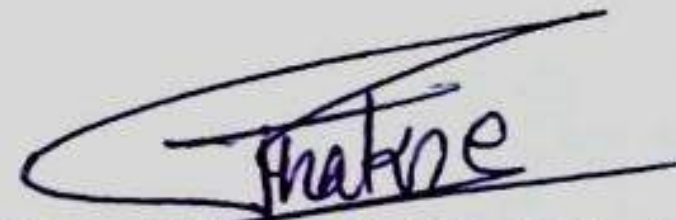
Mr. V. G. Jadhav

Project Supervisor

Assistant Professor

Department of Microbiology

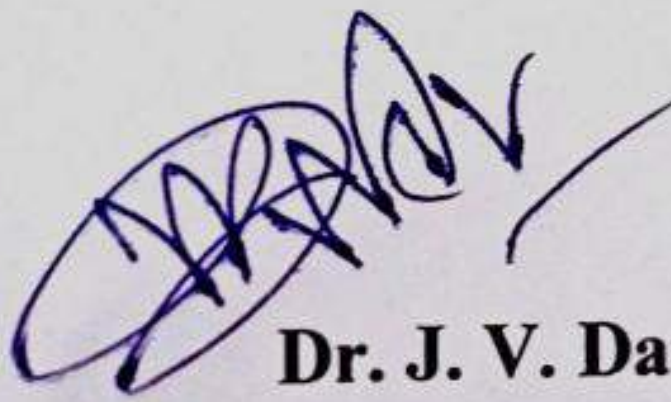
Yashwantrao Chawhan Arts, Commerce
& Science College, Lakhandur



Dr. Rakesh U. Thakare

Head of Department Microbiology

Yashwantrao Chawhan Arts, Commerce
& Science College, Lakhandur



Dr. J. V. Dadve

PRINCIPAL

Yashwantrao Chawhan Arts, Commerce
& Science College, Lakhandur.

Principal
Y.C. College, Lakhandur
Dist. Bhandara

DEPARTMENT OF MICROBIOLOGY
YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE COLLEGE
LAKHANDUR
AFFILIATED TO
RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR



Certificate



This is to certify that the project entitled "Isolation and Characterization of Amylolytic bacteria from Soil", is satisfactorily carried out and completed by Ms. Mrunali Vilas Salve, M.Sc. Microbiology, Yashwantrao Chawhan Arts, Commerce & Science College, Lakhadur, Dist. Bhandara for the partial fulfillment of the Degree of **MASTER OF SCIENCE in MICROBIOLOGY** in the faculty of Science & Technology of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur in the Year 2022.

Dr. RAJU GADPAYLE

Project Supervisor
Department of Microbiology

Dr. R.U. THAKARE

HOD
Department of Microbiology
Head
Dept. of Microbiology
Y. C. College, Lakhadur
Dist. Bhandara

Dr. J. V. DADVE

Principal
Principal
Y. C. College, Lakhadur
Dist. Bhandara

Shri Kisanrao Khobragade Education Society
YASHWANTRAO CHAWHAN ARTS, COMMERCE & SCIENCE
COLLEGE,

LAKHANDUR

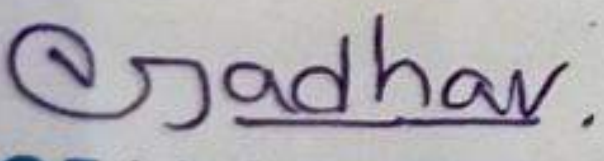
DEPARTMENT OF MICROBIOLOGY

CERTIFICATE

This is to certify that **Miss. RUCHITA H. DHORE** has
satisfactorily completed the project work entitled

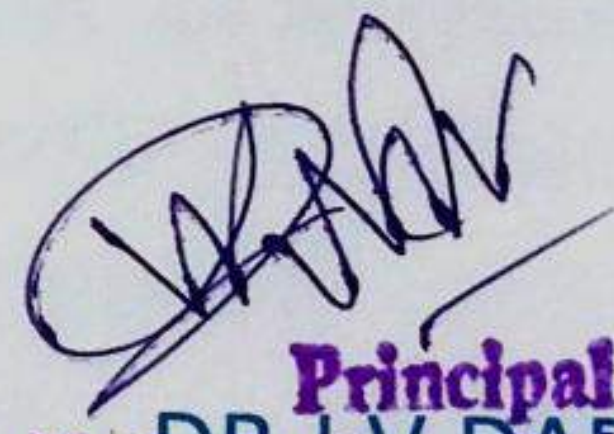
Study on street food sold by vendors

In partial fulfillment of requirement for degree of Master of Science
in the subject of Microbiology and is being submitted to Nagpur
University in the year 2022.


PROF. V.G. JADHAV

PROJECT GUIDE

H.O.D of Microbiology



Principal
DR. J.V. DADME
Y. C. College, Lakhandur
Dist. Bhandara
PRINCIPAL

YASHWANTRAO CHAWHAN ART, COMMERCE

& SCIENCE COLLEGE, LAKHANDUR

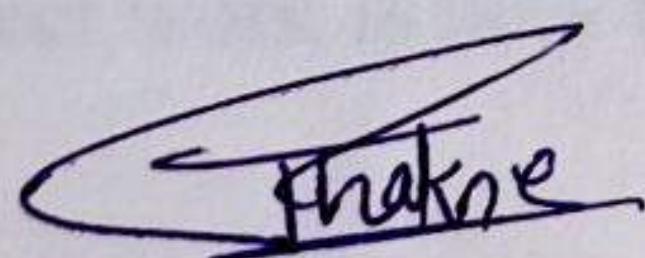
CERTIFICATE

This is to certify that the dissertation entitled "**Decolorization of Reactive Red M8B by fungal species isolated from dye contaminated soil**" submitted to Post Graduate Teaching Department of Microbiology, Yashwantrao Chawhan Arts, Commerce & Science College Lakhandur, Dist- Bhandara, for the Partial Fulfillment of the Degree of Master of Science in Microbiology embodies the result of the bonafide work carried out by **Miss. Vaishali Chandrapramod Raut** under my Guidance and Supervision in the **Post Graduate Teaching Department of Microbiology**, Yashwantrao Chawhan Arts, Commerce & Science College Lakhandur, Dist- Bhandara, Maharashtra, India, Pin-441803.

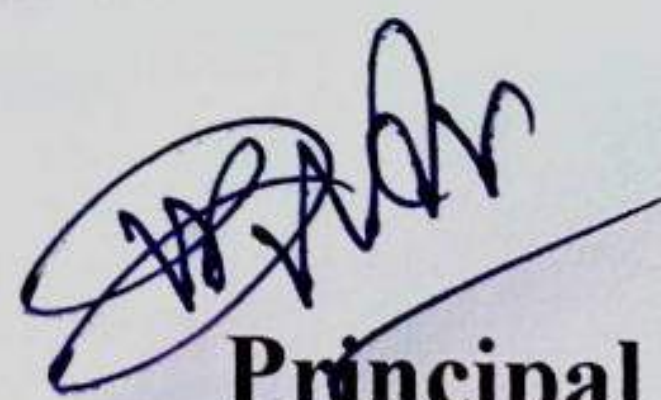
This work was done under the Guidance and Supervision of **Dr. Rakesh U. Thakare**. This work is now ready for Examination.

Date:

Place:



Dr. Rakesh U. Thakare,
Assistant Professor & Head



Principal
Dr. J. V. Dadve

Principal
Y.C. College, Lakhandur
Dist. Bhandara

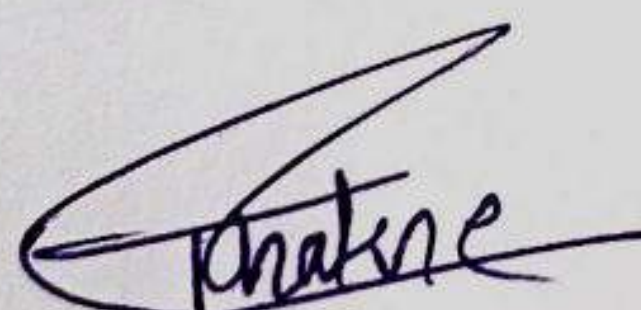


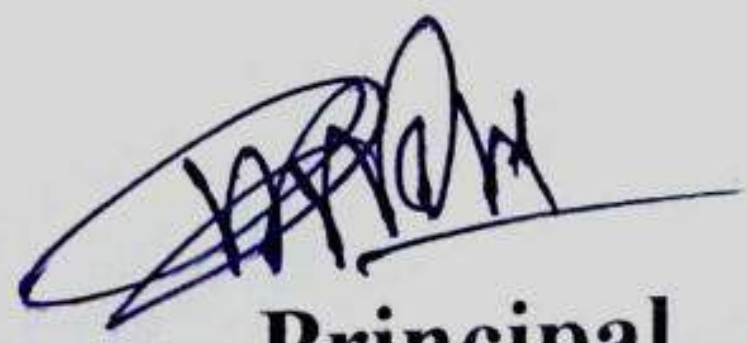
CERTIFICATE

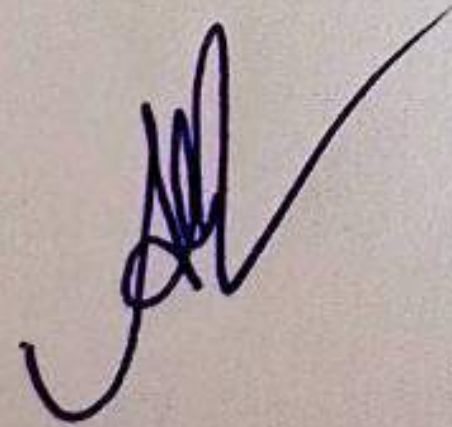
This is to certify that the dissertation entitled "**Studies on Decolorization of Reactive Green 19 dye using a white rot fungus**" submitted to Post Graduate Teaching Department of Microbiology, Yashwantrao Chawhan Arts, Commerce & Science College Lakhandur, Dist- Bhandara, for the Partial Fulfillment of the Degree of Master of Science in Microbiology embodies the result of the bonafide work carried out by **Mr. Vivek Vilas Naktode** under my Guidance and Supervision in the **Post Graduate Teaching Department of Microbiology**, Yashwantrao Chawhan Arts, Commerce & Science College Lakhandur, Dist- Bhandara, Maharashtra, India, Pin-441803.

This work was done under the Guidance and Supervision of **Dr. Rakesh U. Thakare**. This work is now ready for Examination.

Date: 30/06/2022
Place: Lakhandur


Dr. Rakesh U. Thakare,
Assistant Professor & Head
Dept. of Microbiology
Y. C. College, Lakhandur
Dist. Bhandara


Principal
Dr. J. V. Dadve
Principal
Y. C. College, Lakhandur
Dist. Bhandara



CERTIFICATE

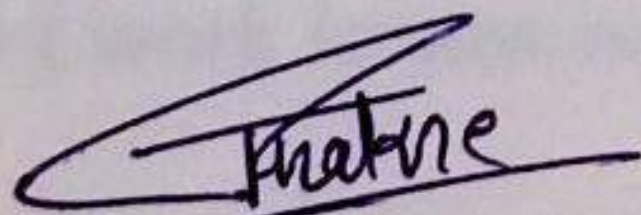
This is to certify that the dissertation entitled "**Green Synthesis of Silver Nanoparticles using *Azadirachta indica* leaf extract and its Antimicrobial study**" submitted to Post Graduate Teaching Department of Microbiology, Yashwantrao Chawhan Arts, Commerce & Science College Lakhandur, Dist- Bhandara, for the Partial Fulfillment of the Degree of Master of Science in Microbiology embodies the result of the bonafide work carried out by **Mr. Devendra Ganesh Funde** under my Guidance and Supervision in the **Post Graduate Teaching Department of Microbiology**, Yashwantrao Chawhan Arts, Commerce & Science College Lakhandur, Dist- Bhandara, Maharashtra, India, Pin-441803.

This work was done under the Guidance and Supervision of **Dr. Rakesh U. Thakare**. This work is now ready for Examination.

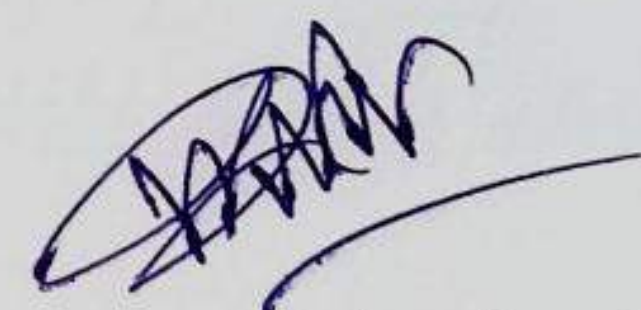
Date:

Place:




Dr. Rakesh U. Thakare,
Assistant Professor & Head

Head
Dept. of Microbiology
Y. C. College, Lakhandur
Dist. Bhandara


Principal
Dr. J. V. Dadve
Principal
Y. C. College, Lakhandur
Dist. Bhandara

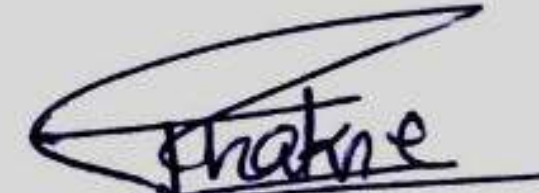
CERTIFICATE

This is to certify that the dissertation entitled "**Encapsulation Of Lactic Acid Bacteria In Calcium Alginate Beads For Bacteriocin Production**" submitted to Post Graduate Teaching Department of Microbiology, Yashwantrao Chawhan Arts, Commerce & Science College Lakhandur, Dist- Bhandara, for the Partial fulfilment of the degree of Master of Science (Microbiology) embodies the result of the bonafide work carried out by **Mr. Pranay Lanjewar** under my guidance and Supervision in the **Post Graduate Teaching Department of Microbiology, Yashwantrao Chawhan Arts, Commerce & Science College Lakhandur, Dist- Bhandara, Maharashtra, India, Pin-441803.**

This work was done under the Guidance and Supervision of **Mr. Pravin.K. Thikare.** This work is now ready for Examination.


Guide

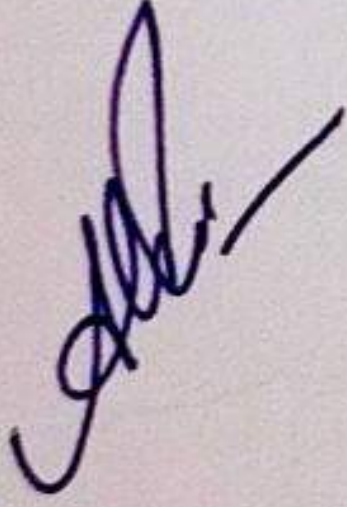
Prof. Pravin K. Thikare


H.O.D.

Prof. Dr. Rakesh U. Thakare




Principal
Dr. J. V. Dadve
Principal
Y.C. College, Lakhandur
Dist, Bhandara





Post Graduate Teaching Department of Microbiology
Yashwantrao Chawhan Arts, Commerce & Science College Lakhandur,
Dist.- Bhandara, Maharashtra, India-441803.
(Affiliated to RTM Nagpur University, Nagpur).

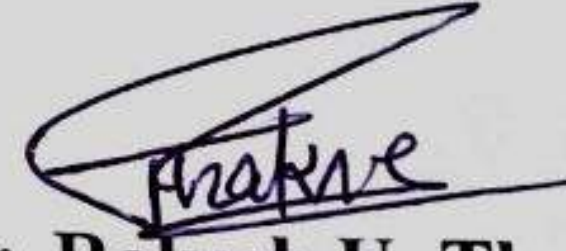
CERTIFICATE

This is to certify that project report entitled "**Antimicrobial activity of medicinal plant extract**" is hereby submitted under the Partial Fulfillment of Master of Science Degree in Microbiology in the Academic Year 2021 – 22.

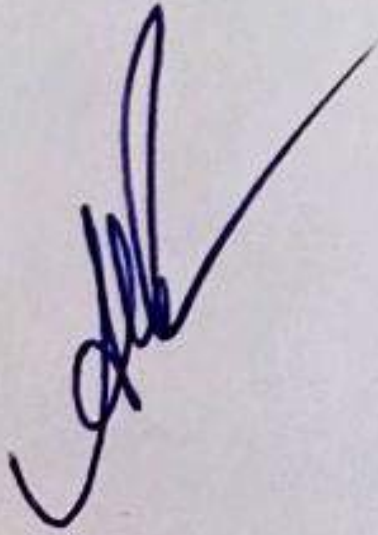
The work presented here in the report has been carried out by **Miss Priyanka Ganesh Ingale**, a student of Semester – IV M.Sc. Microbiology, Yashwantrao Chawhan Arts, Commerce & Science College, Lakhandur (M.S) under the guidance of **Mr. Pravin Thikare**, Assistant Professor, Yashwantrao Chawhan Arts, Commerce & Science College, Lakhandur & **Dr. Rajendra C. Shah**, Department of Microbiology, J. M. Patel Arts, Commerce & Science College, Bhandara (M.S).



Mr. Pravin Thikare
Project Supervisor
Assistant Professor
Department of Microbiology
Yashwantrao Chawhan Arts, Commerce
& Science College, Lakhandur



Dr. Rakesh U. Thakare
Head of Department Microbiology
Yashwantrao Chawhan Arts, Commerce
& Science College, Lakhandur



Dr. J. V. Dadve
PRINCIPAL
Yashwantrao Chawhan Arts, Commerce
& Science College, Lakhandur.

Principal
Y.C. College, Lakhandur
Dist, Bhandara

DEPARTMENT OF MICROBIOLOGY

YASHWANTRAO CHAVHAN ARTS COMMERCE AND SCIENCE

COLLEGE LAKHANDUR

AFFILIATED TO

RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY

NAGPUR



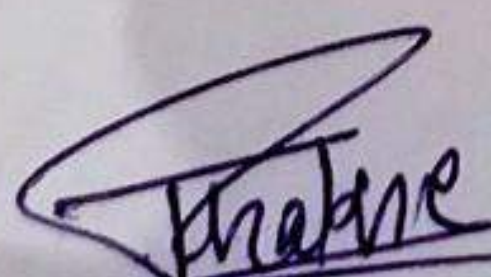
Certificate



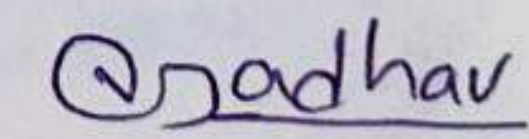
I hereby certify that the project entitled "Isolation Of Phosphate Solubilizing Microbes", submitted for the award of the Degree of MASTER OF SCIENCE in the faculty of Science & Technology (MicroBoilogy), of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur embodies the results of bonafide research work, carried out by Mr. Saurabh Ambardas Vaidhya, under my guidance and supervision.

Place : Lakhandur

Date : 1/7/2022


DR. R. U. THAKARE


H.O.D. Of Microbiology


Mr. V.G. JADHAV
Research Guide

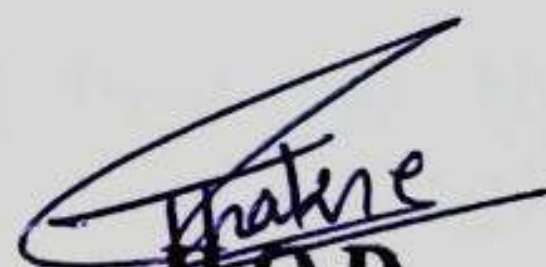
CERTIFICATE

This is to certify that the dissertation entitled "**Antibacterial activity and Phytochemical analysis of *Calotropis Gigantea***" submitted to Post Graduate Teaching Department of Microbiology, Yashwantrao Chawhan Arts, Commerce & Science College Lakhandur, Dist- Bhandara, for the Partial fulfilment of the degree of Master of Science (Microbiology) embodies the result of the bonafide work carried out by **Ku. Sonam M. Dhargave** under my guidance and Supervision in the **Post Graduate Teaching Department of Microbiology, Yashwantrao Chavan Arts, Commerce & Science College Lakhandur, Dist- Bhandara, Maharashtra, India, Pin-441803.**

This work was done under the Guidance and Supervision of **Dr. Pravin Thikare**. This work is now ready for Examination.


Guide

Prof. Pravin K. Thikare


H.O.D

Prof. Dr. Rakesh U. Thakare

Head
Dept. of Microbiology
Y. C. College, Lakhandur
Dist. Bhandara



Principal
Principal
Prof. Dr. J. V. Dadve
Y. C. College, Lakhandur
Dist. Bhandara



Post Graduate Teaching Department of Microbiology

Yashwantrao Chawhan Arts, Commerce & Science College Lakhandur,
Dist.- Bhandara, Maharashtra, India-441803.
(Affiliated to RTM Nagpur University, Nagpur).

