

#### P.D.E.A's

# Annasaheb Magar Mahavidyalaya, Hadapsar, Pune-411028 Department of BBA (CA)

2023-2024

Notice

Date:-15/03/2024

All the students of TYBBA(CA) are hereby informed that there will be a "Soft-Skill MOU-Activity-Guest Lecture on Personality Development" in association with "Vertscend Automation Pvt. Ltd. Pune." on 19/03/2024 at 10.00 a.m. to 12 p.m. at M.P.I. seminar hall. Attendance is compulsory.

Department of BBA (CA) Annasaheb Magar Mahavidyalaya Hadapsar, Pune-28

Annasaheb Magar Mahavidyalaya Hadapsar, Pune-411028.

	Guest Lecture On Person	mality Deve	lopment
-		ate: 13103	12024
r.Mo	Student Name	classo	signature 2
- who	4.8.81.V. Della 1. Cont.	1 ) motor A	17/13/14-P8/15/15
01	Vyas kuntal	TY BBA (CA)	(8), (8)
02.	Shrikant Cokare	S.Y.B. com	8.0 - 08
3.	Shrinceth Bhendy	ST BBACCES	Spheneli'
04.	Vivek Patil	SYBBA(CA)	Patel
5.	Atharu Sawant	SYBBA (CA)	A
6.	Somnath Gratkul	Sy BBACA	Someth,
107	Padalkar Mahader	SYBBACA	no P
8.	Lawand Tanaji Vilas	BY BBA (CA) -	The same
9.	Kamble Positia Nitin	SYBBA (CA)	B.N. Karn
10.	Shelke Vinapak Janku	S. Y. Bcom	- Marke
	Gayras Estok Kapasc	ST BBACCA)	
127	Titendog Gramputal Khichgo	ST BBA COA)	Diendra-
13)	sahil sonawane	SYBBA (CH)	40
147	Margesh kamble	SyBBA (CA)	The
(5)	Waghmare Shubham Mahadev	EMBBA (CA)	Bu
167	Shinde Bujal ball	FYBBACCA)	Sites
(17)	Dande Tushar Balasoheb	TYBBA (CA)	Jurde
187	kamble somnath	TYBBA (CA)	(Padde
19)	Ritesh Rohidas Shellee	FYBBA(1A)	(R) shelle
(20)	Tinde yest Husurappa	Typen (cn)	Jagush H
(21)	Shingofe ( vedant Gandsh	FL BBN (A)	Buryac
22)	Rathod Viver Rameshal		Hivery.
23)	You Shinde Yosh Rajerdra	FYBBA(CA)	Refinde
24)	Acyush D. Songoji		
25]	Geongane Athan Udhav	EXBBA(CD)	August
26)	Dudhmal vishal Ashok	FYBBA(CA)	
		FUBBA CCA	
27)	Momin Shaman Matin	TY.BBA (CA)	Open Miles

	policy of the property of the state of the s		
SrNo	Student Name	class	signagn
27	Mahendra. C. Solantei	S.Y. B.B. A	Halle
28].		S. F. BBA	PSF
29)	Abhijit Ankush Kamble	SYBBA	Abrijit
30]	Saraj Satish Bhosale	FY.BBA (SA)	Shorte !
31]	Gihadage Kunal Kishor	SY.BBA (CA)	Kuped
32]	Jadhar Abhishek Laxnomroad	1.4. B Com (C)	Aghirles
337	Talekar Tejas (ranesh	T.Y. B. Com. (c)	Tejos
357	hogae Shreeram, Sharad	T.y 8.60m[c]	3hoza-
	Lakamore Omkas Laiendra	T. Y. Brom (c)	onlaw .
377	More Vreyhabh Rajendra	T. Y. Brom Ce)	aphabh
32}	morrest sable	S. Y. BBA	Rade
39)	Mayar Kailar Kyrhadr	5.4 BOA	Keled 5
40]	Shreyash Shankar Undre Avadhut Bhausaheb Dashmukh	37 BBA	Tol aller
41)		S. Y. BBA	Avadhes
42)	Singh Adityaraj Kaven Ram Bhagyawant Pise Psatiksha Entral	F. YBBA-CIA	V. Gosanchy
43)	kaven Ram Bhagyannut	TY BBA CA	Kowee
44)	antal h	SK BBA	
45)	NIFITA Dubey	SK BBA	PS PIGE.
46)	Dhende Swaminee Sushilkuman	SY-BBA 72	A
47)	Kutura Kariadora Tomala	FY"BBA [CA]	
48)	Anyariya marky sumas staniil	TY Brom(c)	
50	Diadru sullen jamdade	1126-6	Anuforija
All Sand	Shena Sanjay Somvane	TYB Com(c	Spandad
51	Sachin Namdex lole	F.y. B. (om()	Sneha
52	om Suryawanshi	F. y. B. Com (i	) Sachin
28	sejay sam de	F.y.B. Com(	0) On
54.	Disha Badhe	TYBBACCA	) Zarodo)
		TYBBACCA	D.NoBad