CERTIFICATE

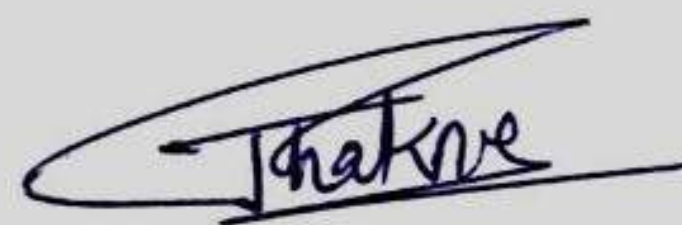
This is to certify that the dissertation entitled "**Isolation of Laccase producing Microorganisms from Garden Soil and Evaluate its efficiency in Dye Decolorization**" submitted to Post Graduate Teaching Department of Microbiology, Yashwantrao Chawhan Arts, Commerce & Science College Lakhandur, Dist- Bhandara, for the Partial fulfilment of the degree of Master of Science (Microbiology) embodies the result of the bonafide work carried out by **Ku. Mrunmayee N. Lanjewar** under my guidance and Supervision in the **Post Graduate Teaching Department of Microbiology**, Yashwantrao Chawan Arts, Commerce & Science College Lakhandur, Dist- Bhandara, Maharashtra, India, Pin-441803.

This work was done under the Guidance and Supervision of **Prof. Pravin K. Thikare**. This work is now ready for Examination.



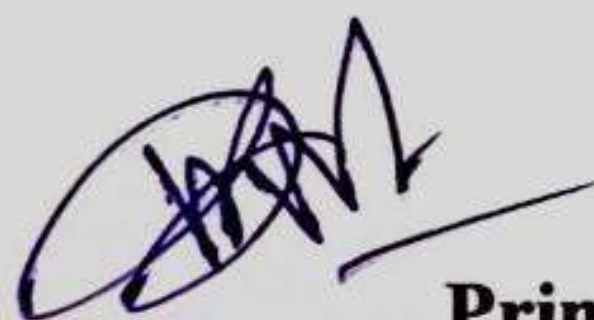
Guide

Prof. Pravin K. Thikare



H.O.D

Prof. Dr. Rakesh U. Thakare



Principal

Prof. Dr. J. V. Dadve

Principal

Y. C. College, Lakhandur

Dist. Bhandara



Post Graduate Teaching Department of Microbiology

Yashwantrao Chawhan Arts, Commerce & Science College Lakhandur,
Dist.- Bhandara, Maharashtra, India- 441803.
(Affiliated to RTM Nagpur University, Nagpur).

CERTIFICATE

DECLARATION

DEPARTMENT OF MICROBIOLOGY

YESHWANTRAO CHAVAN ARTS,
COMMERCE AND SCIENCE COLLEGE
LAKHANDUR



AFFILIATED TO

RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY
NAGPUR

This is to certify that the project entitled “**Isolation and Evaluation of Protease Producing Bacteria from Raw Milk**”, is satisfactorily carried out and completed by **Ms. Dulari Anil Hajare**, M.Sc. Microbiology, Yashwantrao Chawhan Arts, Commerce & Science College, Lakhadur, Dist. Bhandara for the partial fulfillment of the Degree of **MASTER OF SCIENCE in MICROBIOLOGY** in the faculty of Science & Technology of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur in the Year 2022.

Dr. RAJU GADPAYLE

Project Supervisor

Department of Microbiology

Dr. R.U. THAKARE

HOD

Department of Microbiology

Head
Dept. of Microbiology
Y. C. College, Lakhadur
Dist. Bhandara

Dr. J. V. DADVE

Principle
Principal
Y. C. College, Lakhadur
Bhandara

DEPARTMENT OF MICROBIOLOGY
YASHWANTRAO CHAVHAN ARTS COMMERCE AND SCIENCE COLLEGE
LAKHANDUR
AFFILIATED TO
RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR



Certificate



This is to certify that the project entitled "*Isolation and Characterization of Lactobacillus sp. From Fermented Milk*", is satisfactorily carried out and completed by *Ms. Kalyani Amrutlal Bramhankar, M.Sc. Microbiology, Yashwantrao Chawhan Arts, Commerce & Science College, Lakhadur, Dist. Bhandara* in partial fulfillment of the Degree of **MASTER OF SCIENCE in MICROBIOLOGY** in the faculty of Science & Technology of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur in the Year 2022.

Dr. RAJU GADPAYLE

Project Supervisor
Department of Microbiology

Dr. R.U. THAKARE

Head of Department
Department of Microbiology
Head
Dept. of Microbiology
Y. C. College, Lakhadur
Dist. Bhandara

Dr. J. V. DADVE


Principal

Principal
Y. C. College, Lakhadur
Dist. Bhandara

CERTIFICATE

This is to certify that the dissertation entitled "IDENTIFICATION OF BACITRACIN PRODUCED BY BACILLUS SPECIES" submitted to Post Graduate Teaching Department of Microbiology, Yashwantrao Chawhan Arts, Commerce & Science College Lakhandur, Dist- Bhandara, for the Partial fulfilment of the degree of Master of Science (Microbiology) embodies the result of the bonafide work carried out by **Ku. Pallavi P. Dani.** under my guidance and Supervision in the **Post Graduate Teaching Department of Microbiology, Yashwantrao Chavan Arts, Commerce & Science College Lakhandur, Dist- Bhandara, Maharashtra, India, Pin-441803.**

This work was done under the Guidance and Supervision of **Dr. Pravin Thikare.** This work is now ready for Examination.


Guide

Prof. Pravin K. Thikare


H.O.D

Prof. Dr. Rakesh U. Thakare

Head
Dept. of Microbiology
Y. C. College, Lakhandur
Dist. Bhandara



Principal

Prof. Dr. J.V. Dadve

Principal
Y. C. College, Lakhandur
Dist. Bhandara



Post Graduate Teaching Department of Microbiology

Yashwantrao Chawhan Arts, Commerce & Science College Lakhandur,
Dist.- Bhandara, Maharashtra, India-441803.
(Affiliated to RTM Nagpur University, Nagpur).

Certificate

DEPARTMENT OF MICROBIOLOGY

YASHWANTRAO CHAWHAN ARTS COMMERCE AND SCIENCE COLLEGE

LAKHANDUR

AFFILIATED TO

RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR



This is to certify that the project entitled "Isolation and Evaluation of Plant Growth Promoting Activity of Rhizobacteria isolated from Forest Soil", is satisfactorily carried out and completed by Ms. Meghana Vinod Nakade, M.Sc. Microbiology, Yashwantrao Chawhan Arts, Commerce & Science College, Lakhadur, Dist. Bhandara for the partial fulfillment of the Degree of MASTER OF SCIENCE in MICROBIOLOGY in the faculty of Science & Technology of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur in the Year 2022.

[Signature]
Dr. RAJU GADPAYLE

Project Supervisor
Department of Microbiology

[Signature]
Dr. R.U. THAKARE

HOD
Department of Microbiology

Head
Dept. of Microbiology
Y. C. College, Lakhadur
Dist. Bhandara

[Signature]
Dr. J. V. DADVE

[Signature]
Principal
Y. C. College, Lakhadur
Dist. Bhandara

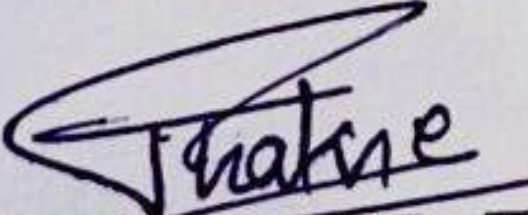
CERTIFICATE


This is to certify that the dissertation entitled "**Study on Occurrence of Drug Resistant *Salmonella typhi* in Spinach Leaves**" submitted to Post Graduate Teaching Department of Microbiology, Yashwantrao Chawhan Arts, Commerce & Science College Lakhandur, Dist- Bhandara, for the Partial Fulfillment of the Degree of Master of Science in Microbiology embodies the result of the bonafide work carried out by **Miss. Bhagyashree Khushal Meshram** under my Guidance and Supervision in the **Post Graduate Teaching Department of Microbiology**, Yashwantrao Chawhan Arts, Commerce & Science College Lakhandur, Dist- Bhandara, Maharashtra, India, Pin-441803.

This work was done under the Guidance and Supervision of **Dr. Rakesh U. Thakare**. This work is now ready for Examination.

Date: 01/07/22

Place: Lakhandur


Dr. Rakesh U. Thakare
Assistant Professor & Head


Principal
Dr. J. V. Dadve
Principal
Y.C. College, Lakhandur
Dist. Bhandara

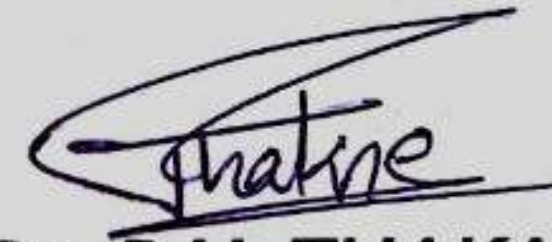
CERTIFICATE

This is to certify that the project entitled "Study on some indian medically important plant for their antimicrobial properties", is satisfactorily carried out and completed by Ms. Duleshwari Vishwajit Hatzade , M.Sc. Microbiology, Yashwantrao Chawhan Arts, Commerce & Science College, Lakhadur, Dist. Bhandara for the partial fulfillment of the Degree of **MASTER OF SCIENCE in MICROBIOLOGY** in the faculty of Science & Technology of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur in the Year 2022.



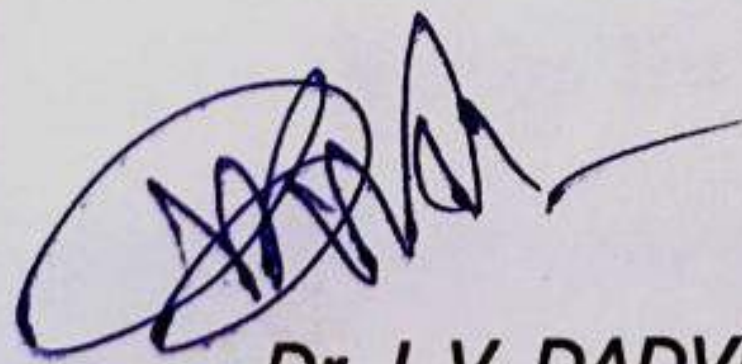
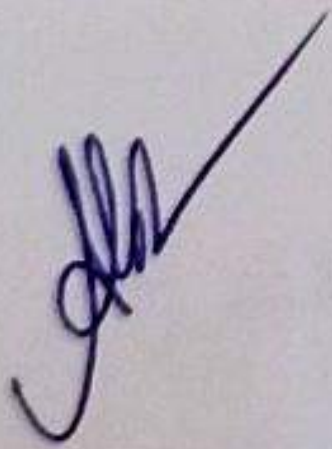
Dr. RAJU GADPAYLE

Project Supervisor
Department of Microbiology



Dr. R.U. THAKARE

Head of department
Department of Microbiology



Dr. J. V. DADVE

Principal
Y.C. College, Lakhadur
Dist, Bhandara

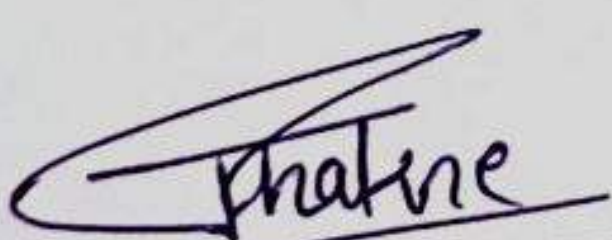
CERTIFICATE

This is to certify that the dissertation entitled "**Isolation and Identification of Probiotic Lactobacillus from Local Dairy (Curd) of Bhandara District and Evaluating their Antimicrobial Activity on Pathogens**" submitted to Post Graduate Teaching Department of Microbiology, Yashwantrao Chawhan Arts, Commerce & Science College Lakhandur, Dist- Bhandara, for the Partial Fulfillment of the Degree of Master of Science in Microbiology embodies the result of the bonafide work carried out by **Miss. Ashwini Namdeo Kudegave** under my Guidance and Supervision in the **Post Graduate Teaching Department of Microbiology**, Yashwantrao Chawhan Arts, Commerce & Science College Lakhandur, Dist- Bhandara, Maharashtra, India, Pin-441803.

This work was done under the Guidance and Supervision of **Dr. Rakesh U. Thakare**. This work is now ready for Examination.

Date: 30/06/2022
Place: Lakhandur




Dr. Rakesh U. Thakare,
Assistant Professor & Head

Head
Dept. of Microbiology
Y. C. College, Lakhandur
Dist. Bhandara

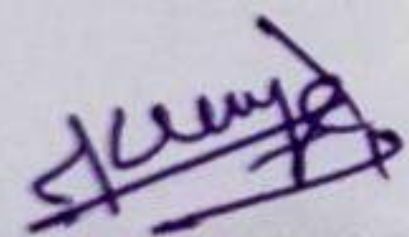


Principal
Dr. J. V. Dadve
Principal
Y. C. College, Lakhandur
Dist. Bhandara

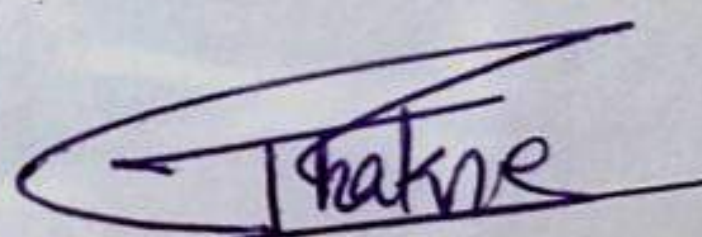
CERTIFICATE

This is to certify that project report entitled "**Identification and Characterization of Pathogenic Bacteria From Water**" is hereby submitted under the Partial Fulfillment of Master of Science Degree in Microbiology in the Academic Year 2021 – 22.

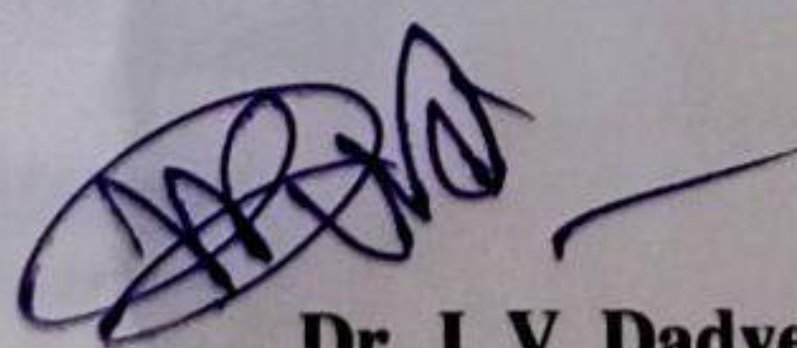
The work presented here in the report has been carried out by **Miss. Nidhi Anil Pashine** a student of Semester – IV M.Sc. Microbiology, Yashwantrao Chawhan Arts, Commerce & Science College, Lakhandur (M.S) under the guidance of **Mr. Pravin Thikare**, Assistant Professor, Yashwantrao Chawhan Arts, Commerce & Science College, Lakhandur & **Dr. Rajendra C. Shah**, Ex- Head, Department of Microbiology, J. M. Patel Arts, Commerce & Science College, Bhandara (M.S).



Mr. Pravin Thikare
Project Supervisor
Assistant Professor
Department of Microbiology
Yashwantrao Chawhan Arts, Commerce
& Science College, Lakhandur



Dr. Rakesh U. Thakare
Head of Department Microbiology
Yashwantrao Chawhan Arts, Commerce
& Science College, Lakhandur



Dr. J. V. Dadve
PRINCIPAL
Yashwantrao Chawhan Arts, Commerce
& Science College, Lakhandur.

Principal
Y. C. College, Lakhandur
Dist. Bhandara

Shri.Kisanrao Khobragade Education Society, Armori, Dist.-Gadcholi
(Reg. No. F/1893-Gad-92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur
Dist.-Bhandara (M.S.) Pin- 441803**

Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.



E-mail:ycel_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

CERTIFICATE

This is to certify that the dissertation entitled "Limnological study of some ponds surrounding Lakhandur area dist. Bhandara M.S. India" is carried out by Ms. Nisha Purame under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date:
Place: Lakhandur

Dr. M. R. Thengare
Supervisor
Assistant Professor & Head
Department of Zoology,

Dr. J. V. Dadve
Principal
Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur Dist.-Bhandara

Shri.Kisanrao Khobragade Education Society, Armori, Dist.-Gadchiroli
(Reg. No. 1/1691-Gad-92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur
Dist.-Bhandara (M.S.) Pin- 441803**

Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.



E-mail: ycccl_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

CERTIFICATE

This is to certify that the dissertation entitled "Avifauna of Navegaon National Park District - Gondia" is carried out by Ms. Minal Thakare under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date:

Place: Lakhandur

Dr. M. R. Thengare
Supervisor
Assistant Professor & Head
Department of Zoology,

30.6.2022

Dr. J. V. Dadve
Principal
Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur Dist.-Bhandara

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur
Dist.-Bhandara (M.S.) Pin- 441803**

Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.



E-mail:yccl_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

CERTIFICATE

This is to certify that the dissertation entitled "**Parasites - Predators: Their Occurrence and Invasive Impact on The Tropical Tasar Silkworm *Antheraea mylitta* (Drury) in the Zone of Gadchiroli District Armori (M.H.)**" is carried out by **Ku. Dipali C. Bondre** under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date:

Place: Lakhandur

Dr. M. R. Thengare
Supervisor
Assistant Professor & Head
Department of Zoology,

Dr. J. V. Dadve
Principal

Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur Dist.-Bhandara

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur
Dist.-Bhandara (M.S.) Pin- 441803**

Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.



E-mail: yccel_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585


CERTIFICATE

This is to certify that the dissertation entitled "**Parasites - Predators: Their Occurrence and Invasive Impact on The Tropical Tasar Silkworm *Antheraea mylitta* (Drury) in the Zone of Gadchiroli District Armori (M.H.)**" is carried out by **Ku. Kalpana Darro** under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date:
Place: Lakhandur


Dr. M. R. Thengare
Supervisor
Assistant Professor & Head
Department of Zoology,


Dr. J. V. Dadve
Principal
Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur Dist.-Bhandara

Shri.Kisanrao Khobragade Education Society, Armori, Dist.-Gadcholi
(Reg. No. 1/1693-Gad-92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur
Dist.-Bhandara (M.S.) Pin- 441803**

Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.



E-mail: yccel_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

CERTIFICATE

This is to certify that the dissertation entitled "**Diversity and conservation status of fish fauna in Wainganga river around Lakhandur region dist. Bhandara, (Maharashtra) India**" is carried out by **Ms. Nikita Rangari** under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date:

Place: Lakhandur

Dr. M. R. Thengare
Supervisor

Assistant Professor & Head
Department of Zoology,

Dr. J. V. Dadve
Principal

Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur Dist.-Bhandara

Shri.Kisanrao Khobragade Education Society, Armori, Dist.-Gadcholi
(Reg. No. F/16/93-Gad/92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur
Dist.-Bhandara (M.S.) Pin- 441803**

Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.



E-mail: ycel_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

CERTIFICATE

This is to certify that the dissertation entitled "**Study of Ecological status with the reference of Physico-chemical parameters from Navegaon Bandh Reservoir**" is carried out by **Miss. Surbhi Chitrivekar** under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date:
Place: Lakhandur

Dr. M. R. Thengare
Supervisor
Assistant Professor & Head
Department of Zoology,

30/07/2022

Dr. J. V. Dadve
Principal
Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur Dist.-Bhandara

Shri.Kisanrao Khobragade Education Society, Armori, Dist.-Gadcholi
(Reg. No. 1/1691/Gad.92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur
Dist.-Bhandara (M.S.) Pin- 441803**

Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.



E-mail:yeel_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

CERTIFICATE

This is to certify that the dissertation entitled "**Life Cycle and Socio-Economical Importance of Honey Bee in Cropland**" is carried out by Ms. **Harshavi Tarone** under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date:

Place: Lakhandur

Dr. M. R. Thengare
Supervisor
Assistant Professor & Head
Department of Zoology,

Dr. J. V. Dadve
Principal
Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur Dist.-Bhandara

Shri.Kisanrao Khobragade Education Society, Armori, Dist.-Gadcholi
(Reg. No. 1/1093-Gad-92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur
Dist.-Bhandara (M.S.) Pin- 441803**

Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.



E-mail:yccl_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

CERTIFICATE

This is to certify that the dissertation entitled "**Study of Ecological status with the reference of Physico-chemical parameters from Navegaon Bandh Reservoir**" is carried out by **Miss. Aachal Walde** under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date:
Place: Lakhandur

Dr. M. R. Thengare
Supervisor
Assistant Professor & Head
Department of Zoology,

Dr. J. V. Dadve
Principal

Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur Dist.-Bhandara

Shri.Kisanrao Khobragade Education Society, Armori, Dist.-Gadchiroli
(Reg. No. 1/1693-Gad-92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur
Dist.-Bhandara (M.S.) Pin- 441803**

Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.



E-mail: ycecl_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

CERTIFICATE

This is to certify that the dissertation entitled "**Profile of Hydrobiology from Wainganga River with Impact of Human Activities at Lakhandur Tahsil Dist. Bhandara (M.S.) India**" is carried out by Ms. **Yuradnyi Lute** under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date:
Place: Lakhandur

Dr. M. R. Thengare
Supervisor
Assistant Professor & Head
Department of Zoology,

Dr. J. V. Dadve
Principal

Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur Dist.-Bhandara

Shri.Kisanrao Khobragade Education Society, Armori, Dist.-Gadchiroli
(Reg. No. F/1093-Gad-92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur
Dist.-Bhandara (M.S.) Pin- 441803**

Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.



E-mail:yccl_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

CERTIFICATE

This is to certify that the dissertation entitled “**Study of Ecological status with the reference of Physico-chemical parameters from Navegaon Bandh Reservoir**” is carried out by **Miss. Surbhi Chitrivekar** under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date:
Place: Lakhandur

Dr. M. R. Thengare
Supervisor
Assistant Professor & Head
Department of Zoology,

Dr. J. V. Dadve
Principal
Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur Dist.-Bhandara

Shri.Kisanrao Khobragade Education Society, Armori, Dist.-Gadcholi
(Reg. No. 1/1493-Gad-92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur
Dist.-Bhandara (M.S.) Pin- 441803**

Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.



E-mail:yeel_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

CERTIFICATE

This is to certify that the dissertation entitled “Study of Ecological status with the reference of Physico-chemical parameters from Navegaon Bandh Reservoir” is carried out by Miss. Ujjwala Landage under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date:

Place: Lakhandur

Dr. M. R. Thengare
Supervisor
Assistant Professor & Head
Department of Zoology,

Dr. J. V. Dadve
Principal
Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur Dist.-Bhandara

Shri.Kisanrao Khobragade Education Society, Armori, Dist.-Gadchiroli
(Reg. No. 1/1601-4nd-92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur
Dist.-Bhandara (M.S.) Pin- 441803**

Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.



E-mail: ycecl_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

CERTIFICATE

This is to certify that the dissertation entitled "**Hydrobiological Status of Chulband River at Lakhandur Territory Dist. Bhandara (M.S.) India**" is carried out by **Ms. Asmita Dighore** under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date:
Place: Lakhandur

Dr. M. R. Thengare
Supervisor
Assistant Professor & Head
Department of Zoology,

Dr. J. V. Dadve
Principal

Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur Dist.-Bhandara

Shri.Kisanrao Khobragade Education Society, Armori, Dist.-Gadchiroli
(Reg. No. F/1693-Gad-92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur
Dist.-Bhandara (M.S.) Pin- 441803**

Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.



E-mail:yccl_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

CERTIFICATE

This is to certify that the dissertation entitled “**Study of Zooplankton Population from Chulband River at Lakhandur Region Dist. Bhandara (M.S.) India**” is carried out by **Ms. Prajakta Ukey** under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date:
Place: Lakhandur

Dr. M. R. Thengare
Supervisor
Assistant Professor & Head
Department of Zoology,

Dr. J. V. Dadve
Principal
Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur Dist.-Bhandara

Shri.Kisanrao Khobragade Education Society, Armori, Dist.-Gadchiroli
(Reg. No. F/1091/Gad-92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur
Dist.-Bhandara (M.S.) Pin- 441803**

Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.



E-mail: yee1_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

CERTIFICATE

This is to certify that the dissertation entitled "**Study of Zooplankton Population from Chulband River at Lakhandur Region Dist. Bhandara (M.S.) India**" is carried out by **Mr. Rushikesh Masram** under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date:
Place: Lakhandur

Dr. M. R. Thengare
Supervisor
Assistant Professor & Head
Department of Zoology,

Dr. J. V. Dadve
Principal
Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur Dist.-Bhandara

Shri.Kisanrao Khobragade Education Society, Armori, Dist.-Gadchiroli
(Reg. No. F/1693-Gad-97)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur**

Dist.-Bhandara (M.S.) Pin- 441803

Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.



E-mail: yeccl_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

CERTIFICATE

This is to certify that the dissertation entitled "**Profile of Hydrobiology from Wainganga River with Impact of Human Activities at Lakhandur Tahsil Dist. Bhandara (M.S.) India**" is carried out by Ms. **Yuradnyi Lute** under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date:

Place: Lakhandur

Dr. M. R. Thengare
Supervisor
Assistant Professor & Head
Department of Zoology,

Dr. J. V. Dadve
Principal

Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur Dist.-Bhandara

POST GRADUATE
DEPARTMENT OF ZOOLOGY

YASHWANTRAO CHAWHAN COLLEGE, LAKHANDUR



CERTIFICATE

This is to certify that investigation described in this project entitled, "A SURVEY ON HOUSE SPARROW POPULATION DECLINE IN RURAL AND URBAN AREAS OF BHANDARA DISTRICT" has been successfully completed by Miss. Bhagyashri Y. Tulshikar in Post Graduate Department of Zoology, Yashwantrao Chawhan College Lakhandur, under my supervision and guidance in partial fulfillment of the requirement for the Degree of Master of Science in Zoology of RTM University, Nagpur.

This work is the won work of the candidate, complete in all respects and is of sufficiently high standard to warrant its submission to the said degree. The assistance and resources used for this work are duly acknowledged.


30/5/2022
Principal


(Mr. M.R. Thengare)
Supervisor


(Mr. M.R. Thengare)
Head of the Department

Shri. Kisanrao Khobragade Education Society, Armori, Dist.-Gadchiroli
(Reg. No. F-1691/Gad-92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur
Dist.-Bhandara (M.S.) Pin- 441803**

Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.



E-mail: yeel_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

CERTIFICATE

This is to certify that the dissertation entitled "Diversity of Ant's around Bhandara District" is carried out by Ms. Pragati Burade under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date:

Place: Lakhandur

Dr. M. R. Thengare
Supervisor
Assistant Professor & Head
Department of Zoology,

30.6.2022

Dr. J. V. Dadve
Principal
Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur Dist.-Bhandara

POST GRADUATE
DEPARTMENT OF ZOOLOGY
YASHWANTRAO CHAWHAN COLLEGE, LAKHANDUR



Certificate

This is to certify that the project work entitled "A SURVEY ON HOUSE SPARROW POPULATION DECLINE IN RURAL AND URBAN AREAS OF BHANDARA DISTRICT" submitted by MISS. FALGUNI V. PAWANKAR in the partial fulfilment of the requirement for the Degree of "Master of Science" in Zoology, Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur at Department of Zoology, Yashwantrao Chawhan Art, Commerce & Science College, Lakhandur District Bhandara under the supervision of Mr.M.R.Thengare, Assistant Professor and Head.


20.6.2022
Dr. J.V. Dadve
Principal


(Mr. M.R.Thengare)
Supervisor


(Mr. M.R.Thengare)
Head of the Department

Principal
Y.C. College, Lakhandur,
Dist. Bhandara

Shri.Kisanrao Khobragade Education Society, Armori, Dist.-Gadchiroli
(Reg. No. F/1693-Gad-92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur
Dist.-Bhandara (M.S.) Pin- 441803**



Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.

E-mail: yecl_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

CERTIFICATE

This is to certify that the dissertation entitled "**Profile of Hydrobiology from Wainganga River with Impact of Human Activities at Lakhandur Tahsil Dist. Bhandara (M.S.) India**" is carried out by **Ms. Vijaya Bhaladhare** under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date:
Place: Lakhandur

Dr. M. R. Thengare
Supervisor
Assistant Professor & Head
Department of Zoology,

Dr. J. V. Dadve
Principal
Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur Dist.-Bhandara

Shri.Kisanrao Khobragade Education Society, Amori, Dist.-Gadcholi
(Reg. No. F 1693-Gad-92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur
Dist.-Bhandara (M.S.) Pin- 441803**

Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.



E-mail: ycecl_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

CERTIFICATE

This is to certify that the dissertation entitled "Diversity and conservation status of fish fauna in Wainganga river around Lakhandur region dist. Bhandara, (Maharashtra) India" is carried out by Ms. Neha Sawarbandhe under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date:

Place: Lakhandur

Dr. M. R. Thengare
Supervisor
Assistant Professor & Head
Department of Zoology,

Dr. J. V. Dadve
Principal
Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur Dist.-Bhandara

Shri.Kisanrao Khobragade Education Society, Arnori, Dist.-Gadchiroli
(Reg. No. 1/1691-Gad-92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur
Dist.-Bhandara (M.S.) Pin- 441803**

Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.



E-mail: yccel_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

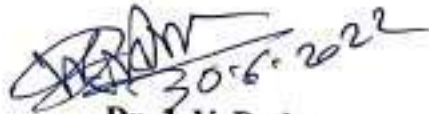
CERTIFICATE

This is to certify that the dissertation entitled "**Hydrobiological Status of Chulband River at Lakhandur Territory Dist. Bhandara (M.S.) India**" is carried out by **Ms. Shubhangi Bhute** under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date:
Place: Lakhandur


Dr. M. R. Thengare
Supervisor
Assistant Professor & Head
Department of Zoology,


Dr. J. V. Dadve
Principal
Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur Dist.-Bhandara

Shri.Kisanrao Khohragade Education Society, Amori, Dist.-Gadcholi
(Reg. No. F/1691-Gad-92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur
Dist.-Bhandara (M.S.) Pin- 441803**

Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.



E-mail: yecl_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

CERTIFICATE

This is to certify that the dissertation entitled "**Hydrobiological Status of Chulband River at Lakhandur Territory Dist. Bhandara (M.S.) India**" is carried out by **Ms. Samiksha Meshram** under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date:

Place: Lakhandur

Dr. M. R. Thengare
Supervisor
Assistant Professor & Head
Department of Zoology,

Dr. J. V. Dadve
Principal
Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur Dist.-Bhandara

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur
Dist.-Bhandara (M.S.) Pin- 441803**

Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.



E-mail:yccl_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

CERTIFICATE

This is to certify that the dissertation entitled "Avifauna of Navegaon National Park District - Gondia" is carried out by Mr. Deeraj Mahajan under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date:

Place: Lakhandur

Dr. M. R. Thengare
Supervisor
Assistant Professor & Head
Department of Zoology,

Dr. J. V. Dadve
Principal
Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur Dist.-Bhandara

Shri.Kisanrao Khobragade Education Society, Armore, Dist.-Gadcholi
(Reg. No. F/1693-Gad-92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur
Dist.-Bhandara (M.S.) Pin- 441803**

Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.



E-mail: ycccl_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

CERTIFICATE

This is to certify that the dissertation entitled "**Limnological study of some ponds surrounding Lakhandur area dist. Bhandara M.S. India**" is carried out by **Ms. Nisha Purame** under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date:
Place: Lakhandur

Dr. M. R. Thengare
Supervisor
Assistant Professor & Head
Department of Zoology,

Dr. J. V. Dadve
Principal
Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur Dist.-Bhandara

Shri.Kisanrao Khobragade Education Society, Armori, Dist.-Gadchiroli
(Reg. No. 1/1993-Gad-92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur
Dist.-Bhandara (M.S.) Pin- 441803**

Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.



E-mail: yecel_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

CERTIFICATE

This is to certify that the dissertation entitled "**Life Cycle and Socio-Economical Importance of Honey Bee in Cropland**" is carried out by Ms. **Harshali Patankar** under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date:

Place: Lakhandur

Dr. M. R. Thengare
Supervisor

Assistant Professor & Head
Department of Zoology,

Dr. J. V. Dadve
Principal

Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur Dist.-Bhandara

Shri.Kisanrao Khobragade Education Society, Armori, Dist.-Gadcholi
(Reg. No.1/1091-Gad92)

**Yashwantrao Chawhan Arts, Commerce & Science
College, Lakhandur
Dist.-Bhandara (M.S.) Pin- 441803**

Principal
Dr. J. V. Dadve
M.A., M.Phil., Ph.D.



E-mail: yeccl_260112@rediffmail.com

STD: 07181
Off: 260112
Res.: 260585

CERTIFICATE

This is to certify that the dissertation entitled "Limnological study of some ponds surrounding Lakhandur area dist. Bhandara M.S. India" is carried out by Ms. Pallavi Pradhan under my supervision for the partial fulfilment for the requirement of the award of the M.Sc. Degree in Zoology, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

The work embodies in this project has not been submitted for any degree or diploma.

Date:
Place: Lakhandur

Dr. M. R. Thengare
Supervisor
Assistant Professor & Head
Department of Zoology,

30.6.2022

Dr. J. V. Dadve
Principal
Yashwantrao Chawhan Arts, Commerce &
Science College, Lakhandur Dist.-Bhandara



Shri Kisanrao Khobragade Education Society
YASHWANTRAO CHAWHAN ARTS, COMMERCE & SCIENCE COLLEGE

LAKHANDUR, DIST. BHANDARA

Student Admission Report

From Date 01/01/2020 To 14/12/2022

Session : 2021-2022

Course : M.SC. (ZOO) - 4

Sr. No.	Roll No	Student Id	STUDENT NAME
M.SC. (ZOO) - 4			
1		2847142	AACHAL VINAYAK WALDE
2		2849073	ASMITA VIJAY DIGHORE
3		2847174	BHAGYASHRI YUVRAJ TULSHIKAR
4		2850369	DHEERAJ SHRIDHAR MAHAJAN
5		2870585	DIPALI CHINTARAM BONDRE
6		2846911	FALGUNEE VASANT PAWANKAR
7		2846606	GODVARI GHANSHYAM BORKAR
8		2845533	HARSHALI HARISCHANDRA PATANKAR
9		2859669	HARSHAVI SATYEJIRAO TARONE
10		2911973	KALPANA DEORAO DARRO
11		2847051	KUNAL VINAYAK DAKHANE
12		2845846	MINAL SUKHDEV THAKARE
13		2866428	NEHA PRAKASH SAWARBANDHE
14		2844518	NIKITA MANOHAR RANGARI
15		2847097	NISHA VISHNUDAS PURAME
16		2849043	PALLAVI YOGESH PRADHAN
17		2845198	PRADNYA PURUSHOTTAM ZALKE
18		2849570	PRAGATI MADHAV BURADE
19		2910632	PRAJAKTA BIHARILAL UKEY
20		2844584	RUSHIKESH RAMDAS MASRAM
21		2850354	SAMIKSHA ADINATH MESHRAM
22		2866559	SHUBHANGI SURESH BHUTE
23		2910600	SURBHI DILIP CHITRIVEKAR
24		2850258	UJJWALA PRAKASH LANDAGE
25		2845195	VIJAYA VINOD BHALADHARE
26		2912070	YURADNYI NATTHU LUTE

लाखांदूर तालुक्यातील विविध गावांमध्ये होणाऱ्या कॅशलेश

व्यवहारांचा अभ्यास 2018-19

सर्वे अहवाल

यशवंतराव चव्हाण महाविद्यालय लाखांदूर जि.अंढारा येथील वाणिज्य विभागाच्या विद्यार्थ्यांनी कॅशलेश व्यवहार सर्वे हा उपक्रम राबविला. हा उपक्रम गावातील नागरिकांची मुलाखत घेऊन त्यांच्याशी संवाद साधून गावपातळीवट कॅशलेश व्यवहार होतो की नाही ? त्याचे प्रमाण किती आहे ? किंवा कॅशलेश व्यवहार न करण्याचे कारण काय ? या सर्व प्रश्नांचे उत्तर शोधून काढण्याकरिता राबविला गेला. हा उपक्रम राबवित्यामुळे विद्यार्थ्यांच्या चिकीत्सक वृत्तीत वाढ घडून आली. त्यांची बौद्धिक क्षमता वाढली, ज्ञान आणि प्रश्न विचारण्याचे विविध कौशल्य यात वाढ घडून आली. कॅशलेश व्यवहाराची माहिती गावपातळीवरून गोळा करण्यात आली. यामुळे गावांमध्ये पैशाचा वापर किती प्रमाणात चालू आहे व किती प्रमाणात कमी झाला आहे ? याचे सत्यता दिसून आली. प्रामुख्याने प्रामुख्याने लाखांदूर तालुक्यातील नदिळ, मोहर्णा, पौना(बू.), बोधली, चिचोली, आसोला, डाबेविटली, तावशी इ.विविध गावांचा समावेश करण्यात आला होता.

या सर्वेमध्ये वाणिज्य विभागाच्या वि.कॉम.भाग 1,2 व 3 च्या विद्यार्थ्यांनी सहभाग घेतला. यात पुढील विद्यार्थ्यांचा समावेश होता.

- | | |
|-------------------------|----------------|
| 1. निलम निमजे | वि.कॉम तृतीय |
| 2. वर्षा गोपाल लोब्रे | वि.कॉम तृतीय |
| 3. लिना केवळराम नखाते | वि.कॉम द्वितीय |
| 4. निखील सुटेशजी विधाते | वि.कॉम तृतीय |
| 5. संघर्ष अशोक मेन्डे | वि.कॉम द्वितीय |
| 6. काजल दुर्योधन बोदले | वि.कॉम द्वितीय |
| 7. वनिता दामोदर साटवणे | वि.कॉम द्वितीय |

8. काजल मुल्चंद सोनवाने वि.कॉम प्रथम
9. अश्विनी परसराम हत्तीमाटेवि.कॉम प्रथम

अवैश्यातून पूर्वील माहिती समोर आली.

सारणी क.1 कॅशलेस व्यवहार करणाऱ्या गावांची संख्या

अ.क.	विवरण	गावांची संख्या
1	बँक मित्र गावात येतात	00
2.	टिचार्ज करणे	07
3.	ग्रामपंचायत मध्ये वापर	08
4.	मनी ट्रान्झफर	04
5.	टिकीट बुकींग	01
6.	मोबाईल बँकींग	01
7.	डेबीट कार्ड	06
8.	चेक	08

सारणी क.2 प्रत्येक गावातील कॅशलेस व्यवहार करण्याचे प्रमाण

अ.क.	गावाचे नाव	प्रामाण(%)
1	नदिळ	20
2.	मोहर्णा	20
3.	पौना(बू.),	40
4.	बोधली	40
5.	चिचोली,	10
6.	आसोला	10
7.	डाबेविरली	40
8.	तावशी	20

नेष्कर्ष

1. गावांमध्ये सर्वात अधिक प्रमाणात ग्रामपंचायत मध्ये कॅशलेस व्यवहार होतो.
2. सर्वात कमी चेकने व्यवहार केले जातात.
3. डेबीटकार्ड वापरण्याचे प्रमाण समपातळीवर आहे.
4. मोबाईलचा वापर सर्वात अधिक होत असून ते सर्वांकडे उपलब्ध आहे.

कॅशलेस व्यवहार न होण्याचे कारण-

1. गावपातळीवर कॅशलेस व्यवहाराचे अज्ञान आहे.
2. कॅशलेस व्यवहारांकरिता प्रत्येक गावात बँक नसून बँक मित्रसुद्धा येत नाहीत.
3. प्रत्येक व्यक्तीकडे मोबाईल उपलब्ध नाही.
4. अनेकांना मोबाईल वापरता येत नाही.

उपाय

1. गावात कॅशलेस व्यवहारांवर प्रशिक्षण देण्यात यावे.
2. गावात बँक मित्रांनी येऊन कॅशलेस व्यवहारातून गावकऱ्यांना मदत करावी.
3. गावाकऱ्यांनी मोबाईलचा वापर करण्याचे प्रशिक्षण घ्यावे.

कॅशलेस व्यवहारांवर आधारित प्रश्नावली (त्यावसायिक किंवा गावकरी यांकरिता)

नाव:- विठोद भागि. शिवगकर
 लिंग:- पुरुष वय:- 24 वर्ष शिक्षण:- B.Sc. Bachel.
 गाव:- लावरी घंटा/नोकराः:- बोती
 वार्षिक उत्पन्न(रु):- 3000

1. तुमच्या गावामध्ये पुढीलपैकी कोणकोणत्या सुविधा आहेत ? समोटा टिक करा.

अ.क.	विवरण	संख्या	प्रमाण %
1	ए.टी.एम.	-	
2	बँका	-	
3	पतसंस्था	-	
4	किराणा दुकान	09	
5	कपड्यांचे दुकान	01	
6	आटाचक्की	02	
7	मेडीकल	-	
8	दवाखाने	-	
9	पानठेले	06	
10	भाजीपाला मार्केट (गुजरी)	01	
11	आठवडी बाजार	01	
12	धान्य किंवा खताची दुकाने	-	
13			
14			
15			
	एकूण		

राष्ट्रसंत तुकडोजी महाराज नागपूर विद्यापीठ, नागपूर
श्री. किसनराव खोब्रागडे शिक्षण संस्था, आरमोरी, जि. गडचिरोली
द्वारा संचालित



यशवंतराव चव्हाण कला, वाणिज्य व विज्ञान महाविद्यालय लाखांदूर, जि. भंडारा

पदव्युत्तर भूगोल विभाग

सन २०१८-१९

शैक्षणिक सर्वेक्षण वृत्तांत

“ चंद्रपूर जिल्ह्यातील ब्रम्हपुरी तालुक्यातील लाडज (सावंगी)
गावातील लोकसंख्येचा सामाजिक-आर्थिक विकास ”

राष्ट्रसंत तुकडोजी महाराज नागपूर विद्यापीठांतर्गत एम.ए.द्वितीय वर्ष (भूगोल)
चतुर्थ सेम. शैक्षणिक सत्र २०१८-१९ परीक्षेकरीता सादर.