	Maria	class	signatu
n. 140	student Name		
		TYBBACCA	Maralt-
55.	Franch Jachav	TYBBA(CO)	Balli
86.	Dominance dange	TYBBACAD	'Was
57.	Marshada Divate.	FYRBAGA	Baha
88.	FIRE THE TENTION RUMO - Jan	FY. BBA(UA)	Neho
59	Sharma Neha Kambahadur	TY. BBA(A)	8B_
60	Shrinivas Ganesh Barge	TUDDAM	1) Darda
61	Shinde Rohit Satish		n) Anil
162	Arif mohummad	TYBBALA	
63	Vivel Ghule	7413BH(A)	Catalo
64	sakshi Rajesh Gonjare	TYBBLCO	Ges
65)	Shelar Rushikesh suresh	TY BBACA	W. W.
66)		T)BBACCA)	Milas
$\frac{67.0}{68}$	Pareleshi Ashufash Ajitsing Shital T. Palch	TYBCA	ShitalPalot
697	Dinga v. wanje	TYBCA	
10)	vaibhouri S Ghalme	TYBEA	405
_11)	Momin Shamoon Matin	Ty BBA(CA)	from
921	Sandesh Bhausaheb Janjire	TYBBACCA)	A CONTRACTOR OF THE CONTRACTOR
731	Atul Manotias Bhosale	TYBBA (CA)	-
74	kiove pena shu'subhash	TYBBO (CO)	Durk
1-4			
		COLUMN TWO IS NOT THE OWNER, THE	The second secon

#### P.D.E.A'S

# Annasaheb Magar Mahavidyalaya Hadapsar, Pune-411028 **Department of B.B.A. (CA) 2023-2024**

#### Report on

"Soft-Skill MOU-Activity-Guest Lecture on Personality Development"

Date: 19/03/2024

Department of BBA (CA) has conducted Soft Skill Activity in Association with Vertscend Automation Pvt Ltd. for TYBBA (CA) students on 20/04/2024 at 10.00 a.m. to 1.00 p.m. at seminar hall. Mr. Varun Jadhav, Manager and Mr. Prasad Jadhav, Executive, Vertscend Automation Pvt Ltd. Elaborated How to develop communication skill & develop personality. There were 74 students participated for these Activity. Event was coordinated by, Prof. Shinde S.A Prof. Godambe S. O. and Prof. Modak S.K vote of thanks proposed by HOD Prof. Mane A. C.

of BBA (CA) Department Annasaheb Magar Mahavidyalaya Hadapsar, Pune-28









#### P.D.E.A's

# Annasaheb Magar Mahavidyalaya, Hadapsar, Pune-411028 Department of BBA (CA)

2023-2024

Notice

Date:-18/03/2024

All the students of T.Y.B.B.A (C.A) are hereby informed that there will be a MOU Activity "Placement Drive" in association with "KDN InfoTech Pvt. Ltd and V & K Softtech Solution Pvt. Ltd" on 21 March 2024. Attendance is compulsory. All students should bring their resume along with I-card size photo.

Venue: - Commerce seminar Hall, AMM Campus, Hadapsar.

Time: 9.00 am to 12.00 pm.