* सादरकर्ती *

शालू वामन वाघाडे

एम.ए.चतुर्थ सेम.(भूगोल)

यशवंतराव चव्हाण कला, वाणिज्य व विज्ञान महाविद्यालय, लाखांदूर

* मार्गदर्शक *

डॉ. जी. एल. धोटे

यशवंतराव चव्हाण कला, वाणिज्य व विज्ञान
महाविद्यालय, लाखांदूर, जि. भंडारा

* मार्गदर्शक व भूगोल विभाग प्रमुख *

डॉ. के. वाय. ठाकरे

यशवंतराव चव्हाण कला, वाणिज्य व विज्ञान
महाविद्यालय, लाखांदूर, जि. भंडारा

शैक्षणिक सर्वेक्षण वृत्तांत

चंद्रपूर जिल्ह्यातील ब्रम्हपुरी तालुक्यातील
लाडज(सावंगी) गावातील लोकसंख्येत
सामाजिक-आर्थिक विकास


मार्गदर्शक

डॉ. जी.एल. धोटे

यशवंतराव चव्हाण कला, वाणिज्य व
विज्ञान महाविद्यालय, लाखांदूर



मार्गदर्शक व भूगोल विभाग प्रमुख

डॉ. के. वाय. ठाकरे

यशवंतराव चव्हाण कला, वाणिज्य व
विज्ञान महाविद्यालय, लाखांदूर

:: सादरकर्ते ::

प्रितम रमेश सेलोकर
विक्रान्त देवेंद्र मने
खिलेश्वरी हेमराज गहाणे
राकेश रूपचंद्र रोकडे
नितेश धनराज चुटे
रविंद्र देवदास पटले
भगवान तुकाराम बन्सोड
रोषन जानबा उईके
शालू वामन वाघाडे
मिनाक्षी सदाराम मारभते
प्रिती शालिकराम ठाकरे
तुमदेव काशिराम डोंगरवार
उमराव राजकुमार सहारे
विकास लक्ष्मण वाटगुरे
सविता लालाजी प्रधान

राष्ट्रसंत तुकडोजी महाराज नागपूर विद्यापीठ नागपूर
श्री. किसनराव खोब्रागडे शिक्षण संस्था, आरमोरी, जि. गडचिरोली



**यशवंतराव चव्हाण कला, वाणिज्य व विज्ञान
महाविद्यालय लाखांदूर, जि. भंडारा**

पदव्युत्तर भूगोल विभाग

सन २०१८-१९

-:: प्रमाणपत्र ::-

राष्ट्रसंत तुकडोजी महाराज नागपूर विद्यापीठांतर्गत येणाऱ्या एम.ए.
द्वितीय वर्ष, चतुर्थ सेम, भूगोल विषयांतर्गत सन २०१८-१९ या शैक्षणिक सत्राकरिता
सादर करण्यात आलेला "क्षेत्रीय सर्वेक्षण वृत्तांत" एम.ए. अंतिम वर्षाच्या विद्यार्थी-
विद्यार्थिनींनी पूर्ण केला.

हा वृत्तांत स्वतः त्यांनी लिहिलेला असून एम.ए. (द्वितीय वर्ष) चतुर्थ
सेम, भूगोल पदव्युत्तर परीक्षेला सादर करण्यात आलेला आहे.

मार्गदर्शक

डॉ. जी.एल. धोटे

यशवंतराव चव्हाण कला, वाणिज्य व
विज्ञान महाविद्यालय, लाखांदूर

मार्गदर्शक व भूगोल विभाग प्रमुख

डॉ. के. वाय. ठाकरे

यशवंतराव चव्हाण कला, वाणिज्य व
विज्ञान महाविद्यालय, लाखांदूर

अंतर्गत परीक्षक

बहिःशाल परीक्षक

शैक्षणिक सर्वेक्षणांतर्गत लाडज गावास भेट व मुलाखत घेतांना



यशवंतराव चव्हाण महाविद्यालय
लाखांदूर, जि. भंडारा
भूगोल पदवी व पदव्युत्तर विभाग
सामाजिक, आर्थिक, लोकसंख्या व कृषी पाहणी सर्वेक्षण



शैक्षणिक सर्वेक्षण वृत्तांत

“गोंदीया जिल्हयातील अर्जुनी/मोर. तालुक्यातील इसापूर गावातील लोकसंख्येचा सामाजिक-आर्थिक विकास व कृषी पाहणी”


मार्गदर्शक

प्रा. डॉ. जी. एल. धोटे

यशवंतराव चव्हाण कला, वाणिज्य व
विज्ञान महाविद्यालय, लाखांदूर



मार्गदर्शक व भूगोल विभाग प्रमुख

प्रा. डॉ. के. वाय. ठाकरे

यशवंतराव चव्हाण कला, वाणिज्य व
विज्ञान महाविद्यालय, लाखांदूर

:: सादरकर्ते ::

- | | |
|-------------------------------|------------------------------|
| १) सुबोध दिलीप मेश्राम | १९) प्रियंका रमेश वैद्य |
| २) अमोल शरद बागडे | २०) पुनम राजू निखाडे |
| ३) अनिल जयराम वैद्य | २१) राजेंद्र गणपत पचारे |
| ४) अरविंद देवराम पटणे | २२) सचिन घनश्याम गेडाम |
| ५) भावेश विनायक धुर्वे | २३) शेखर दुधराम येरणे |
| ६) डिंपल जगदिश तिघारे | २४) सिध्दु मुकून्दा मेश्राम |
| ७) गायत्री प्रदिप भेंडारकर | २५) सोनाली शर्मा बगमारे |
| ८) हेमंत प्रभू फुंडे | २६) अभिजीत अरविंद खोब्रागडे |
| ९) लितेश रेवा फटे | २७) सुनिल कान्हू मलगामे |
| १०) लोमेश चंद्रहास भेंडारकर | २८) स्वाती रामचंद्र बोधलकर |
| ११) मनिषा रविंद्र चुटे | २९) उमेश खुशाल धाकडे |
| १२) मंजूषा विजय मेश्राम | ३०) विद्याताई हरिदास गिदमारे |
| १३) निषांत प्रभुजी मेश्राम | ३१) विकास आनंदराव खांडेकर |
| १४) ओमप्रकाश जगन्नाथ राऊत | ३२) विकास श्यामराव तलमले |
| १५) प्रतिभा मोडकराज रामटेके | ३३) विनय वामन जुगनाके |
| १६) प्रितम डाकराम खोब्रागडे | ३४) विष्णु पुंडलिक बुरडे |
| १७) प्रिती गोपाल खरकाटे | ३५) युगंधरा काशिनाथ मेंडे |
| १८) प्रियंका भाऊराव खोब्रागडे | |

राष्ट्रसंत तुकडोजी महाराज नागपूर विद्यापीठ, नागपूर
श्री. किसनराव खोब्रागडे शिक्षण संस्था, आरमोरी, जि. गडचिरोली



**यशवंतराव चव्हाण कला, वाणिज्य व विज्ञान
महाविद्यालय लाखांदूर, जि. भंडारा**

पदव्युत्तर भूगोल विभाग, उच्च शिक्षण व संशोधन केंद्र

सन २०२०-२१

-: प्रमाणपत्र :-

राष्ट्रसंत तुकडोजी महाराज नागपूर विद्यापीठांतर्गत येणाऱ्या एम.ए.
द्वितीय वर्ष, चतुर्थ सेम, भूगोल विषयांतर्गत सन २०२०-२१ या शैक्षणिक सत्राकरिता
सादर करण्यात आलेला "क्षेत्रीय सर्वेक्षण वृत्तांत" एम.ए.अंतिम वर्षाच्या विद्यार्थी-
विद्यार्थिनींनी पूर्ण केला.

हा वृत्तांत स्वतः त्यांनी लिहिलेला असून एम.ए. (द्वितीय वर्ष) चतुर्थ
सेम, भूगोल पदव्युत्तर परीक्षेला सादर करण्यात आलेला आहे.

मार्गदर्शक

प्रा. डॉ. जी. एल. धोटे

यशवंतराव चव्हाण कला, वाणिज्य व
विज्ञान महाविद्यालय, लाखांदूर

मार्गदर्शक व भूगोल विभाग प्रमुख

प्रा. डॉ. के. वाय. ठाकरे

यशवंतराव चव्हाण कला, वाणिज्य व
विज्ञान महाविद्यालय, लाखांदूर

अंतर्गत परीक्षक

बहिःशाल परीक्षक

* अनुक्रमणिका *

प्रकरण	तपशिल	पृष्ठ क्रमांक
१)	<p>प्रकरण १ ले : प्रस्तावणा</p> <p>१.१ प्रास्ताविक</p> <p>१.२ स्थान निश्चिती</p> <p>१.३ अभ्यास विषय</p> <p>१.४ कालावधी</p> <p>१.५ उद्देश</p> <p>१.६ अध्ययन पध्दती</p> <p>१.७ अध्ययनाचे महत्व</p>	१-५
२)	<p>प्रकरण २ रा : इसापूर गावाची भौगोलिक संरचना/वैशिष्ट्ये</p> <p>२.१ प्रस्तावना</p> <p>२.२ इसापूर गावाचे स्थान व विस्तार</p> <p>२.३ भूरचना व भूशास्त्रीय रचना</p> <p>२.४ जलप्रवाह प्रणाली</p> <p>२.५ हवामान</p> <p>२.६ भूमी उपयोजन</p>	६-१६
३)	<p>प्रकरण ३ रे : इसापूर गावाची सामाजिक व सांस्कृतिक संरचना/वैशिष्ट्ये</p> <p>३.१ प्रस्तावना</p> <p>३.२ लोकसंख्या</p> <p>३.३ वय संरचना</p> <p>३.४ जात संरचना</p> <p>३.५ साक्षरता</p> <p>३.६ व्यवसाय संरचना</p> <p>३.७ कुटूंबाचे वार्षिक उत्पन्न</p> <p>३.८ वाहतुक साधनांचा विकास</p> <p>३.९ चैनीच्या वस्तुची उपलब्धता</p> <p>३.१० जीवनावश्यक वस्तुवरील खर्च</p>	१७-२५

प्रकरण	तपशिल	पृष्ठ क्रमांक
४)	<p>प्रकरण ४ थे : इसापूर गावातील शेतीचे वैशिष्ट्ये</p> <p>४.१ प्रस्तावना</p> <p>४.२ शेतकरी व शेतमजूर</p> <p>४.३ भूमीधारणेचा प्रकार</p> <p>४.४ शेतीवर कुटूंबाचा खर्च</p> <p>४.५ रासायनिक खताचा वापर</p> <p>४.६ किटकनाशकांचा वापर</p> <p>४.७ पारंपारीक कृषि अवजारे</p> <p>४.८ आधुनिक कृषि अवजारे</p> <p>४.९ कृषि मार्गदर्शन</p>	२६-३४
५)	<p>प्रकरण ५ वे : इसापूर गावातील शेतीचे स्वरूप</p> <p>५.१ प्रास्ताविक</p> <p>५.२ विविध पिकाखालील सिंचित क्षेत्र</p> <p>५.३ विविध साधनाद्वारे सिंचित क्षेत्र</p> <p>५.४ सुधारीत बी-बीयाने</p> <p>५.५ कृषी साधनांची खरेदी</p> <p>५.७ श्रेसर यंत्रापासून मिळणारे उत्पन्न व खर्च</p>	३५-३८
६)	<p>प्रकरण ६ वे : समस्या, उपाययोजना व सारांश</p> <p>६.१ प्रास्ताविक</p> <p>६.२ समस्या</p> <p>६.३ उपाययोजना</p> <p>६.४ सारांश</p>	३९-४१
	* संदर्भ ग्रंथ सूची	४२

संप्रसूत तुकडोजी महाराज, नागपूर विद्यापिठ नागपूर.
यशवंतराव चव्हाण महाविद्यालय,
लाखांदूर, जि.भंडारा

आर्थिक व सामाजिक सर्वेक्षण अहवाल

२०१९-२०२०

मौजा:किन्हाळा

•सादरकर्ते•

अमित ताराचंद शेंडे
अश्विनी चंद्रसेर राजुत
दिशा ललितानस कुलपूके
डिम्पल पूरुषोत्तम नसाते
दिपाली असोक कावळे
हिराबाईर सुशाल चौधरी
जयश्री रामदास सावरबाधे

मेधा एकनाथ उके
ओमप्रकाश सहदेव निमजे
पूजा विष्णू मेडे
रविना प्रकाश बढोले
रोशन बुधराम हुलके
रूपेश्वरी छगनलाल लंजे
संतोष दामोभर जिभकवटे

शिमा मोरेस्वर दिवडे
तेजरामबाळकृष्ण मोहरकर
कल्याणी धनराज मैश्राम
मगेश वसंत कांबळे
सरोज यशवंत लांडगे
शुभांगिनी मुसरू गडकर

एम.ए.भाग -२ (भूगोल)

• मार्गदर्शक •

प्रा.डॉ.किशोर वाय.ठाकरे

प्रा.डॉ.गणेश एल.घोटे

भूगोल विभाग

यशवंतराव चव्हाण महाविद्यालय लाखांदूर

राष्ट्रसंत तुकडोजी महाराज नागपूर विद्यापिठ नागपूर,एम.ए.भाग-२.

२०१९-२०२० भूगोल प्रात्याक्षिक परिक्षेकरीता प्रस्तुत

RASHTRASANT TUKDOJI MAHARAJ NAGPUR UNIVERSITY, NAGPUR

GEOGRAPHY PRACTICAL EXAMINATION

SUMMER- 2019-20

NAME OF THE STUDENT

Puja Vikram Moudhe

M.A.II nd(GEOGRAPHY)

PRACTICAL-II

EXAMINATED



INTERNAL EXAMINER,

R.T.M.NAGPUR UNI.NAGPUR



EXTERNAL EXAMINER

R.T.M.NAGPUR UNLNAGPUR

CERTIFICATE

This is to certify that, Shri/ku. *P. Y. Chavan*
Of M.A.IIGeo is bonafide of Yashwantrao Chawhan
College, Lakhandur during the academic Session 2019-20.

He/She was completed is/her Field work at mouza-
'KINALA' and prepared the reporty for the submission to
Rashtrasant Tukodji Maharaj Nagpur University Nagpur,
Geography Practical Examination Summer 2019-20.

Under the Supervision of Prof. Dr. K. Y. THAKARE ,
Prof. Dr. G. L. DHOTE



HEAD

DATE:- 23 / 02 / 2020

PostGraduate Geography Department
Y.C.College, Lakhandur Dist-Bhandara

● — मनोगत — ●

“आर्थिक व सामाजिक सर्वेक्षण” किन्हाळा हा अहवाल सादर करताना आम्हाला अत्यंत आनंद होत आहे की, आर्थिक भूगोलाची शाखा असलेल्या कृषी भूगोलाचे अग्रे महणत कृषी हाय या कृषीचा भूमी उपयोग पिक आकृतीबध, जलसिंचनाच्या सोयी, वार्षिक उत्पन्न, आधुनिक तंत्र सामुगी, कृषीचे आधुनिकीकरण तसेच सामाजिक घटकात लोकसंख्या, जातीव्यवस्था, कुटुंबारचना वाहरूक व दळणवळण, वसाहती इत्यादी संबंधी माहिती देण्याचा प्रयत्न केलेला आहे.

हे सर्वेक्षण पुर्ण करण्याच्या हेतुने ज्या मान्यवरांचे मला मार्गदर्शन लाभले त्यांचे आभार न मानल्यास हा अहवाल अपूर्ण राहील. या सर्वांच्या सहकार्याबद्द कृतज्ञता व्यक्त करणे हे आमचे प्रथम कर्तव्य आहे.

सर्वप्रथम आमच्या आभारास पात्र असलेले प्रथम व्यक्ती भूगोल विषयाचे विभाग प्रमुख मान.डॉ. के.वाय.ठाकरे सर व त्यांचे सहकारी प्रा.डॉ.गणेश घोटे सर, प्रा.घनश्याम अलोने सर यांचे आम्हाला मोलाचे मार्गदर्शन लाभले.

किन्हाळा येथील तलाठी त्यांनी या क्षेत्राबद्दल माहिती देवून प्रत्यक्ष मार्गदर्शन केले त्याचप्रमाणे तेथील सरपंच व ग्रामपंचायत सभासद यानी सुध्दा मोलाचे सहकार्य केले तसेच किन्हाळा येथील स्थानिक नागरिकांनी आपल्या शेतीविषयी योग्य माहिती देवून सहकार्य केले याबद्दल आम्ही त्यांचे आभारी आहोत.

वरील सर्वांच्या सहकार्याची, प्रेमाची व आदराची भावना आम्हास गिरारून चालणार नाही. त्यांच्याच अमूल्य सहकार्यातून आर्थिक व सामाजिक सर्वेक्षण आम्ही सादर करू शकलो अन्यथा हे कार्य अपूर्ण राहिले असते. त्यामुळे आपण सर्वांचे अविस्मरणीय सहकार्य सदैव संस्मरणीय राहील यात शंका नाही.

सादरकर्ता



एम.ए.भाग-2 (भूगोल)

ग.व.महा लाखादूर

- अनुक्रमणिका -

● प्रकरण पहिले

परिचय

- ✓ परिचय
- ✓ अभ्यासाचा उद्देश
- ✓ सर्वेक्षणाचा उद्देश
- ✓ अभ्यास पध्दती

● प्रकरण दुसरे

भौगोलिक पार्श्वभूमी

- ✓ प्रदेशाची निवड
- ✓ स्थान व विस्तार
- ✓ शाखाची निवड
- ✓ सर्वेक्षणाचा पध्दती
- ✓ भूपृष्ठरचना
- ✓ मृदा
- ✓ वनस्पती
- ✓ जलप्रणाली

● प्रकरण तिसरे

मानव संसाधने

- ✓ लोकसंख्या
- ✓ लोकसंख्येची वयोगट व लिंगानुसार रचना
- ✓ साक्षरतेनुसार लोकसंख्या वितरण
- ✓ लोकसंख्येची जातानुसार रचना
- ✓ वैवाहिक स्थिती

● प्रकरण चौथे

आर्थिक विकासाचे स्वरूप

- ✓ भूमांडव्याज
- ✓ भूमांडव्याजचा विकास
- ✓ भूमांडव्याजचा विकास
- ✓ कलात्मकतेचे स्वरूप

● प्रकरण पाचवे

कृषीचे आधुनिकीकरण

- ✓ सरासरीयानेक मालांचा वापर
- ✓ कृषी अखण्डार व विकासाचे
- ✓ कृषी शिक्षणाचा व कलात्मकतेचा वापर
- ✓ उपाययोजना व विकास

● प्रकरण सहावे

पिक विविधता

- ✓ व्याख्या
- ✓ पिक विविधतेच्या आधार कृषी विकास
- ✓ पाटण्यासाठी वापरण्याच्या सांख्यिकीय पध्दती
- ✓ पुरवार या मातात्तोन प्रमुख पिके

● प्रकरण सातवे

आर्थिक व सामाजिक स्तर

- ✓ वाहतूक व दळणवळण
- ✓ शिक्षण
- ✓ पिण्याच्या पाण्याचे संचयन
- ✓ विद्युत शक्तीचा वापर

● निष्कर्ष व उपाययोजना

प्रकरण पहिले

प्रस्तावना

प्रस्तावना :-

राष्ट्रसत तुकडोजी महाराज नागपूर विद्यापीठ, नागपूर च्या एम.ए.मान २(भूगोल) प्रात्याक्षिक अभ्यासक्रमातर्गत एखाद्या भूरचना व लोकवस्तीचे सर्वेक्षण करून त्या आधारावर क्षेत्रिय अभ्यास प्रात्याक्षिक परिषदेत राष्ट्रसत तुकडोजी महाराज नागपूर विद्यापीठाला सादर करावयाचा असतो त्यानुसार आम्ही भंडारा जिल्ह्यातील लाखादूर तालुक्यातील किन्हाळ्या या गावाचे कृषी, सामाजिक, आर्थिक तसेच कौटुंबिक जीवन कशाप्रकारे आहे याविषयी क्षेत्रिय अहवाल सादर केलेला आहे.

एखाद्या क्षेत्राला प्रत्यक्ष भेट देऊन निरीक्षणाद्वारे मिळालेल्या माहितीच्या आधारावर सविस्तर अनुभवाद्वारे तथा शास्त्रीय दृष्टीने केला जाणारा अभ्यास म्हणजे क्षेत्रिय अभ्यास होय. म्हणूनच प्रात्याक्षिक भुगोलात क्षेत्रिय अभ्यासाचे महत्त्वाचे स्थान आहे.

भारत हा कृषी प्रधान देश आहे. शेती हा भारताचा मुख्य व्यवसाय आहे. अन्न, वस्त्र, निवारा ह्या मानवाच्या प्राथमिक गरजा पूर्ण करण्यासाठी शेती व्यवसाय हा अत्यंत महत्त्वाचा व्यवसाय समजला जातो. शेती व्यवसायामुळे मानवास स्थायी जीवन लाभलेले आहे. कृषी व्यवसाय हा गावीगावी देण समजली जाते तर ग्राम हे कृषीची देण आहे आणि खऱ्या अर्थाने कृषी नगरात नव्हे तर खेड्यात मिळते. म्हणूनच विनोबा भावे यांचे असे म्हणणे आहे की, खेड्यात देव निर्मी-शहरात निर्मी मनुज' या वचनाचा विचार मनात घेवूनच आम्ही अशाच एका खेड्याचा क्षेत्रिय अभ्यास करण्यासाठी निवड केली की, जा भंडारा जिल्ह्यात फुलून दिसावा.

भंडारा जिल्ह्यातील लाखादूर तालुक्यातील किन्हाळ्या या गावात गावील काही वर्षांपासून कृषी आधुनिक तंत्रज्ञान वापरून भविष्यातील कृषी विकाराच्या दृष्टीने जास्तीत जास्त उत्पादन करणे काढता येईल याचे अध्ययन करण्यात आलेले आहे. परंतु जगाच्या प्रत्येक भागात शेती करणे प्रतिकूल परिस्थितीमुळे शक्य नाही. म्हणूनच शेती हे शास्त्र समजून मांडळ या खेड्यातील कृषी जीवन कशा प्रकारचे आहे हे जाणून घेण्याच्या उत्सुकतेने प्रेरित होवून आम्ही किन्हाळ्या गावाची क्षेत्रिय अभ्यासासाठी निवड केली आहे.

अभ्यासाची उद्दिष्टे :-

भारत हा कृषी प्रधान देश असून एकूण लोकसंख्येच्या 70 टक्क्यांपेक्षा जास्त लोकसंख्या कृषी या व्यवसायात गुंतलेली आहे. कृषी हा भारतातील लोकांचा मुख्य व्यवसाय आहे. याचे मुख्य उद्देश म्हणजे भारतातील एकूण लोकसंख्यापैकी 70 ते 80 टक्के लोकसंख्या ही खेड्यात राहत असलेल्या औद्योगिक क्रांतीनंतर शेतीसुद्धा औद्योगिकीकरणाचा आधार बनला आहे. आणि त्यातूनच औद्योगिक प्रगती नवीन उपकरणांचा शोध किटकनाशकं खाजगीकर इत्यादीमुळे आधुनिकीकरण ही सकारण उदास आली.

शेती हा व्यवसाय उदर निर्वाहासाठी समजला जात असे परंतु आजच्या बदलत्या परिस्थितीच्या अनुसराने शेतीला व्यापारी स्वरूप आलेले दिसून येते. म्हणजेच उदर निर्वाहाचा प्रश्न सोडविताना आर्थिक उत्पादनाचा एक व्यवसाय म्हणून शेतीकडे पाहण्याचा दृष्टीकोन बनविला आहे. परंतु भारतातील शेतीच्या बाबतीत विचार केला असता भारतीय कृषी अजूनही पारंपारीक स्वरूपाची आढळून येते.

भारतीय शेतकरी आधुनिक शेतीविषयी पूर्णपणे परिचीत नसल्यामुळे त्याचा शेतीकडे पाहण्याचा दृष्टीकोन अजूनही बदललेला आढळून येत नाही. आणि त्याचा परिणाम शेती उत्पादनावर झालेला आढळून येतो. भारतीय शेतकरी आजच्या परिस्थितीतही कृषीला आवश्यक असणाऱ्या घटकापासून त्याच्या ज्ञानापासून दूर आहे. म्हणूनच आम्ही किन्हाळ मावाचे सर्वेक्षण करण्याची योजना आखली आणि हे सर्वेक्षण करण्याचा मुख्य उद्देश म्हणजे शेतीशी निगडित असलेल्या विविध बाबींचा अभ्यास करणे हाच होता.

सर्वेक्षणाचे उद्दिष्टे :-

- 1) विन्दाळा गावातील भूमी उपयोगाचा अभ्यास करणे व त्याचे उत्पन्न किती प्रमाणात मिळते याचा अभ्यास करणे.
- 2) जल वर्षापूर्वी शेती भूमी उपयोगाचा काही बदल झाला असल्यास तसेच उत्पादनात त्या प्रमाणात बदल झाला काय? याचा अभ्यास करणे.
- 3) पाणी पुरवठा तसेच जलसिंचनाच्या सोयीचा पिकांच्या उत्पन्नावर होणारा परिणाम अभ्यासने.
- 4) स्थानिक हवामानाचा परिणाम पिकावर कशा पध्दतीने झाला आहे हे अभ्यासने.
- 5) आधुनिक पिक पध्दती आणि सुचारीत ओलीताखलील पिकात क्षेत्रीय वाढ झाली आहे किंवा नाही याचा अभ्यास करणे.
- 6) मागील 10 वर्षांपासून पडीत असणाऱ्या क्षेत्राला बदलते रूप देऊन त्याचा उपयोग लागवडी खालील शेतीकरीता केला जात आहे. किंवा नाही हे अभ्यासने.
- 7) पिकांचे उत्पादन वाढविण्याच्या दृष्टीने सिंचनाखालील जमीनीचा क्षेत्रीय वाढ किंवा घट होत आहे किंवा नाही हे अभ्यासने.
- 8) शेती व्यवसाया व्यतीरीक्त कुटूंबातील इतर स्त्रि-पुरुष वेगळा व्यवसाय करतात काय? याचा सविस्तर अभ्यास करणे.
- 9) गावात आलेल्या शेतकरी, शेतमजुर इतर व्यवसायीक इ. ची सामाजिक आर्थिक परिस्थिती विषयक माहिती प्राप्त करून घेणे.
- 10) कृषीच्या वाढत्या आधुनिकरणात येथील शेतकरी किती उपयोग होतो त्यापासून काही कृषीला मदत होते काय? याचा अभ्यास करणे.
- 11) गावातील जनावरे त्यांचे आरोग्य त्या जनावरांचा शेतीसाठी किती उपयोग होतो. त्यापासून काही कृषीला मदत होते काय? याचा अभ्यास करणे.
- 12) शेती व्यतीरीक्त, कुक्कुटपालन, पशूपालन, दुग्धव्यवसाय यासारखे व्यवसाय करता काय? त्यापासून त्यांना किती आर्थिक नफा होतो याविषयी अभ्यास करणे.

अभ्यास पध्दती :-

भूगोल हा अतिशय व्यापक विषय आहे आणि ज्ञान पाहीले तर भूगोलाच्या विविध शाखाही आपले रसदार अस्तित्त्व घेवून अस्तित्त्वास आणते आणि भूगोल हा विषय कालानुरूप अभ्यासनाचा विषय असल्याने अलीकडील काळामे भूगोलाच्या पुस्तकी ज्ञानासोबतच विकिस इतरही प्रकारच्या अभ्यास पध्दती आपल्याला वाडळून घेतातच त्यामुळे आपल्याला एखाद्या अभ्यास क्षेत्राची विनवूक माहीती मिळविण्यात योग्य अशी मदत होते.

भूगोल हा विषय प्रत्यक्ष निरीक्षणाद्वारेच अभ्यासण्याचा विषय आहे. भूगोल या विषयाचा अभ्यास मुख्यतः चार भितीच्या आत राहून करावयाचा नसतो तर त्याला प्रामुख्याने प्रत्यक्ष मुलाखतीची सर्वेक्षणाची जोड असावी लागते. कोणतेही अध्ययन हे जेव्हा निरीक्षण किंवा प्रत्यक्ष मुलाखत पध्दतीनक केलेल्या अभ्यासाची उद्दिष्टे पूर्ण होण्यास काहीही अडथळा येत नाही. तसेच अभ्यास क्षेत्रात निर्माण होणा-या समस्यांचे निराकरण, निष्कर्ष काढण्यास मदत होते. आणि त्याचाच आधार घेवून आम्ही किन्हाळा गावाचे क्षेत्रीय अध्ययन करण्यासाठी प्रत्यक्ष मुलाखत आणि प्रत्यक्ष भूमी उपयोजन निरीक्षण ही अभ्यास पध्दती अवलंबली तसेच सोबतच गावातील काही निवडक आवश्यक आकडेवारी गोळा केली.

प्रत्यक्ष रूपाने जमा केलेल्या माहीतीला संक्षिप्त रूप देण्यात आले. कुटूंबाची प्रत्यक्ष मुलाखतीसाठी निवड करण्यात आली. ही निवड करतांना खालील गोष्टींचा आधार घेण्यात आला.

- 1) सर्व प्रथम ग्रामपंचायत वार्ड निश्चित करून प्रत्येक वार्डाची सिमा निश्चित करण्यात आली.
- 2) प्रत्येक वार्डात किती घरे आहेत याची माहीती जाणून घेण्यात आली.
- 3) आम्ही विद्यार्थ्यांचे एका गटात तीन विद्यार्थी या प्रमाणे गट निर्माण करण्यात आले.

वरील प्रक्रियेनंतर आम्ही विद्यार्थी गटागटाने कुटूंबप्रमुखाची प्रत्यक्ष भेट घेतली. सर्वेक्षणाचा उद्देश सर्व प्रथम समजावून सांगितला. त्यांच्याशी सलोखाची भावना निर्माण करून आम्ही शासकीय कर्मचारी नाही ही बाब त्यांच्यांत रुजवावी लागली. नंतर त्यांच्याकडून माहीती कवचारून आमच्याकडील प्रश्नावली भरून दिली.

प्रश्नावलिननुसार सारणीयन करण्यात आले. व प्राप्त सारणीच्या आधारे अहवाल तयार करण्यात आला. यात भूगोल विभाग प्रमुख प्रा.डॉ.के.बाय.ठाकरे सर, प्रा.डॉ. गणेश धोटे, प्रा. घनश्याम अलोने सर, यांच्या योग्य मार्गदर्शनाखाली सहकार्य लाभले.

भौगोलिक पार्श्वभूमी

स्थान :-

महाराष्ट्र राज्यातील मंदरा जिल्यातील लाखादूर तालुक्यात येणाऱ्या किन्हाळा गावाचे स्थान भारतीय स्थलदर्शक नकाशा निर्देशांक 55 व/14 या स्थलदर्शक नकाशाद्वारे माहेली निर्देशित केली आहे. किन्हाळा गावाचे मंदरा जिल्याच्या दक्षिण आणि लाखादूर तालुक्याच्या नैऋत्य दिशेला स्थित आहे. किन्हाळा गावाचे मंदरा जिल्यापासून अंतर 70 कि.मी. असून लाखादूर या तालुक्यापासून 15 कि.मी. एवढे अंतर आहे. या गावाला जाण्यासाठी लाखादूर - मंदरा मार्गाने परसोडी करून उत्तरेस 4 कि.मी. अंतरावर किन्हाळा गाव वसलेले असून जाण्यासाठी डांबरीकरण रस्ता आहे.

विस्तार :-

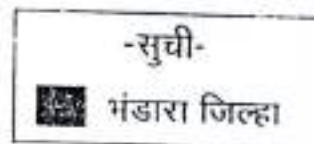
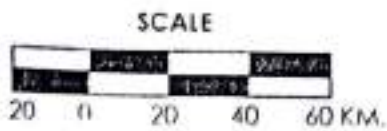
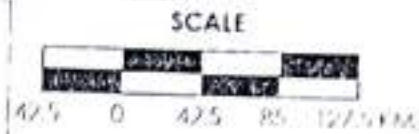
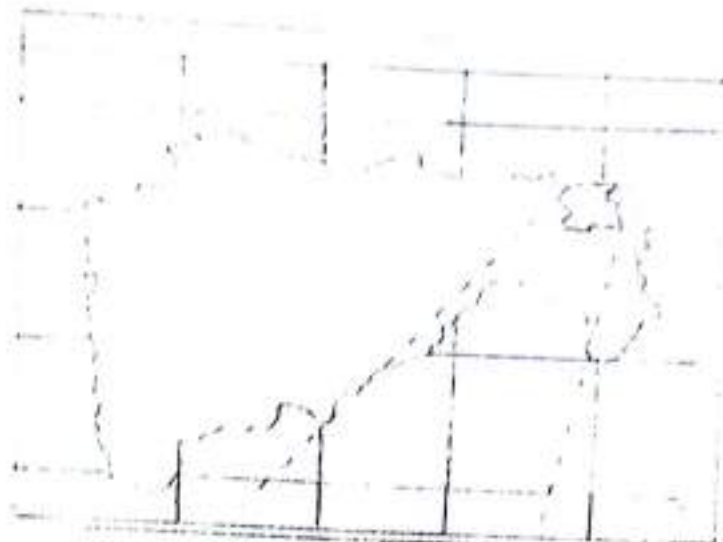
भारतीय स्थलदर्शक नकाशा नुसार किन्हाळा अक्षांशीय विस्तार 20 44'27" ते 20 44'35" उत्तर अक्षांश तर रेखांशीय विस्तार 79 57'34" पूर्व रेखांश आहे. मांडळ हे गाव मैदानी प्रदेशात वसलेले आहे तर या गावाची समुद्र सपाटी पासूनची उंची 270 मी. इतकी आहे.

गावाची निवड :-

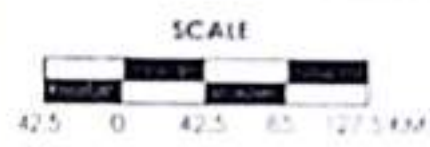
किन्हाळा या गावाची निवड खालील गोष्टी लक्षात ठेवून करण्यात आली

- 1) किन्हाळा गावाचे मुख्य रस्त्यापासून किमी अंतर
- 2) वाहतूक साधनाची उत्तम सोय
- 3) सर्वेक्षणासाठी आवश्यक योग्य नैसर्गिक आणि सामाजिक परिस्थिती
- 4) निसर्गाचा वातावरणावर झालेला परिणाम
- 5) किन्हाळा गाव चुलबंद नदिच्या खोऱ्यात वसलेले असल्याने गावाचा नदि खोऱ्याचा अभ्यास करण्याचा दृष्टीकोन.

- मंडरा जिल्ह्याचे स्थान -



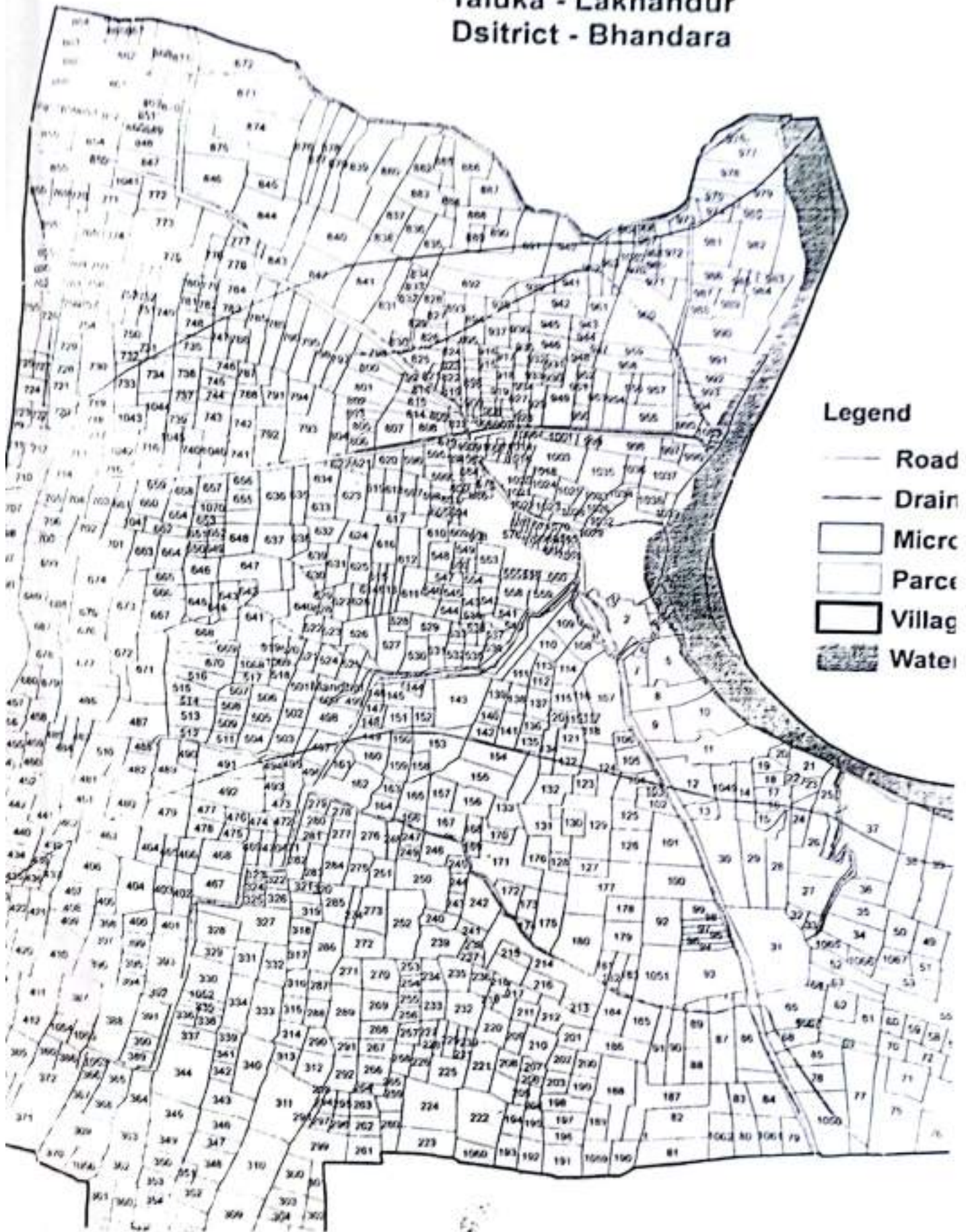
- भंडारा जिल्ह्यातील लाखांदूर तालुक्याचे स्थान -



-सुची-
■ लाखांदूर तालुका

BASE MAP

Village - KINALA
Taluka - Lakhandur
Dsitric - Bhandara



Legend

- Road
- Drain
- Micro
- Parcel
- Village
- ▨ Water

मानव संसाधन

कोणत्याही साधन संपत्तीच्या विकासात मानवाची भूमिका निणवणारी असते व त्याचे स्थान अन्य साधन आहे. मानवाशिवाय साधनसंपत्तीचा विकास विनीयाम प्रशक्य आहे म्हणूनच विसर्गोत्पत्त्या द्वारे साधनसंपत्ती इतकेच मानवाने साधनसंपत्ती म्हणून महत्त्वाचे स्थान आहे.

लोकसंख्या :-

लोकसंख्या ही एक साधनसंपत्ती आहे. लोकसंख्या सामान्यतः नैसर्गिक व सामाजिक परिस्थितीमुळे प्रभावित होते. मानव कृतीशील विचारशील आहे. तो अनेक वस्तूंचे उत्पादन करतो व उपभोगही घेता.

कोणत्याही राष्ट्राचा आर्थिक विकास व साधनसंपत्ती या निर्णायक घटकांवर असतो त्यात लोकसंख्या हा प्रमुख पायाभूत घटक आहे. भारताचा आर्थिक विकास आणि देशात सुरू असलेल्या नियोजनाच्या प्रयोगाबद्दल विचार केला असताना लोकसंख्येच्या प्रश्नाचा विचार करावा लागतो. देशाच्या अर्थकरणात आणि विकासाच्या प्रक्रियेमध्ये लोकसंख्याच्या प्रश्नाला विशेष महत्त्व आहे.

लोकसंख्या वाढीची गती व नैसर्गिक संपत्तीची निर्मितीची गती यात फार मोठी तफावत आहे. एकोणविसाव्या शतकापर्यंत जगातील लोकसंख्येतला धान्य आणि साधनसंपत्तीचे उत्पादन पुरेशे होते. धान्य उत्पादनात होणारी वाढ व लोकसंख्येत होणाऱ्या वाढीचे प्रमाण हे सारखे नाही. धान्य उत्पादन वाढत्या लोकसंख्येला अपुरा पडेल असे गेल्या शतकामध्ये तज्ज्ञांनी इशारा दिला होता.