Department of BBA (CA) Annasaheb Magar Mahavidyalaya Hadapsar, Pune-28

Annasaheb Magar Mahavidyalaya Hadapsar, Pune-411003

#### P.D.E.A'S

### Annasaheb Magar Mahavidyalaya, Hadapsar, Pune-28 Department of BBA(CA)

# MOU Activity of Palcement Drive by KDN Infotech Pvt Ltd TYBBA(CA)

	Attendance Sheet	Date 21/03/2024
Sr. No	Student Names	Sign
1	BADGUJAR SURAJ MANOJ	Survey
2	BADHE DISHA NAVNATH	(D)'s
3	BAGUL AADESH SARJU	Bague
4	BARGE SHRINIVAS GANESH	Barge 1
5	BHANDARE DIKSHA TATYA	gikshy
6	BHOSALE ATUL MANOHAR	(Agree)
7	DANDE TUSHAR BALASAHEB	Darole
8	DIVATE HARSHADA RAJENDRA	alt
9	DUDHAL RUSHIKESH BHIMRAO	DEP.
10	GANDHI OONMANEE SANTOSH	Orananee:
11	GHALME VAIBHAVI SHIVAJI	Chalane
12	GHULE VIVEK ROHIDAS	Coliver
13	GONJARE SAKSHI RAJESH/	Sarate
14	JADHAV PRANALI PRASHANT	YY
15	JANJIRE SANDESH BHAUSAHEB	Lugin
16	KALBHOR PAYAL KISAN	144/11
17	KAMBLE SOMNATH RATNAPPA	(kou
18	KAVATHEKAR KIRAN SHIVAJI	Kiron
19	KEKAN ONKAR YUVRAJ	Kelca(M)
20	KIRVE NEHA SUBHASH	Kinve
21	KUDALE ADITYA KHANDU	Akoobale
22	MOMIN SHAMUN MATIN	Momon
23	NALE ATHARVA ANIL	Naile
24	PARDESHI ASHUTOSH AJITSING	Schutosh
25	RAJPURE SIDDHI VIJAY	Godin.
26	RAJPUROHIT ARJUN NARAYAN	Astur
27	RAKTE SHITAL TUKARAM	Stutal Raiche
28	SARODE SEJAL JITENDRA	Seja
29	SATPUTE MRUNAL NAGESH	Sugar
30	SAYKAR NITESH KESHAV	Solleda
31	SHARMA SHASHIBA <del>LA AS</del> HOK	Shalli
32	SHENDE ANIKET NILESH	Shende
33	SHINDE KUNAL BHARAT	1/01/11
34	SHINDE ROHIT SATISH	Rouit
35	SHITOLE ABHISHEK RAJU	WWW)

#### P.D.E.A'S

## Annasaheb Magar Mahavidyalaya, Hadapsar, Pune-28 Department of BBA(CA) MOU Activity of Palcement Drive by KDN Infotech Pvt Ltd TYBBA(CA)

	Attendance Sheet	Date 21/03/2024
36	SHIVRATRI VAISHNAVI SANTOSH	Suiveatel
37	SINGH ADITYARAJ SANJAY	Dolityary
38	SODANAWAR PAWAN HARIBHAU	PH 50 danuers
39	SURAVASE MAHESH KHANDU	Cupman
40	TAMBOLI SAHIL RAMJAN	Tambe
41	VISHWAKARMA DEEPAK H.	1 Joens
42	VYAS KUNTAL SUMEET	(X)
43	WAGASKAR KAJAL BHASKAR	Wagesteer
44	WANJE DIVYA VYANKATRAO	Divua
45	YADAV POOJA GORAKH	

# Annasaheb Magar Mahavidyalaya Hadapsar, Pune-411028

# Department of B.B.A. (CA)

## Report on Placement Drive Activity

Date: 21/03/2023

### Objectives:

- 1) Preparation of resume according to job description
- 2) Formal Interview with the panel.
- 3) Job interview questions pertaining both to general and IT related topics.

A mock interview was conducted for students of TYBBA (CA) in association with KDN InfoTech Pvt. Ltd and V & K Softtech Solution Pvt. Ltd on 21/03/2024. The interview panel assessed the technical and communication competence of the students and gave the individual and group feedback on their performances. Students found it to be good rehearsal for the actual job interview. It was treated as the placement related training and continuous assessment during the course. Total 46 students of TYBBA (CA) were part of this session.

Mr. Vinod Jagtap, CEO of KDN InfoTech Pvt. Ltd and V & K Softtech Solution Pvt. Ltd was one of the members of the panel as an expert. They guided the students regarding resume writing and interview. The session was conducted by HOD Asha Mane, Prof. Shinde S.A, Prof. Godambe S.O and Prof. Modak S.K.