भारत हा खंडप्राय देश आहे. भारतात अनेक जाती, धर्म, पंथ व भाषा दिसून येतात. आर्थिक विकास हा नैसर्गिक साधनसंपत्ती आणि लोकसंख्येवर अवलंबून असतो. पूर्वीच्या काही नैसर्गिक साधन संपत्तीला विशेष महत्त्व दिला जात आहे असे आणि लोकसंख्येला गौण मानले परंतु आजच्या स्थितीत याचा दृष्टीकोण बदललेला आहे. गेल्या काही शतकात लोकसंख्येत वेगाने वाढ झाली आहे. त्यामुळे आज वाढती लोकसंख्या ही फार मोठी समस्या आहे. कारण लोकसंख्या वाढीमुळे साधनसंपत्ती व लोकसंख्या यांचे सतुलन निर्माण होते.

लोकसंख्या वाढ ही जन्मदर 1 मुल्युद्धर या दोन घटकान्वर अवलंबून असते. घटत्या निर्माण
प्रदेशातील निर्माण प्रदेशातील वाढीवर जन्मदर एक हजार लोकसंख्या जन्मदराने जास्तीत
मूल्युद्धर जन्मदर होय. ज्यावेळी जन्मदरामुळे मुल्युद्धर उणी असते त्यावेळी लोकसंख्या ही घटित
जाते. जाई लोकसंख्या वाढीचे प्रमाण हे लोकसंख्या वाढत केले जाते. लोकसंख्या वाढीच्या प्रमाणानुसार
जास्तीत लोकसंख्येची वाढ कशी होईल याची कल्पना येते.

विकसनशील देशांमध्ये मात्र विकसित देशांच्या तुलनेत लोकसंख्या वाढीच्या जास्तीत वेगळे
वेगळे दिशेने विकसनशील देशांमध्ये 1920 नंतर लोकसंख्या वाढीचा दर वाढण्यास सुरु झाली. न
त्यानंतर दर 1970 पर्यंत सारख्या वाढत राहिल. मात्र 1970 नंतरच त्या या वर्षांचे कृत्रिमवेगळेपणाचे प्रसार
ह्यावेळी जास्तीत आणि या देशांमध्ये सामाजिक अस्थिरता देशातील सरकारने 1970 नंतर लोकसंख्या
नियंत्रण ठेवण्यात प्रयत्न केला.

वाढत्या लोकसंख्येमुळे आर्थिक सामाजिक वास्तविक आणि राजकीय समस्या निर्माण झाल्या
आहेत. ज्या ठिकाणी लोकसंख्येचे प्रमाण जास्त असते त्या ठिकाणी भू जागांचे तुकडीकरण जास्ती
जागरीकरण, प्रदुषण, प्रादेशिक असमानते, सांस्कृतिक मूल्यांचा हास, बेरोजगारी व समस्या निर्माण
होतात.

पृथ्वीच्या एकूणक्षेत्रफळापैकी केवळ 29/ मुद्यात असून बहुतेक भाग हा जमीनवाळू वाळवटी
हिमच्छादीत आणि क्वाचछादीत असल्याने मानवी वस्तीत लोकसंख्येसाठी उपलब्ध जागासंपत्ती आणि
अन्न उत्पादन अपुरे पडू नये, या करिता वाढत्या लोकसंख्येवर नियंत्रण ठेवणे जागण संपत्तीचा नियंत्रीत
वापर करणे आणि त्याचे संवर्धन करणे आवश्यक आहे.

लोकसंख्या आणि आर्थिक विकास यांचा घनिष्ठ संबंध आहे. अन्नोत्पादनाच्या दृष्टीने एखाद्या
देशातील लोकसंख्येचे प्रमाण हे त्या देशातील नैसर्गिक जागणसंपत्तीचा एक महत्त्वाचा घटक समजला
जातो. म्हणून ज्या ठिकाणी जागणी सर्वेक्षण केले त्या ठिकाणी लोकसंख्या विषयाबाबतच्या मुद्यांचा विचार
करून माहिती संकलीत केली.

लोकसंख्येची लिंगभेदानुसार रचना :-

आम्ही शैक्षणिक सर्वेक्षणासाठी मनास जिल्ह्यातील किन्हाळ्या गावी गले असता, या गावातील स्त्री-पुरुषांची एकूण संख्या वयोगदानुसार माहिती करण्यासाठी गावामध्ये सर्वेक्षण करण्यात आले असता 2012-13 या वर्षी स्त्री व पुरुषांचे प्रमाण पुढील प्रमाणे दिसून येते.

लोकसंख्येची लिंगानुसार विभागणी :-

पुरुष	टक्केवारी	स्त्री	टक्केवारी	मुले	टक्केवारी	मुली	टक्केवारी
1313	45.38	1278	44.17	946	5.42	945	5.01

साक्षरतेनुसार लोकसंख्या वितरण :-

लोकसंख्येचा गुणवत्तेवरून त्याच्या सहणीमानाचा दर्जा ठरतो. देशाला मागासलेपणा पासून आधुनिक बनविण्यासाठी लोकांच्या सहणीमानाचा दर्जा उंचावण्यासाठी त्यांच्यातील सामाजिक व आर्थिक स्तर उंचावणे, दुर्भिक्ष, अंधश्रद्धा दूर करण्यासाठी साक्षरतेची आवश्यकता असते. साक्षरता जितकी जास्त असेल तितक्या गतीने देश प्रगतीपथावर अग्रेसर होतो. कारण शिक्षित जनता लवकरात लवकर नवनविन तंत्रज्ञान आत्मसात करून आपल्या व देशाच्या प्रगतीला यातून हातभार लावत असतो. म्हणून साक्षर जनता हे देशाच्या विकासाचे द्योतक आहे. अशाप्रकारे किन्हाळ्या गावातील सर्वेक्षण करण्यात आले तेव्हा साक्षर व निरक्षर लोकांची संख्या ही पुरुष यामध्ये विभागण्यात आली ही माहिती पुढील सारणीवरून दिलेली आहे.

स्वरूप	पुरुष	स्त्रीया	एकूण
साक्षर	1268	1234	2503
निरक्षर	202	188	390
एकूण	1470	1423	2893

लोकसंख्येची जातीनुसार रचना :-

भारतातील इतिहासात जेव्हा समाज अस्तीत्वात आला तेव्हा त्या समाजामध्ये विशिष्ट वर्ग तयार झाले आणि त्या वर्गांमध्ये लक्षणवर्णापासून संपत्तीस होईपर्यंत पितृयानपितृया एकच काम करीत राहिले. त्याच्या कामात इतकी कुशलता आली की त्याच्या व्यतीरीक इतर कोणीही इतकी श्रमक असलेली कौशल्यपूर्ण कार्य करू शकत नव्हती व त्यामुळे ते काम जून्या पिढीकडून नव्या पिढीकडे हस्तांतरित करीत असे व ते जे काम करीत असत त्या कामावरून त्याच जातीचे संवाधन केले जात असे.

या गावातील लोकसंख्या ही जातीनुसार खालीलप्रमाणे स्पष्ट करता येते.

अ.क्र	जात	पुरुष	स्त्री	एकूण
1	अनु. जाती	344	343	698
2	अनु. जमाती	09	08	17
3	वि.जा / भ.ज.	78	80	158
4	वि.मा.प्र.	152	125	277
5	इ.मा.व.	876	867	1743
एकूण		1459	1423	2882

वैवाहीक स्थिती :-

विवाहीत			अविवाहीत		
पुरुष	स्त्री	एकूण	पुरुष	स्त्री	एकूण
923	1048	1871	390	230	620

जलप्रवाह प्रणाली :-

विशाल भूप्रदेशावर वाहणाऱ्या या निरस्योन्निर्मित जलप्रवाह म्हणजे नदी होय. याचा उगम झरा, दलदल प्रदेश, सरोवर किंवा उगम उतारावरून जाऊन जाणवतातून होते. पावसाचे पाणी गू उताराला अनुसरून वाहत येतो ते खोलगत मार्ग तयार करताना जमक मोहाळ एकत्र येऊन निझर व ओढ निर्माण होतात नंतर त्याची नदी बनते. एकूण वृष्टीच्या 30 टक्के पाणी नदी रुपान वाहते. नदी ही जलप्रवाहाची व्यापक सज्ञा आहे. वाहते पाणी किंवा नदी हा सर्वात मोठा क्षरण कारक आहे. जगातील बहुतांश भूप्रदेश पाण्याने व्यापलेला आहे. बहुतांश प्रदेशात पाण्याचे कार्य चालूच असते. जगातील 10 टक्के क्षरण कार्य पाण्यामुळेच होते. नद्यांची वाहण्याची गतिमानता व त्यातील पाण्याचे प्रमाण यानुसार नदीचा वहन मार्ग ठरतो. नदीत पाणी किती काळ असतो यानुसार तीव्र प्रवाहाची अखंडता ठरते. नदी आपल्या उगमापासून मुखापर्यंत विविध कार्य करीत असते त्यामुळे विविध भूरूपाची निर्गती होते.

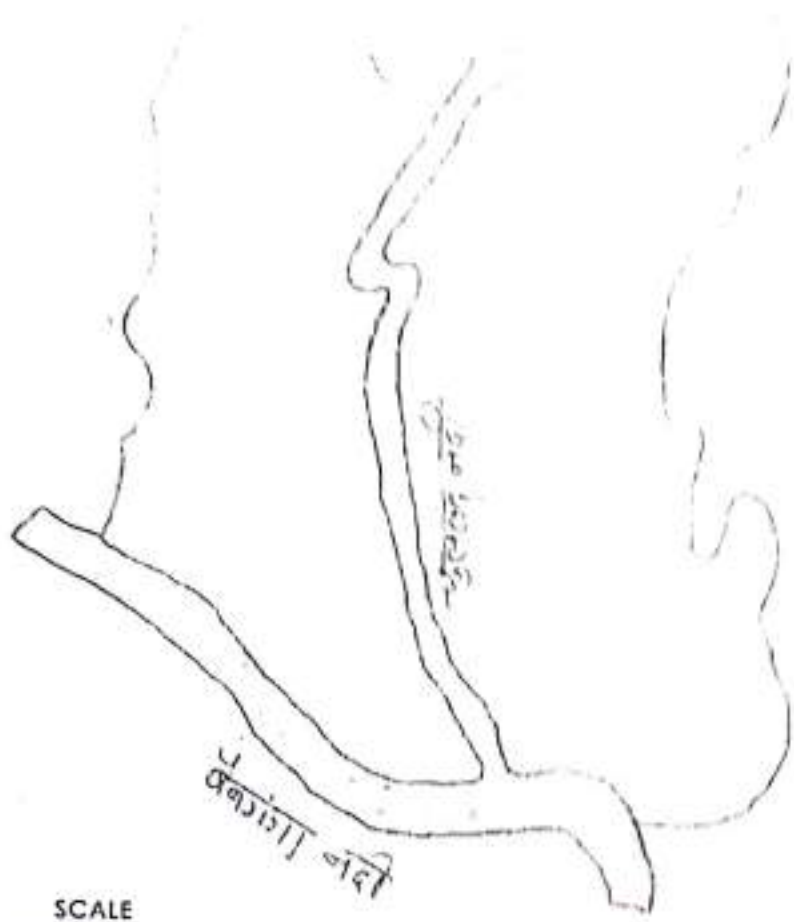
जलप्रणालीचे प्रारूप :-

किन्हाळ हे गाव भंडारा जिल्ह्यातील लाखांदूर तालुक्यात वसलेले आहे. किन्हाळ गाव गाढवी नदी तिरावर आहे. या नदीच्या पाण्याचा उपयोग शेतीसाठी मोठ्या प्रमाणात केला जातो.

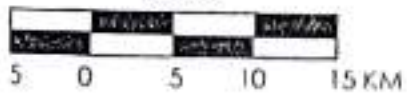
जलप्रवाह प्रणालीची रचना :-


भंडारा जिल्ह्यातील लाखांदूर तालुक्यातील किन्हाळ गावातील धुलबंद नदी ही आपल्या टप्यात म्हणजे प्रौढावस्थेत आहे. नदीच्या या अवस्थेत उभ्या क्षरणापेक्षा पार्श्ववर्ती क्षरण जास्त असल्याने नदीचे पात्र रुंद व विस्तीर्ण दिसून येते. नदी प्रौढावस्थेत असल्याने पात्रात गाळाचे संचयन झालेले असल्याचे दिसून येते. या नदीच्या पात्रात उतार अत्यंत कमी व पाणी व गाळाचे प्रमाण असल्याने या नदीची प्रौढावस्था असल्याने पाण्याचे प्रमाण जरी कमी असले तरी वेग जास्त आहे. शिवाय नदीत गाळाचे संचयन थोड्या प्रमाणात झाले असल्याने हा गाळ वाहून नेऊ शकत नाही. नदीची सापेक्ष उंची 6 त 7 मीटर एवढी आहे.

• एतद्वाङ्गं नदी-प्रणाली-चित्रम्



SCALE



-सुची-
 नदी

सर्वेक्षण पध्दती :-

किन्हाळ या गावाची सर्वे प्रकल्पाचे स्थानिक माहिती गोळा करून नकाशा साबत घेतून आम्ही माडळ या गावी पोहचलो सर्वे विदायोजने विभागणी करण्यात आली या मट विभागणीनुसार 3 मूला मूलीचा एक मट तयार करण्यात आला आणि त्यानुसार प्रत्यक्ष शेती जाकड्याना कमाकनुसार भूमी उपयोजन सर्वेक्षणास सुरुवात करून या शेतातील मातीचा प्रकार जमिनीचा उतार,पिक पध्दती,जलसिंचनाखालील क्षेत्र,कोरडवाहू धात्र व पिकाचे प्रकार इनिरीक्षणद्वारे नकाशात नोंदणी केली आणि त्यानुसार नकाशाचे सर्व विभाग एकत्र करून पूर्ण नकाशा सूचीद्वारे माहिती एकत्रित करण्यात आली

सर्वेक्षणाचा कालावधी :-

भूमी उपयोजनाच्या सर्वेक्षणासाठी किन्हाळ गावाची निवड करण्यात आली.या गावाच्या सर्वेक्षणाकरिता सतत दोन दिवस या गावाचे सर्वेक्षण केले.सर्वेक्षण दिनांक 28 व 29/10/2019 या तारखेला आम्ही सकाळी 10:00 वाजता या गावी पोहचलो आणि तेथील क्षेत्राची 11:00 वाजेपर्यंत सायंकाळी 5:00 वाजेपर्यंत भूमी उपयोजन करण्यात आले.या भूमी उपयोजन सर्वेक्षणात भूमी उपयोजनाच्या दृष्टीने माडळ या गावाच्या सभोवतालच्या जमीनीचा नकाशाप्रकारे उपयोग करण्यात येत आहे हे त्या ठिकाणी अभ्यासले गेले.अशा प्रकारे या सर्वेक्षणात मूरचना निर्मित विविध प्रारूपे त्यावर वातावरणातील बाह्य कारकांचा प्रभाव जलप्रणाली व वसाहत या सर्व घटकांचा परस्परातील होणाऱ्या प्रभावाचे अध्ययन केले

भूपृष्ठ रचना :-

किन्हाळ या गावाचा भूपृष्ठ रचनेच्या दृष्टीने विचार केला असता हे लहानसे गाव तुलबंद नदी तिरावर वसलेले आहे.स्थलदर्शक नकाशाचे अवलोकन केले असता गावाच्या उत्तर भागातून ही नदी वाहत आहे. ही नदी गावालागत वाहत आहे.तेथील भूपृष्ठरचना मैदानी स्वरूपाची आहे.

मृदा :-

किन्हाळ या गावाच्या मृदेच्या अभ्यास केला असता त्या ठिकाणी उत्तरेकडे व दक्षिणेकडे सधन काळी मृदा ,पूर्वेस रेताळ मृदा आढळते.तेथील काळ्या मृदेत तांदूळ पिक भरपूर प्रमाणात घेतल्या जाते तेथील जवळपास 70 टक्के जमीन ओलीताखाली येतो तर 30 टक्के जमीन कोरडवाहू आणि पडीत जमीनीखाली येतो.यावरून या ठिकाणी रबी पीके मोठ्या प्रमाणात घेतली जातात.

- लाखादुर तावुव्याती. भुपुतरचना -




SCALE



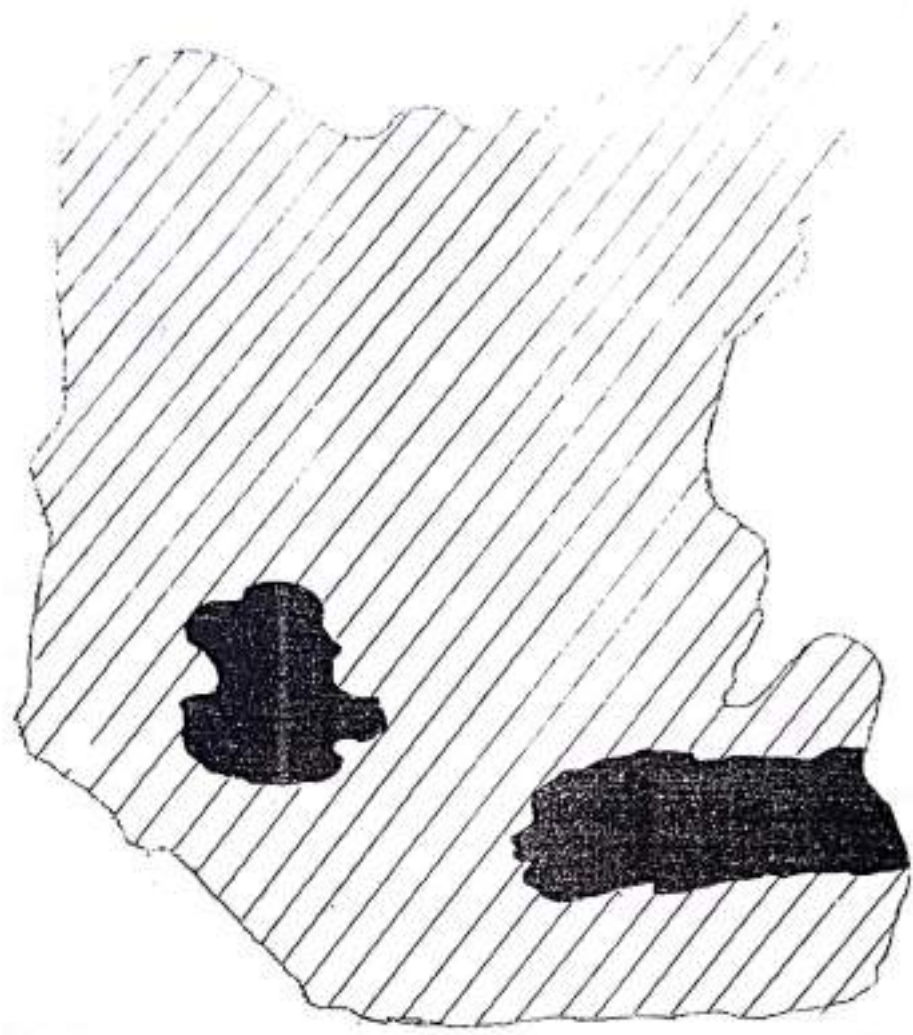
5 0 5 10 15 KM

-सुची-

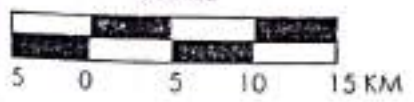
 200-400 MTRS.

 200 Below MTRS.



- लाखादूर तालुक्यातील मृदा -



SCALE



-सुची-

	काळी मृदा
	तांबूस तपकिरी मृदा

प्रकरण चौथे आर्थिक विकासाचे अंग

भूमी उपयोजन :-

मानव व कृषीप्रधान देश आहे जमिनीचा उपयोग कृषीकरिताच उपयुक्त वाहलुक दळणवळण जन्यही मानव व इत्यादी अनेक कारणासाठी होत असता जमिनीचा उपयोग त्याच्या प्रकारावर अवलंबून असतो जसे सुषिक जमिनीमध्ये शरीर केली जाते तसेच खडकाळ व नाफिक जमिन वाहलुक व दळणवळण उपयोगात आणली जाते एखादा नरी उद्योग स्थापन करावयाचा असत त्यासाठी मांडवलाबरीवर जमिन ही असणे आवश्यक आहे जमिन ही कालपरत्व बदलणारी असते त्यानुसार मानव त्या जमिनीचा उपयोग करून घेत असतो तसेच मानवाच्या मूलभूत गरजा जसे अन्न, वस्त्र, निवास या तिन्ही गरजा भूमिती संबंधित आहेत

भूमी ही मानवाला मिळालेली नैसर्गिक दणगी आहे आणि ती मर्यादित स्वरूपाची आहे त्यामुळे तिचा उपयोग योग्य त्या पध्दतीने घेणे आवश्यक आहे परंतु आजच्या पर्यावरण समस्यांमुळे व प्रदूषणामुळे भूमीशी संबंधित अनेक समस्या आपल्याला पहायला मिळतात अशाच प्रकारच्या समस्यांची जाणीव करणे घण्यासाठी व भूमीचा उपयोग करून कशा पध्दतीने केला जातो याचा विस्तृत अभ्यास करण्यासाठी या प्रकरणाची निवड केलेली आहे आणि त्या करीता किन्हाळ गावाची निवड केली आहे कारण भूमीसुद्धा मानवाच्या आर्थिक विकासासाठी आवश्यक असलेला महत्वाचा घटक आहे.

भूमी उपयोजनाच्या व्याख्या :-

1) टि. व्ही. फोरमन (1968) :-

"विशिष्ट क्षेत्रात, विशिष्ट वेळेला, विशिष्ट ठिकाणी, अविकसित व विकसित भूमीचा केला गेलेला वापर म्हणजेच भूमी उपयोग होय".

2) ए. बी. नानवटी :-

"एका मुख्य उपयोगापासून दुसऱ्या सामान्य उपयोगात जमिनीचा उपयोगीतेच्या आधारे खातर करणे म्हणजेच भूमी उपयोजन होय".

3) आर. बी. मंडल :-

"जमीन, पाणी, हवा आणि मानव यांच्या कार्यातून भूमी उपयोजन निर्माण होते"

भूमी उपयोगाचे प्रकार

१) एकूण जमीन क्षेत्र		
२) पडीत जमीन	अ) चालू पडीत	ब) कायम पडीत
३) लागवडीखालील क्षेत्र	अ) रबी क्षेत्र	ब) गरीब क्षेत्र

किन्हाळ तालुक्यातील जावळदूर तालुक्यातील किन्हाळ गावातील जमीनीचा अंदाजेक अंदाधकार होत आहे याची माहिती जाणून घेण्यासाठी सन २०१७-२०१८ या कालावधीत माहिती गोळा करण्यात आले त्यातून जमीनीचा वापर मानवचाने करता येतो हे स्पष्टपणे करण पावतिले केला आहे मानवचाने त्यावाचर क्षेत्रात आर्थिक विकास याची सुलभात्मक माहिती पुढीलप्रमाणे पाहता येईल.

गावातील भूमी उपयोजनाचे प्रकार व स्वरूप :-

एकूण जमीन धारण क्षेत्र :-

किन्हाळ हे गाव जावळदूर या तालुक्यातील ग्रामीण विभाग असून या गावातील भौगोलिक क्षेत्रफळाचा विचार केला असता एकूण गावाचा भौगोलिक जमिन धारण क्षेत्र ४२४८० हेक्टर इतके आहे त्यापैकी एकूण लागवडीखालील क्षेत्र २८०१७ हेक्टर आहे त्यापैकी ३६९५० हेक्टर क्षेत्र खाली असून कोरडवाहू क्षेत्र १७५५० हेक्टर इतके आहे.

पडीत जमीन :-

पडीत जमीनीचे दोन प्रकार १)चालू पडीत आणि २)कायम पडीत यापैकी कायम पडीत जमीन किन्हाळ गावामध्ये पहायला मिळते.कोणत्याही प्रकारची शेत जमीन पाच वर्षांपेक्षा जास्त काळ पडीत असेल तर अशा जमीनीला कायम पडीत जमीन म्हणतात.आणि जर दोन तीन वर्षे पडीत ठेवून पुन्हा लागवडीखाली आणल्या जात असेल तर अशा जमीनीला चालू पडीत जमीन असे म्हणतात.माढळ या गावामध्ये पडीत जमीन ८०५ हेक्टर आहे.

लागवडीखालील क्षेत्र :-

किन्हाळ या गावातील सर्वेक्षण केले असता असे निदर्शनास आले की येथील जमीनीमध्ये लागवडी खाली जमीन ही ५४० हेक्टर क्षेत्र आहे इतर जमीनीच्या तुलनेत या जमीनीचे क्षेत्र सर्वात जास्त आहे तर तांदूळ हे तेथील प्रमुख पिक आहे.

भूमी उपयोग किंवा भूमी उपयोजन :-

किन्नाळा गा. गावातील भूमी हा सर्व क्षेत्रातून एक असता प्रती आडकून आले की या गावातील संपूर्ण क्षेत्रातील क्षेत्र 588.08 हेक्टर हा ज. नि. वि. मधील ज. नि. वि. मधील 250.77 हेक्टर हा क्षेत्र लागवडी खातीला आड गावरून आपल्याला असे म्हणता येईल की किन्नाळा गावातील लागवडीच्या मानाने खरीप पिकांसाठी क्षेत्राचे प्रमाण कमी आहे. यथोक्त शेत्याचा उपयोग पाहिजे तेवढ्या प्रमाणात विकसित नाही या गावाच्या जवळ इटीयाडोड परण आहे.

भूमी उपयोजन :-

अ.क.	जमीनीचे प्रकार	एकूण जमीन क्षेत्र
1	वाळू पडीत क्षेत्र	9.90 हेक्टर
2	कायम पडीत क्षेत्र	5.90 हेक्टर
3	कुरणाखालील क्षेत्र	2.06 हेक्टर
4	खरीप पिकाखालील क्षेत्र	540 हेक्टर
5	रब्बी पिकाखालील क्षेत्र	430 हेक्टर
6	कुरणाखालील क्षेत्र	2.06 हेक्टर

पिक आकृतीबंध 2017-18 :-

अ.क.	पिक	क्षेत्र (एकर)	उत्पादन (किट./कि.)	उत्पादन (रुपयात)	क्षेत्र (टक्केवारी)	उत्पादन (टक्केवारी)
1	तांदूळ	540	6056	6140800	74.01	94.97
2	तूर	14	23	92000	6.44	0.36
3	भाजीपाला	25	40	60000	3.65	0.72
4	मिरची	6	70.5	402750	6.39	1.10
5	गहू	15	160	160000	7.30	2.50
6	हरभरा	15	27	425000	4.93	0.42

वरील टेबलचे अयलोकन केले असता असे लक्षात येते की, येथील शेती ही जलसिंचनाच्या आणि वरच्या पाण्यावर अवलंबून आहे त्यामुळे पिकांमध्ये विविधता कमी दिसून येते.

जलसिंचनाचे स्वरूप :

पिकांना सावरण्यासाठी सिंचनाचा वापर करण्यात येतो. पुरक म्हणून दिलेल्या पाण्यास जलसिंचन असे म्हणतात. पाणी जरी पिकारस उपयुक्त असले तरी पण दुण्याचे महत्त्व जमीन असते त्यामुळे जमीनीच्या जलवायु शक्तिप्रमाणच पाणी दिले जाऊ शकते असले जमीनीतील उपलब्ध पाण्यापेक्षा निम्मे पाणी तय्युक्त तद्दुपर्यंत पिकांवर लागू घडते नाही.

भंडारा जिल्ह्यातील लाखादूर या तालुक्यातील किन्हाळ गावाच्या सर्वेक्षणावरून असे दिसून येते की, या गावातील शेतीवर जलसिंचनाच्या मदती प्रमाणात प्रभाव झालेला दिसून येतो कारण या गावामध्ये कालवे, नहर दिसून येतात त्यामुळे जाचिताळातील जमीनीचे प्रमाण जास्त आहे या गावामध्ये विहिरीची संख्या फारच कमी आहेत जिव विहिरी आहेत त्या विहिरीतील पाण्याची खोली अधिक आहे त्यामुळे विहिरींना उन्हाळ्यात पाणी सधत नाही.

मजूर पुरवठा :-

भंडारा जिल्ह्यातील लाखादूर तालुक्यातील किन्हाळ गावाच्या सर्वेक्षणावरून आपल्याला असे लक्षात येते की, तेथील लोकांचा प्रमुख व्यवसाय शेती असल्यामुळे मजूर पुरवठा हा घटक अत्यंत महत्त्वाचा आहे. या गावात कायम आणि हंगामी या दोन प्रकारे मजूर पुरवठा होत असतो. याचा मोबदला हा पैशांच्या स्वरूपात दिला जातो. किन्हाळ गावातील सर्वेक्षणात मजूर पुरवठ्याच्या संदर्भात विचार केल्यास स्त्रियांपेक्षा पुरुषांची संख्या जास्त असून ही कायम आणि हंगामी अशा दोन्ही स्वरूपाची आहे.

पिकांना हंगामानुसार खर्च :-

भंडारा जिल्ह्यातील लाखादूर तालुक्यातील किन्हाळ ठिकाणी हंगामानुसार काही प्रकारची पिके घेतली जातात. त्यात प्रामुख्याने तांदूळ, तुर, हरभरा, गहू इ. पिके आहेत. या पिकांचे एवढ्या मोठ्या प्रमाणात उत्पादन घेतले जाते. त्याच प्रमाणात खर्चही केला जातो. या पिकांना हंगामानुसार लागणारा खर्चाचा तपशिल खालील प्रमाणे आहे.

पिकांना हंगामानुसार खर्च :-

अ.क्र.	पिकाचे नाव	मशागत	पेरणी	निदण	औषधी	कापणी	मळणी	सिंचन
1	तांदूळ	337240	815062	208290	464640	366900	245840	130530
2	गहू	2500	1000	500	2000	5000	1500	2000
3	हरभरा	1000	700	500	1000	1000	1000	-
4	माजीपाला	500	500	500	1000	500	-	-
5	तुर	7250	3000	1000	5000	3000	7000	-
6	गिरवी	1000	1000	1000	500	1000	1000	-

पशुधन प्रकार :-

किन्हांळा येथील उदरनिर्वाह प्रामुख्याने शेतीवर अवलंबून आहे व तेथील शेती ही पशुवर आधारित आहे त्यामुळे तेथे याचा विचार करणे जत्यत गरजेचे आहे.

पशुधन प्रकार :-

अ.क्र.	पशुधन प्रकार	संख्या	दुध देणाऱ्या	अंदाजे किंमत रुपये	दर दिवशी दुधाचे उत्पादन	मासिक उत्पन्न
1	गाय	103	20	396500	360 लिटर	216000
2	म्हैस	180	03	503400	500 लिटर	180000
3	बकरी	88	-	157200	-	-
4	बैल	129	-	126050	-	-
5	कोंबड्या	1000	-	93115	-	-

भांडवल पुरवठा :-

शेती हा व्यवसाय मोठ्या प्रमाणात असता तरी या करीता लागणारा पैसा म्हणजे भांडवल पुरवठा हा मूल्यता शेतीसाठी कर्जाच्या स्वरूपात घेतला जातो. यदील शेतकरी मायवली सहकारी बँक तसम साजवये सांसायती यांच्याकडून जोला प्रमाणात कर्ज घेताना दिसतात तर काही प्रमाणात इतर म्हणजेच स्थानीय बँकेवाडकांकडून देखील कर्ज घेतल्या जाताना.

कर्ज घेण्याचा उद्देश शेतीवर्षर अनेक कामासाठी देखील असतां यथे कुटुंबासाठी कर्ज घेणारे अनेक शेतकरी दिसून येतात या कर्जांच्या परतफेडीचा कालावधी निश्चित केलेला आढळून येते या वेळात त्यांना घेतलेल्या कर्जाची परतफेड करावी लागते.

गावाचे एकूण वार्षिक उत्पन्न :-

मानवाच्या आर्थिक व्यवसायात विविध व्यवसायाचा समावेश होतो हे आपल्याला किन्हाळ गावातील सर्वेक्षणावरून आढळून आले यात प्रामुख्याने प्राथमिक व्यवसायात शेतीचा समावेश होतो तर दुय्यम व्यवसायात पशुपालन तर तृतीय व्यवसाय फारच अल्प स्वरूपात दिसून येतो येथील एकूण वार्षिक उत्पन्न 8396600 हजार असून ते सर्व व्यवसायांमिळून असलेले दिसून येते.

निष्कर्ष :-

भारत हा कृषीप्रधान देश आहे सुमारे 70 टक्के लोकांचा उदरनिर्वाह हा पूर्णतः कृषीवर अवलंबून आहे आणि भारताच्या प्रत्येक ग्रामिण भागात शेती केली जाते म्हणून भारत हा गरीब लोकांचा श्रीमंत देश आहे असे म्हणतात भारतातील ग्रामिण कृषी ही भूमीशी निगडीत आहे आणि याचा अभ्यास करण्यासाठी सर्वेक्षणाची आवश्यकता असते म्हणूनच सर्वेक्षणासाठी किन्हाळ गावाची निवड करून तेथील भूमी उपयोजनाचे सर्वेक्षण करण्यात आले येथील लोकसंख्येच्या मानाने एकूण लागवडीखालील क्षेत्राचे प्रमाण जास्त आहे याचा अभ्यास करण्यासाठी भूमी उपयोजन या भागाकडे लक्ष केंद्रित केले आहे.

किन्हाळ या गावामध्ये पिक आकृतीबधाचा अभ्यास केला असता असे लक्षात येते की त्या ठिकाणी जलसिंचनाच्या आणि पाणी पुरवठ्याच्या सोयीमुळे ओलिताखालील क्षेत्र जास्त आहे त्यामुळे तेथील लोक विविध पिके घेतात. किन्हाळ गावामध्ये कृषीवर आधारीत इतर कोणकोणते व्यवसाय आहेत व त्यापासून मिळणारे एकूण वार्षिक उत्पन्न किती आहे आणि या उत्पन्नाच्या खर्चाचे विनियोग कोणकोणत्या घटकावर कमी जास्त प्रमाणात केला जातो हे जाणून घेण्याचा प्रयत्न केला आहे.

वरील संपूर्ण घटकांद्वारे या गावातील वर्तमान आर्थिक विकास कशाप्रकारचा आहे आणि भविष्यात आर्थिक विकास कशा स्वरूपाचा राहिल हे जाणून घेतले आहे आणि त्यासाठी तेथील लोकांनी जलसिंचनाचा विकास करण्यासाठी सरकारच्या नवनविन योजना जसे जवाहरलाल विहिर योजना, ठिंबक सिंचन इ. योजनांचा लाभ घेण्यात यावा असे आम्हाला प्रामाणिकपणे वाटते.

प्रकरण पाचवे

कृषीचे आधुनिकीकरण

मात्र ही कृषी प्रमाण देशातून जगातल्या प्रत्येकठिकाणी कृषीवर अवलंबून आहे त्यामुळे तशीच शेतकरी व शेती व्यवसायाचा विकास करण्यावर अधिक भर देत असतो त्या दुष्पीन शेतकरी हा परंपरागत शेती पध्दतीत आधुनिक शेतकरीचे कळकळ मिळून येते

कृषी ही सध्याच्या व्यापक संस्था आहे प्राचीन काळापासून कृषी हा धंदूक जगातील सगळ्या समाजांचा स्थायी वसाहत म्हणून गरीबीची पूर्तता तसेच सामाजिक, प्राथमिक आणि सांस्कृतिक विकासाची आधारशील समजली जाते आजच्या औद्योगिक काळात सुद्धा जगातील अनेक देशातील समाज जीवन व अर्थव्यवस्था कृषी या पध्दतीवर अवलंबून असलेली दिसून येते

कोणत्याही गावाचा किंवा देशाच्या क्षेत्रात अभ्यास करतानातील कृषीचा अभ्यास करणे आवश्यक असते कारण त्यामुळे त्या क्षेत्रातील कृषीखालील एकूण क्षेत्रात जलसिंचनाखालील क्षेत्र, सिंचनाच्या सोयी, प्रमुख पिके, वानरातील यंत्र व अवजार इतर माहिती मिळवून त्या भागातील सामाजिक आर्थिक व सांस्कृतिक विकास तसेच त्या समस्या याचा आढावा घेवून अहवाल सादर करता येतो त्याद्वारे येथील समस्यांचे निराकरणासाठी उपाय सुचविता येतो

खतांचा वापर :-

भंडारा जिल्ह्यातील लाखांदूर तालुक्यातील किन्हाळ गावाचे सर्वेक्षण केले असता असे आढळून आले की, तेथील शेतकऱ्यांनी आपल्या शेतजमिनीमध्ये खतांचा वापर केलेला दिसून येतो.

शेणखत व रासायनिक खतांचा वापर :-

कृषीसाठी शेणखतांचा वापर प्राचीन काळमपासून करित असल्याचे आढळून येते शेणखतांचा वापर किन्हाळ गावातील शेतकऱ्यांनी आपल्या शेत जमिनीमध्ये प्रति एकर दोन गाडी शेणखत उपयोजिल्याचे आढळून येते. म्हणजेच या गावात 1250 गाड्या एवढे शेणखत वापरण्यात आले आहे. या किंमत प्रति गाडी 400 रु. आहे.

रासायनिक खते :-

खेतीसाठी वापरण्यात येणाऱ्या रासायनिक खतांचा प्रभाव वाढवण्यासाठी खेतीकरांना खतांचा वापर योग्यरित्या करणे आवश्यक आहे.

खताचा वापर :-

खताचा प्रकार	दर	दर	दर	दर	दर
1000	प्रति टोनी किमान	दर	प्रति टोनी किमान	दर	एकूण किमान
1250	600	800	650	550	650

कितकनाशके / औषधे :-

क्र.सं.	औषधाचे नाव	लिटर / कि.ग्रॅ.	कि.मि.
1	कराट	1 लिटर	200
2	एकलारा	21 कि.ग्रा. ईम	2000
3	दडकी	1 लिटर	1200
4	एनटासमिथान	16 लिटर	2500
5	वि. एच. सी	5 कि.ग्रॅ.	200

कृषी अवजारे व यंत्रसामुग्री :-

कृषी ही मानवाच्या पारंपारिक व आधुनिक अवजारांच्या साहाय्याने केली जात असते. कृषी कार्यात अवजारांचा वापर फार प्राचीन काळापासून होत आहे. एखाद्या प्रदेशातील शेती पध्दतीत वापरली जाणारी अवजारे या शेतकीच्या व्यवस्था सांगू शकतात. म्हणजेच ती शेती विकसीत आहे की, अविकसीत आहे हे समजू शकते.

आजही विकसनशील देशात पारंपारिक अवजारांच्या साठ्याने कृषी केली जाते. याचे मासिक व वार्षिक उत्पादन अपुनिक अवजारांच्या साठ्याने उत्पादनात वाढ होऊन वेळ व श्रम वाचविते. परंपारिक अवजारांच्या साठ्याने अधिक श्रम व वेळ खर्च होतो. कृषी अवजारांच्या अभ्यास कृषी परिसराना प्रागुल्याने ही अवजार दान प्रकारची दिसून येतात.

- 1) पारंपारिक अवजार
- 2) आधुनिक / सुधारीत अवजार

किन्हाळ या गावात पुढीलप्रमाणे पारंपारिक व सुधारीत अवजारे वापरता येतात. ते पुढील प्रमाणे. आधुनिक अवजारात विद्युत पंप 90, थ्रेशर मशीन 10, डीझल पंप 01, स्प्रेअर पंप 40, डस्टर पंप 08, आढळून आले. त्यासोबतच पारंपारिक अवजारे याचाही वापर करण्यात येतो. ते पुढील प्रमाणे लाकडी लागर 15, लाकडी वखर 09, लाकडी तिफन 15, लोखंडी वखर 15, लोखंडी नागर 38, लोखंडी डवरा 01, बैलगाडी 28, छकडा 01, रेंगी 01, ट्रॅक्टर 25.

त्याचप्रमाणे किन्हाळ गावात कृषी शिक्षणाच्या व मनोरंजनाच्या साधनात टि.व्हि. 250, रेडीओ 50, वर्तमानपत्रे 250, एवढी आढळून आली.

त्याचप्रमाणे जलद वाहने आढळून आले. त्यात सायकल 500, स्कुटर 05, मोटार सायकल 100, असुन वेळ दर्शवणारी साधने सुधदा आहे. त्यात मनगटी घडयाळ 250, मितीवरील घडयाळ 500, इतके आढळून आले.

कृषी आधुनिक यंत्रे :- यांमध्ये विद्युत पंप-90, थ्रेशर मशीन-10, लोखंडी वखर-25, स्प्रेअर पंप-40.

डिझेल पंप-01, लोखंडी नागर-38, लोखंडी डवरा-01, ट्रॅक्टर-25.

पारंपारिक यंत्रे:- यांमध्ये लाकडी नांगर-15, लाकडी तिफन-15, रेंगी-01, छकडा-01, लाकडी

वखर-09, बैलगाडी-28 इत्यादी.

कृषी शिक्षणाची व मनोरंजनाची साधने:- टि.व्हि-69, रेडीओ-14, वर्तमानपत्रे-09 इत्यादी.

जलदगतीची साधने:- सायकल-500, स्कुटर-5, मोटार सायकल-110.

वेळ दर्शविणारी साधने:- मनगट घडयाळ-250, मितीवरील घडयाळ-500.