Department of BBA (CA) Annasaheb Magar Mahavidyalaya Hadapsar, Pune-28



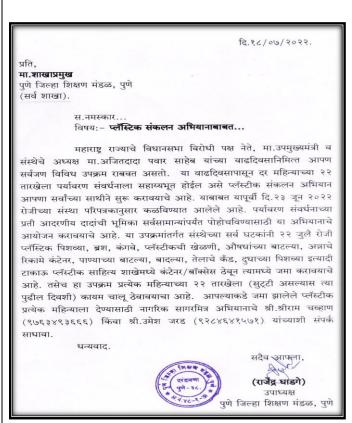




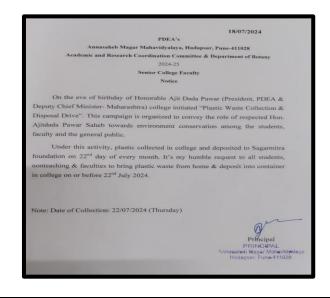
#### PDEA's

# Annasaheb Magar Mahavidyalaya, Hadapsar, Pune-411028 Academic & Research Coordination Committee & Department of Botany

# Plastic Collection & Disposal Activity 2023-24 22nd July 2024



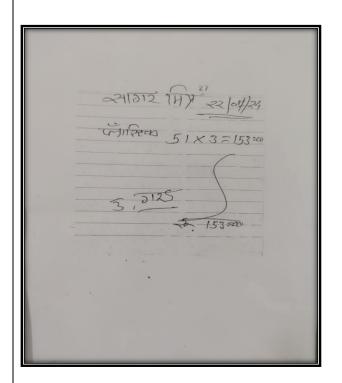


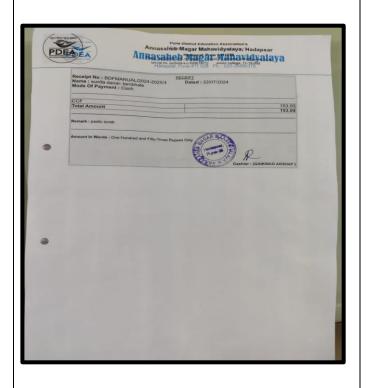












**Report:** On the eve of Birthday of President of PDEA and Dy. Chief Minister of Maharashtra Hon'ble Mr. Ajitdata Pawar, Annasaheb Magar Mahavidyalaya initiated Plastic Collection drive since July 2022. Under this drive faculty and students collects plastic which is handed over to Sagar Mitra Foundation every month for further processing. On 22<sup>nd</sup> July 2024, 51 kg Plastic handed over to Sagarmitra Foundation. Hon'ble principal Dr. Nitin Ghorpade created awareness amongst faculty and students regarding not to use plastic and

प्लास्टिक संकलन अभियान माहिती: Link for information <a href="https://forms.gle/pcktHaZiMji8odZn7">https://forms.gle/pcktHaZiMji8odZn7</a>

#### अण्णासाहेब मगर महाविद्यालयात प्लास्टिक संकलन अभियान

पुणे जिल्हा शिक्षण मंडळाचे अध्यक्ष व महाराष्ट्र राज्याचे उपमुख्यमंत्री मा. अजितदादा पवारसाहेब यांच्या वाढिदेवसाचे औचित्य साधून, अण्णासाहेब मगर महाविद्यालयात प्लास्टिक संकलन अभियान राबविण्यात येत आहे. सदर अभियानांतर्गत प्रत्येक महिन्याला संकलित झालेले प्लास्टिक सागरिमत्र फाउंडेशनकडे पुनर्वापरासाठी सुपूर्द करण्यात येते. त्या अंतर्गत महाविद्यालयात

its threat to environment, use of degradable plastic as well as recycling of plastics. Message of Hon'ble Dy. Chief minister is being disseminated through this drive. Vice Principals of A. M. College namely Mr. Anil Jagtap, Dr. Bajirao Shinde, Dr. Shubhangi Shinde, Dr. Akash Nimbalkar, Dr. Rajesh Rasal, Dr. Sunita Kunjir, Dr. Nana Zagade, Dr. Kiran Ranadive, Prof. Asha Mane, Prof. Gaurav Shelar. Prof. Pratik Kamthe, Prof Neha Salunkhe, Prof. Preeti Patil, Prof. Vaibhav Kodlinge, Dr. Mahesh Joshi and Sunita Danai-Tambhale as well as nonteaching faculty Mr. Rajesh Aute, Changdev Poman and students were present at large on this occasion.

संकलित केलेले 51 किलो प्लास्टिक दिनांक 22 २०२४ रोजी सागरिमत्र फाउंडेशनकडे सुपूर्व करण्यात आले. महाविद्यालयात सातत्याने राबविण्यात येणाऱ्या पर्यावरणपूरक प्लास्टिक संकलन अभियानास उस्फुर्त प्रतिसाद देणाऱ्या महाविद्यालयातील शिक्षक, शिक्षकेतर वर्ग व विद्यार्थ्यांना महाविद्यालयाचे प्राचार्य डॉ. नितीन घोरपडे यांनी प्लास्टिक न वापरण्याचे आवाहन केले. पर्यावरणाप्रती अजितदादा पवार यांची भूमिका सर्वसामान्यांपर्यंत पोहोचविण्यासाठी या अभियानाचे प्रायोजन आहे, असे प्लास्टिक संकलन अभियानाविषयी महाविद्यालयाचे प्राचार्य डॉ. नितीन घोरपडे यांनी मत व्यक्त केले.

या प्रसंगी महाविद्यालयाचे उपप्राचार्य, अनिल जगताप, वनस्पतीशास्त्र विभाग प्रमुख, बाजीराव शिंदे, प्राणीशास्त्र विभाग प्रमुख शरद गिरमकर, राजेश रसाळ, सूक्ष्मजीवशास्त्र विभाग डॉ. शुभांगी शिंदे सुनिता दानाई-तांभाळे, नाना झगडे, रसायनशास्त्र विभाग शैला धोत्रे, डॉ.

किरण रणिदवे, बीबीये (सीये) विभाग प्रमुख आशा माने, गौरव शेलार, प्रतीक कामठे, प्रीती पाटील ,नेहा साळुंखे, पोमन चांगदेव, महाविद्यालयातील शिक्षक, शिक्षकेतर सेवक व विद्यार्थी मोठ्या संख्येने उपस्थित होते.

ARC Head Principal



# Pune District Education Association's Annasaheb Magar Mahavidyalaya, Hadapsar,



## Pune-28.

	Activi	ity Report	Pure
Name of Department/ Committee	Zoology_Health Center	Academic Year: 2023-24	Name of Coordinator: Dr. Sharad V. Giramkar
Name of the Activity	Free Health Centre for	students and emp	loyees
Day & Date: Second am to 12: 00 pm  Time/ Duration: 10;00 Venue: Annasaheb Magar No of Participants Mahavidyalaya Hadapsar, Pune			

#### 1. Brief information about the Activity:

Topic	Free health center for college students and employees.	
Objectives	To provide free health checkup and consultation facilities	
Methodology	Physical health examination by doctors.	
Detail Report of Activity	Separate sheet attached	

#### 2. Proofs and Documents Submitted:

Documents	Yes/No	Documents	Yes/No
Detail Report of Activity	Yes	Activity Photos (Geotagged)	Yes
Notice	Yes	News Published	
Invitation and Thank giving Letters		Participation Certificate (Specimen)	
Attendance of Participants	Yes	Feedback Forms	

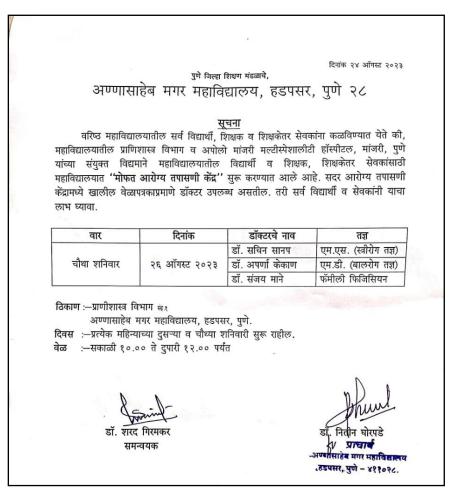
\ \			
Land	- fromt	Blow	
	Head	Coverdinates	OM
Signature of Coordinator	Depar Signature of ZHOP dy	Signatur dinater	PRINCIPAL
	Hadapsar, Pune-411028.	Annasaheb Magar Mahavidyata Hadapsar, Pune-28.	nasaheb Magar Mahavidyalaya Hadapsar, Pune-411028.
	•		

#### 3. For IQAC Use only:

IQAC File No	IQAC Document No	Criterion/Metric No	

#### Report:

Department of Zoology has started free health centre for college students and employees in collaboration with Sanap Women & Children care Hospital, Hadapsar, Pune. As per MoU with above mentioned hospital a medical health checkup OPD was arranged in college campus under the care of General Physician on 2<sup>nd</sup> and 4<sup>th</sup> Saturday of every month (excluding college holiday) during 10:00 am to 12:00 pm. This OPD was free of cost for college students, their parents and employees. The aim of health centre was to guide and consultation to needy employees and students. Total 40 students and employees get benefited in health centre. Health Centre was consulted by Dr. Sachin Sanap and his team. Free medical check-up centre is conducted under the able guidance of Principal Dr. Nitin Ghorpade and vice principal Dr. Prashant Mulay, Dr. Shubhangi Auti and Dr. Sharad Giramkar worked as co-ordinator of this centre.



**Notice** 

दिनांक २१ फेब्रुवारी २०२४

#### पुणे जिल्हा शिक्षण मंडळाचे, अण्णासाहेब मगर महाविद्यालय, हडपसर, पुणे २८ मोफत आरोग्य तपासणी

#### सूचना

महाविद्यालयातील सर्व विद्यार्थी, त्यांचे पालक, शिक्षक व शिक्षकेतर सेवकांना कळविण्यात येते की, महाविद्यालयातील प्राणिशास्त्र विभाग व सानप हॉस्पीटल, हडपसर, पुणे यांच्या संयुक्त विद्यामो शनिवार दिनांक २४/०२/२०२४ रोजी सकाळी १०.०० ते दुपारी १२.०० या वेळात ''मोफत आरोग्य तपासणी'' करण्यात येणार आहे. सदर आरोग्य तपासणी खालील डॉक्टर करणार आहेत.

अ. क.	डॉक्टरचे नाव	तज्ञ
8	डॉ. सचिन सानप	एम. एस. (स्त्रीरोग तज्ञ)
2	डॉ. अपर्णा केकाण	एम. डी. (बालरोग तज्ञ)
3	डॉ. विशाल वायाळ	एम.एस.(जनरल सर्जन, मुळव्याध, गुद्व्दार तज्ञ)
8	डॉ. संजय माने	एम.बी.बी.एस. ( जनरल फिजिशियन)

ठिकाण

: प्राणीशास्त्र विभाग, पहिला मजला, सायन्स बिल्डींग, अण्णासाहेब मगर

महाविद्यालय, हडपसर, पुणे.

तारीख वेळ : शनिवार दिनांक २४/०२/२०२४ : सकाळी १०.०० ते दुपारी १२.०० पर्यंत

L . 1

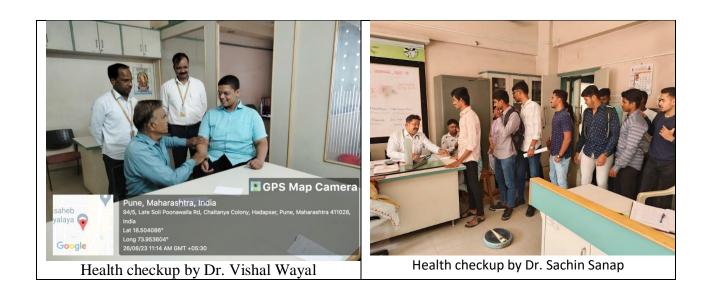
डॉ. शरद गिरमकर समन्वयक डॉ. नितीन घीरपडे

प्राचार्य अण्णासाहेब मगर महाविद्यालय इडपसर, पुणे – ४११०२८.

#### **Notice**

#### Glimpses of activities:





# "BIO-INSPIRED TIO2 NANOPARTICLE SYNTHESIS & APPLICATIONS."

Dissertation Submitted to



# FOR PARTIAL FULFILMENT TOWARDS THE DEGREE OF MASTER OF SCIENCE (MICROBIOLOGY) Submitted By,

Ms. Deshmukh Mrunali Pradip Mr. Divekar Omkar Rajendra Mr. Gaikwad Akshay Abhimanyu

UNDER THE GUIDENCE OF Mrs. Dhangar Urmila Shankar



Department of Microbiology,
Annasaheb Magar Mahavidyalaya,
Hadapsar, Pune-412307

2023-2024

# "BIO-INSPIRED TIO2 NANOPARTICLE SYNTHESIS & APPLICATIONS."



Dissertation Submitted to



# FOR PARTIAL FULFILMENT TOWARDS THE DEGREE OF MASTER OF SCIENCE (MICROBIOLOGY)

UNDER THE CO-GUIDENCE OF

Sundist

Dr. Shubhangi R. Shinde



Department of Microbiology, Annasaheb Magar Mahavidyalaya,

Hadapsar, Pune-412307

2023-2024

#### Acknowledgment

It is tradition of our culture to share the fruits of Success with all those who made it possible It is my pleasure to have an opportunity of showing gratitude towards all of them and give extreme pleasure in presenting my project report at Department of Microbiology, Annasaheb Magar Mahavidyalaya

First, I would like to thank Mrs. Urmila. S. Dhanger, our Project Guide for supporting us so much with all literature and also thanks to Dr. Shubhangi R. Shinde. We express our thanks and profound affection to our head of department Dr. Neha. N. Patil for encouraging us to carry out our project work efficiently.

We are also thankful to Ms. Meghmala Waghmode, Dr U.V. Khisti from Annasaheb Mager Mahavidyalaya for their support required to complete our project work.

I would like to extend my sincere and heartfelt thanks. Towards all those who have helped me in making this project. Without their active guidance, help, co-operation and encouragement, I would not have been able to present the project on time.

#### Certificate of the Guide

Certified that work incorporated in M.sc dissertation entitled "Bio-Inspired TiO<sub>2</sub> Nanoparticle Synthesis and their Applications." submitted by Mr. Gaikwad Akshay Abhimanyu was carried out candidates under my guidance. Such material has been obtained from other sources has been duly in the dissertation.

Guide

Mrs. Dhangar Urmila Shankar

Department of Microbiology

Annasaheb Magar Mahavidyalaya,

Hadapsar, Pune- 411028.

Internal examiner

Date:

Place: -Pune

External examiner

### Candidate's Declaration

I hereby declare that dissertation entitled, "Bio-Inspired TiO<sub>2</sub> Nanoparticle Synthesis and Applications" submitted by me for the degree of M.Sc. is the record of work carried out by my guidance Mrs. Urmila. S. Dhanger. and has not formed the basis for the award of any degree in this or another university or other institution of higher learning.

I further declare that the material obtained from other sources has been duly acknowledged in the dissertation.

Students Sign: AlshoyA. G.

Mr. Gaikwad Akshay Abhimanyu

Guide:

Mrs. Urmila S. Dhangar

#### Abstract

Recent advances in Nano science and nanotechnology radically changed the way we diagnose, treat, and prevent various diseases in all aspects of human life. TiO<sub>2</sub>nanoparticles (TiO<sub>2</sub>NPs) are one of the most vital and fascinating nanomaterials among several metallic nanoparticles that are involved in biomedical applications. TiO<sub>2</sub>NPs play an important role in Nano science and nanotechnology, particularly in Nano medicine.

In this report, we discuss the synthesis of TiO<sub>2</sub>NPs using biological method. We also discuss the properties of TiO<sub>2</sub>NPs and methods for their characterization. More importantly, we extensively discuss the multifunctional bio- applications of TiO<sub>2</sub>NPs; as antibacterial activity of TiO<sub>2</sub>NPs, the antimicrobial activity of TiO<sub>2</sub> nanoparticles was determined by spread plate method and found the TiO<sub>2</sub> nanoparticles have significant antibacterial activity against <u>S. aureus</u>, <u>E. coli</u>, <u>Psedomonas spp.</u> and <u>Klebsiella</u>.

Azo dyes such as Acid red 3BN & Acid yellow which are used in various textile industries which are very toxic to the environment, by using TiO<sub>2</sub> NPs this dye can be degrade by Dye degradation assay.

TiO<sub>2</sub> nanoparticles were extracellular synthesized using <u>Aspergillus Niger</u> which are isolated from the industrial area and <u>Curvularia spp.</u> found in area near textile industry the formation of nanoparticles was observed after 144hrs of incubation. The result recorded from colour changes UV-visible spectroscopy, FT-IR, X-Ray diffraction XRD and SEM (EDX) supported the biosynthesis and characterization of TiO<sub>2</sub> nanoparticles. From the SEM images, it is confirmed that the TiO<sub>2</sub> nanoparticles are crystalline in nature, which was confirmed by the FT-IR peak at 1550 cm<sup>-1</sup>corresponding to the TiO<sub>2</sub> vibration present in crystalline structure.

Guide

Student Name

Mrs.Urmila.S.Dhanger

Ms. Deshmukh Mrunali Pradip Mr. Divekar Omkar Rajendra Mr. Gaikwad Akshay Abhimanyu

## "BIO-INSPIRED NANOPARTICLE SYNTHESIS."

## DISSERTATION SUBMITTED TO



# FOR PARTIAL FULFILLMENT TOWARDS THE DEGREE OF MASTER OF SCIENCE (MICROBIOLOGY)

Submitted By,

Ms. Bagade Siddhi Mohan

Ms. Kalbhor Priti Ganesh

Ms. Ghule Neha Kantilal

Ms. Navale Sonal Sandip

UNDER THE GUIDANCE OF

Mrs. Dhangar Urmila Shankar



DEPARTMENT OF MICROBIOLOGY,
ANNASAHEB MAGAR MAHAVIDYALAYA,
HADAPSAR, PUNE-28

2023-2024

## Acknowledgment

It's tradition of our culture to share the fruits of Success with all those who made it possible It's my pleasure to have an opportunity of showing gratitude towards all of them and give extreme pleasure in presenting my project report at Department of Microbiology, Annasaheb Magar Mahavidyalaya

First of all, I would like to thank Mrs. Urmila. S. Dhanger, our Project Guide for supporting us so much with all literature and also thanks to Dr.Shubhangi.R.shinde. We express our thanks and profound affection to our head of department Dr. Neha. N. Patil for encouraging us to carry out our project work efficiently.

We are also thankful to Ms. Meghmala waghmode, Dr U.V. Khisti from Annasaheb Magar Mahavidyalaya for their support required to complete our project work.

I would like to extend my sincere and heartfelt thanks. Towards all those who have helped me in making this project. Without their active guidance, help, co-operation and encouragement, I would not have been able to present the project on time.

### Certificate of the Guide

Certified that work incorporated in M.sc dissertation entitled ""Bio-Inspired Nanoparticle Synthesis" submitted by Miss.Ghule Neha kantilal was carried out candidates under my guidance. Such material has been obtained from other sources has been duly in the dissertation.

Mrs. Dhangar Urmila Shankar

Department of Microbiology.

Annasaheb Magar Mahavidyalaya,

Hadapsar, Pune- 411028.

Date: 2/5/24

Place:Pune

Dr. Klush N'V'



Pune District Education Association's Annasaheb Magar Mahavidyalaya Hadapsar, Pune-411028 Website: www.ame.pdeapune.org E-mail: plasma ammm@yahoo.co.in Id No.: PU/PN/ASC/029/1971



## Declaration by the Candidate

I hereby declare that the Project titled "Bio-Inspired Nanoparticle Synthesis" submitted by me for the degree of M.Sc. Microbiology (MBCP 243- Dissertation) is the work done by me under the supervision of Mrs. Urmila S. Dhangar and has not formed the basis for the award of any degree in this or any other University or other Institution of Higher Learning. I also declare that any information obtained from other sources has been properly acknowledged in the thesis.

Date: 02/5/24

Internal examiner

External examiner

## Abstract

Recent advances in Nano science and nanotechnology radically changed the way we diagnose, treat, and prevent various diseases in all aspects of human life. Silver nanoparticles (AgNPs) are one of the most vital and fascinating nanomaterial's among several metallic nanoparticles that are involved in biomedical applications. AgNPs play an important role in Nano science and nanotechnology, particularly in Nano medicine.

In this report, we discuss the synthesis of AgNPs using biological method. We also discuss the properties of AgNPs and methods for their characterization. More importantly, we extensively discuss the multifunctional bio- applications of AgNPs; as antibacterial activity of AgNPs, the antimicrobial activity of silver nanoparticles was determined by spread plate method and found the silver nanoparticles have significant antibacterial activity against S. aureus, E.coli, Psedomonas and Klebsiella.

Azo dyes such as Acid red 3BN, Patent Blue, Acid yellow and Yellow 186 which are used in various textile industries which are very toxic to the environment, by using AgNPs this dye can be degrade by Dye degradation assay.

Silver nanoparticles were extracellular synthesized using Aspergillus Niger which are isolated from the industrial area and Curvularia found in area near textile industry the formation of nanoparticles was observed after 144hrs of incubation. The result recorded from colour changes UV-visible spectroscopy, FT-IR, X-Ray diffraction XRD and SEM (EDX) supported the biosynthesis and characterization of silver nanoparticles. From the SEM images, it is confirmed that the silver nanoparticles are crystalline in nature, which was confirmed by the FT-IR peak at 518 cm<sup>-1</sup>corresponding to the Ag vibration present in crystalline structure.

Guide

Mrs.Urmila.S.Dhanger

Student Name

Ms. Bagade Siddhi Mohan

Ms. Kalbhor Priti Ganesh

Ms. Ghule Neha Kantilal

Ms. Navale Sonal Sandip

### "BIO-INSPIRED NANOPARTICLE SYNTHESIS."

### **DISSERTATION SUBMITTED TO**



# FOR PARTIAL FULFILLMENT TOWARDS THE DEGREE OF MASTER OF SCIENCE (MICROBIOLOGY)

Submitted By,

Ms. Bagade Siddhi Mohan

Ms. Kalbhor Priti Ganesh

Ms. Ghule Neha Kantilal

Ms. Navale Sonal Sandip

UNDER THE GUIDANCE OF

Mrs. Dhangar Urmila Shankar



DEPARTMENT OF MICROBIOLOGY,
ANNASAHEB MAGAR MAHAVIDYALAYA,
HADAPSAR, PUNE-28

2023-2024

### Acknowledgment

It's tradition of our culture to share the fruits of Success with all those who made it possible It's my pleasure to have an opportunity of showing gratitude towards all of them and give extreme pleasure in presenting my project report at Department of Microbiology, Annasaheb Magar Mahavidyalaya

First of all, I would like to thank Mrs. Urmila. S. Dhanger, our Project Guide for supporting us so much with all literature and also thanks to Dr.Shubhangi .R.shinde. We express our thanks and profound affection to our head of department Dr. Neha. N. Patil for encouraging us to carry out our project work efficiently.

We are also thankful to Ms. Meghmala waghmode, Dr U.V. Khisti from Annasaheb Magar