प्रकरण सहावे

पिक विविधता

पिक विविधता म्हणजे एखाद्या प्रदेशात पिकाची संख्या भरपूर असाणे म्हणजे जेवढी पिकाची संख्या जास्त तेवढी पिक विविधता जास्त असते. या उलट जेवढी पिकाची संख्या कमी तेवढी पिक विविधता कमी असते. पिक विविधता ठरविताना दरील प्रदेशातील वेगवेगळ्या पिकाखालील क्षेत्र व एकूण पिकाची संख्या याच्या गुणोत्तरावरून ठरविला जातो.

व्याख्या :-

1) Diversification of cropping pattern mean rising variety of crops for a arebic land.

2) पिक विविधता म्हणजेच विशिष्ट वेळेला विविध पिकाचे उत्पादन घेणे हाय

यावरून असे म्हणता येईल की, जेव्हा एका विशिष्ट क्षेत्रात पिकाची संख्या जास्त असते.

जेव्हा त्या प्रदेशात पिका-पिकांमध्ये तीव्र स्पर्धा चालत असते ही स्पर्धा जेव्हा मोठ्या प्रमाणात चालते तेव्हा पिक विविधता ही जास्त असते.

म्हणजे ज्यावेळी स्पर्धा जास्त असते. त्यावेळी पिक विविधता जास्त असते. ही स्पर्धा ज्यावेळी कमी असते त्यामुळे विशेषीकरणाकडे अधिक कल असतो.

पिक विविधतेच्या आधारे कृषी विभाग पाडण्यासाठी वापरावयाच्या सांख्यिकीय पध्दती:-

पिक विविधतेच्या आधारे कृषी विभाग पाडण्यासाठी अनेक कृषी भूगोल तेजांनी अनेक सांख्यिकीय पध्दती सुचविलेल्या आहेत. यापैकी 'भाटीया' यांना पिक विविधतेच्या आधारे कृषी विभाग ठरविताना दहा पिकांचा विचार केला आहे. भाटीया यांनी अभ्यास क्षेत्रातील दहा पिके लक्षात घेवून पिकांचा निर्देशांक काढला आहे. यासाठी त्यांनी पुढील सूत्र वापरली आहे.

$$\text{पिक विविधता निर्देशांक} = \frac{\text{एकूण पिकाखलील क्षेत्रापैकी} \times \text{पिकाखलील क्षेत्र}}{\times \text{पिकांची संख्या}}$$

ज्योत पिकांखालील क्षेत्र म्हणजे ज्या कमीत कमी दहा टक्के व त्यापेक्षा अधिक क्षेत्र व्यापक जात असेल पिके

जसबिर् जय्यर यांनी मातीयाचा सुत्रात थोडासा बदल करून तेव सुत्र पिक विविधता निर्देशांक काढण्यासाठी वापरले. जय्यर यांनी कमीत कमी ३ टक्के क्षेत्र पिकांखाली असणाऱ्या पिकांची एकूण पिकांकव समावेश केला त्यामुळे यातील विलगता काही कमी झाली

जसबिर् सिंग यांनी दखील मातीयाच्या पध्दतीत थोडासा बदल करून पिक विविधतेच्या आधारे कृषी विभाग पाडण्याचा प्रयत्न केला. यासाठी खालील सुत्र वापरले आहे.

जसबिर् सिंग (1976) :-

$$\text{Index of Crop Division} = \frac{\text{Percent of total harvested area under 'x' crop}}{\text{Number of 'x' Crops}}$$

येथे 'x' पिके म्हणजेच अशी सर्व पिके की, ज्योनी एकूण हंगामाखालील पिकांपैकी कमीतकमी पाच टक्के व त्यापेक्षा जास्त क्षेत्र व्यापले आहे.

या सुत्राचा वापर करून पिक विविधतेचा निर्देशांक काढला जातो. व आलेली सर्व टक्केवारी बदल्या क्रमाने मांडली जाते आणि जास्तीत जास्त पिक निर्देशांक व कमीत कमी पिक निर्देशांक किती आहे हे पाहून त्याची विभागणी पाच विभागात केली जाते. व तेवढ्याच गटांतराचे कवभाग तयार केले जातात. जेवढी पिक विविधता जास्त तेवढा पिक निर्देशांक जास्त असतो. ते पाच विभाग पुढील प्रमाणे आहेत.

अ.क्र.	गट	निर्देशांक
1	Very high crop diversification	below 32
2	High crop diversification	32 to 54
3	Medium crop diversification	54 to 76
4	Low crop diversification	76 to 98
5	Very low crop diversification	98 to 120

अशा प्रकारे पिक विविधता काढण्यासाठी जी. मार्टिनने (1962) मध्ये सुत्राचा वापर केला आहे.

जी वार्टिन (1962) :-

$$\text{Index of diversification} = \frac{\sum x^2}{(\sum x)^2}$$

'x' म्हणजे एकूण पिकांमध्ये-संग्रहातील प्रत्येक पिकाला व्यापलेला क्षेत्र क्षेत्रमध्ये किंवा प्रतिशत क्षेत्रे जी वार्टिनच्या सूचकांसास तसे एखाद्या अभ्यास क्षेत्रात संपूर्ण पिकांमध्ये संग्रहातील संग्रहात एकाच पिकाच्या व्यापलेले क्षेत्रे तसे पिक विविधता निर्देशक हा शून्य असतो अर्थात तसे संपूर्ण क्षेत्र वेगवेगळ्या पिकांमध्ये समान प्रमाणात विभागलेले असते तसे पिक विविधता निर्देशक 0.9 पर्यंत विविधता निर्देशक 0.0-0.9 दरम्यान असतो

गावातील प्रमुख पिके :-

किन्हाळा येथील गावठाण नकाशांमध्ये दर्शविलेली आहे तांदूळ हे किन्हाळा गावातील शेतकऱ्यांचे प्रमुख पिक आहे. याशिवाय तूर, गहू, भाजीपाला, मिरची, हरभरा हे पिकांसुद्धा अल्प प्रमाणात घेत असल्याचे दिसून येते

प्रकरण सातवे

आर्थिक व सामाजिक स्तर

काणव्याही क्षेत्राचा विकास हा त्या क्षेत्रातील आर्थिक व सामाजिक स्तराकडे मानवी साधनांचा अवलंबून असतो. कारण हा स्वतःचा विकास प्राकृतिक व सांस्कृतिक वातावरणाचा उपयोग करून करित असतो व त्यानुसार विविध प्रकारचे परिवर्तन घडवून आणतो. यातून सामाजिक परिवर्तनाचे कार्य घडत आणतो. यातून सामाजिक परिवर्तनाचे कार्य घडत असते. सामाजिक परिवर्तन ही गतीशील प्रक्रिया आहे. त्यामुळे आर्थिक विकासासोबतच लोकसंख्या राहणीमानाचा विकास होत असतो. रोजगाराच्या संधी उपलब्ध होत असल्याने दरडोई व एकूण उत्पादनात वाढ होते. त्यामुळे अधिक लोकसंख्या वाढीबरोबर शैक्षणिक दर्जा, आरोग्य विषयक सुकवधा, पिण्याच्या पाण्याची सुविधा, व्यापार व वाहतूक इत्यादी मुलभूत सुविधांमध्ये वाढ होताना दिसून येते. भारतीय कृषी प्रधान संस्कृती बरोबर भारतीय ग्रामीण अर्थव्यवस्थेमध्ये शेती जमिनीस महत्त्वाचे स्थान प्राप्त झालेले आहे. शेतकऱ्यांच्या आर्थिक व सामाजिक दर्जाचे मूल्यमापन करण्याचा तो प्रथम मापदंड आहे.

आर्थिक स्तर :-

किन्हाळ येथील लोकांना मुख्य व्यवसाय शेती हा आहे. तेथील आर्थिक स्थिती मुख्यतः शेती या व्यवसायावर अवलंबून आहे. कुटूंबाचे आर्थिक विकासात हातभार लावण्याकरीता पुरुषांप्रमाणे स्त्रिया सुद्धा शेतीकाम करतात. त्याचप्रमाणे शेती करण्यासाठी परंपरागत साधनांबरोबरच आधुनिक उपकरणांचा वापर करण्यात येतो. त्यामध्ये ट्रॅक्टर, विद्युत पंप, लोखंडी नांगर, श्रेसर मशीन, वखर इत्यादी आधुनिक उपकरणांचा वापर करण्यात येतो. सोबतच तेथील शासन, सहकारी सोसायटी, सहकारी बँक इ. यामातून शेतकऱ्यांस आर्थिक मदतीला हातभार असल्यामुळे येथील आर्थिक स्थिती समाधानकारक आहे हे लक्षात येते.

किन्हाळ या गावातील भूमी धारण क्षेत्राचा अभ्यास केला असता असे निदर्शनास येते की, किन्हाळ गावाचे भौगोलिक क्षेत्र 424.83 हेक्टर एवढे असून एकूण लागवडीखालील क्षेत्र 588.80 हेक्टर तर 369 50 हेक्टर ओलीताखालील क्षेत्र आहे. कोरडवाहू क्षेत्र 175.50 हे. तर पडीत क्षेत्र 15.80 हे. एवढे आहे.

या गावातील आर्थिक स्तर हा कृषी व्यवसाय असून त्याचे वार्षिक उत्पन्न 8396600 रु. इतकं आहे व दुय्यम व्यवसायातून वर्षाला मिळणारे आर्थिक उत्पन्न 1454000 य इतकं आहे त्यामुळे येथील आर्थिक स्तर समाधानकारक आहे त्याचबरोबर दिवसेंदिवस वार्षिक उत्पन्न वाढत आहे प्रदेश विकासाचा विचार केल्या असता आर्थिक विकासात दळणवळण व वाहतूक इत्यादी घटकांचा मोलाचा वाटा आहे वाहतूक व दळणवळणामुळे गावाचे व शहराचे अंतर अगदी जवळचे झालेले आहे. किन्हाळा ठिकाण भंडारा लाखादूर या मार्गाशी जोडलेले आहे

सामाजिक स्तर :-

किन्हाळा हे गाव लाखादूर पासून 06 किमी अंतरावर आहे. तसेच किन्हाळा मध्यम वस्तीचे गाव आहे सामाजिक सर्वेक्षण म्हटले की, त्यात क्षेत्रीय वितरण घनता, रचना, प्रारूप, आर्थिक व्यवसायात विविधता वस्त्यामधील उपलब्ध सोयी सुविधा यांचे प्रभाव क्षेत्र इत्यादी सर्व बाबींचा विचार केला जातो.

सामाजिक सर्वेक्षण म्हटले की, वंश जातीचा विचार करावा लागतो. त्याचप्रमाणे किन्हाळा येथील सामाजिक सर्वेक्षणात असे निदर्शनास आले की, स्थानिक कुणबी समाज जास्त प्रमाणात दिसून येता. त्याखालाखाल बौध्द, दिवर, गोंड, गांवारी आणि कुणबी इत्यादी समाज राहतात. तेथील बोलीभाषेचा विचार केला असता तेथील सर्वां लोक गराती भाषा बोलणारे दिसून येतात. तेथील सामाजिक घटकांपैकी कुटूंब पध्दतीचा विचार केल्यास गावात सयुक्त व विभक्त दोन्ही प्रकारची कुटूंबपध्दती दिसून येते.

किन्हाळा गावी समाजोपयोगी व्यवस्था आहेत. त्या समाजोपयोगी व्यवस्थेत बोरवेल, विहीरी, रस्ते, सांडपाण्याची सुविधा असल्याचे दिसून आले. किन्हाळा गांव लहान असले तरी येथील नागरीक सुशिक्षित असल्याने कुटूंबनियोजनाचा अवलंब करून आपले कुटूंब सिमीत ठेवल्याचे दिसून आले. त्यामुळे त्याचा आर्थिक विकास होत असल्याचे दिसून आले.

अशा प्रकारे किन्हाळा गावातील सामाजिक व आर्थिक स्तर समाधानकारकरीत्या उंचावलेला दिसून येतो.

वाहतूक व दळणवळण :-

वाहतूक :

वाहतूक म्हणजे व्यक्तीचे किंवा मालाचे एका ठिकाणाहून दुसऱ्या ठिकाणापर्यंत होणारे किंवा केल जाणारे स्थानांतर होय.

निव्वेल किंवा सजिव घटक एका ठिकाणाहून दुसऱ्या ठिकाणी नेण्याच्या क्रियेला वाहतूक असे म्हणतात. ही न-आण एका भौगोलिक क्षेत्रातून दुसऱ्या भौगोलिक क्षेत्रामध्ये थोडक्यात वस्तुच्या देवाण-घेवाणीस सहाय्यमूर्त असणारे व वस्तूला उपयुक्तता प्राप्त करून देणारी क्रिया आहे. वाहतूक ही एक प्रकारची सेवा किंवा सुविधा आहे. प्राचीन काळापासून अगदी आजपर्यंत वाहतूक ही सतत बदलत आणि वाढत जाणारी क्रिया आहे. काळ आणि अंतर या मानवाच्या प्रगतीमधील अडचणी थोडक्यांकर प्रमाणात दूर करण्याचे कार्य वाहतूक करते.

वाहतूक देशाच्या आर्थिक प्रगतीला महत्त्वाची असते. प्रगत व परिणामकारक वाहतूक आर्थिक प्रगतीचा पाया असतो. वाहतूकीमुळे निरनिराळ्या वस्तुना नविन विस्तृत बाजारपेठ उपलब्ध होतात. वाहतूकीमुळे अनेक नवनविन उद्योग निर्माण होतात.

प्रस्तूत गावाचे सर्वेक्षण केलं असता किन्हाळगावात जमीनीवरील वाहतूक दिसून येते. यात रस्ते वाहतूक प्रामुख्याने बससेवा, बैलगाडी, ट्रक, ट्रॅक्टर, ऑटो, आणि रेल्वे योचा अंतर्भाव होतो. मांडळ या गावातील शेतीमध्ये धान, हरभरा, तूर, भाजीपाला आणि गहू इत्यादी पिकांची लागवड केली जाते. तसेच शेतीतून उत्पादीत झालेला माल लाखादूर या मोठ्या बाजारपेठेत विकण्यासाठी बैलगाडी, ट्रॅक्टर आणि ट्रक इ. वाहतूकीच्या साधनांद्वारे नेला जातो आणि त्यासाठी रस्त्याचा विकास मोठ्या प्रमाणात झालेला दिसून येतो.

दळणवळण :-

माहिती व संदेश एकीकडून दुसरीकडे पाठविणे म्हणजे दळणवळण होय. वाहतूकीच्या विविध साधनांचा उपयोग दळणवळणाच्या माध्यमांनी केला जातो. कमी अंतरावरील होणारे दळणवळण हे पूर्वीपासून आपणास माहिती आहे. त्यात सांकेतिक खुणा, झोडे, ध्वनी यांचा वापर होत असतो.

जगाच्या कोणत्याही भागात जाता जगदी अत्यकालावधीत संपन्न राहता येतो. दळणवळणात माध्यम नवळ आलेले जाते. आधुनिक तंत्रज्ञानातील प्रगतीमुळे ते शक्य झाले अश्या तरी टपालसेवा अजूनही मातृभूमीच्या भागांवरच अवलंबून आहे. दूरसंचार यंत्रणमुळे दळणवळणात क्रांतीकारक बदल घडून आले. दळणवळण ही संकल्पना रेडीओ, दूरचित्रवाणी, मोबाईल, टेलीफोन इत्यादी साधनांद्वारे कार्यरत जाते. गड व जतर या नैसर्गिक घटकांवर नियंत्रण मिळवून निरनिराळ्या वातावर्या, संदेश, चित्र दूरदर्शनी यासाठी मोठ्या प्रमाणावर वापर केला जाऊ लागला.

प्रस्तुत किन्हाळ्यागावाचे सर्वेक्षण केले असता या गावामध्ये टि. वि. रेडीओ, टेलीफोन, मोबाईल इत्यादी संदेश वाहनाची साधने दिसून येतात. आजच्या परिस्थिती संदेशवाहनाच्या बाबतीत मोबाईल या साधनाचा मोठ्या प्रमाणावर वापर होतो.

पिण्याच्या पाण्याची सुविधा :-

पाणी हे जीवन आहे. पाण्याविना आपण जगू शकत नाही. पाणी ही एक नैसर्गिक संपत्तीच आहे. प्रस्तुत गावळ या गावाचे सर्वेक्षण केले असता या गावात पिण्याच्या पाण्याची सुविधा चांगल्या प्रमाणे उपलब्ध आहे. किन्हाळ्या गावात इटियाडोह कालव्यातून पाणी पुरवठा होत असल्याचे समजते. यावर पाईप लाईन टाकून नळांद्वारे पाणीपुरवठा केलेला दिसून येतो. त्याचप्रमाणे या गावात विहीरीची संख्या 4 असून त्यापैकी खाजगी 3 तर सरकारी 1 दिसून येते. तसेच बोरवेलची संख्या ही 9 आहे. आशाप्रकारे पिण्याची पाण्याची सुविधा दिसून येते.

विद्युत शक्तीचा वापर :-

प्रस्तुतकिन्हाळ्यागावाचे सर्वेक्षण केले असता असे आढळून आले की, या गावात विद्युत शक्तीचा वापर मोठ्या प्रमाणावर झालेला दिसून येतो. या गावात घरोघरी विद्युत यंत्रणा दिसून येते. या गावात लाखांदूर येथील शक्ती केंद्रातून विद्युत उपलब्धता झालेली दिसून येते. त्यामुळे प्रत्येक घरात विजेचा वापर झालेला दिसून येतो.

निष्कर्ष व उपाययोजना

निष्कर्ष या गावी एम ए भाग 2 चे विद्यार्थी / विद्यार्थीनी यांनी आर्थिक व सामाजिक सर्वेक्षण केल
असा त्या सर्वेक्षणांतर्गत विविध गोष्टींचा अभ्यास करण्यात आला त्या अंतर्गत खालील निष्कर्ष
आढळून येतो.

निष्कर्ष :-

- 1) आधुनिक वि-विंगने, रासायनिक खते, किटकनाशके तसेच औषधीचा प्रसार करून त्याचा वापर योग्य प्रमाणात करावयास सांगणे.
- 2) या गावातील शेतकरी तादूळ हे मुख्य पिक घेतात, तर त्यानंतर गहू, भजीपाला, तूर, हरभरा इत्यादी पिकांचे अनुक्रमे उत्पादन घेतले जाते.
- 3) किन्हाळ येथील लोकांचा प्रमुख व्यवसाय शेती व आर्थिक स्तंभ हा शेती व्यवसाय आहे. त्याचप्रमाणे कुक्कुटपालन हा दुय्यम आढळून येतो.
- 4) या गावातील शेतकरी आजच्या युगातील आधुनिक तंत्राचा वापर कमी तर पारंपारीक यंत्राचा व अवजारांचा अधिक प्रमाणात वापर करतांना दिसतो.
- 5) या गावातील शेतकऱ्यांना फेरपिक पध्दती तसेच बहुपिक पध्दतीबाबत ज्ञान देणे आवश्यक आहे.
- 6) या गावातील साक्षरतेचे प्रमाण बघितल्यास फक्त प्राथमिक व माध्यमिक स्वरूपाचे शिक्षणात जास्तीत जास्त लोकांचा समावेश आहे.

उपाययोजना :-

खालील उपाय योजनांद्वारे मांडळ या गावाचा विकास होऊ शकतो. ते उपाय खालीलप्रमाणे आहेत.

- 1) किन्हाळ येथे जलसिंचनाच्या सोयी परिपूर्ण करून विहीरी व कंपनलिकेद्वारे जलसिंचन करण्यावर भर देऊन शेतीचा विकास करणे व इतर व्यवसायांना प्राधान्य देणे.
- 2) मांडळ या गावातील शेतकऱ्यांनी रासायनिक खताचा वापर मर्यादित प्रमाणात करावा, आणि सेंद्रिय शेती पध्दतीला वाव द्यावा.
- 3) शासनाने शेतकऱ्यांना कर्ज देण्याच्या सुविधामध्ये वाढ करावी व कर्जाच्या परतफेडीचा कालावधी वाढविण्याचा विचार करावा.
- 4) दरडोई उत्पन्न वाढविण्याकरीता शेतकऱ्यांनी उदरनिर्वाह व पारंपारीक पध्दतीने शेती नकरता आधुनिक तंत्रज्ञानाचा वापर करून शेतीचा विकास करावा.
- 5) शेतकऱ्यांनी आपल्या दुयम व्यवसायाचा व्यापारी स्वरूप देण्याचा प्रयत्न करावा.
- 6) गावातील लोकांनी आपल्या कुटूंबातील व्यक्तींना चांगले शिक्षण देवून त्यांना साक्षर बनविण्याचा प्रयत्न करावा.
- 7) शेती व शेतमालासंबंधी तज्ञांकडून योग्य मार्गदर्शन घेतो.

Socio-Economic Survey

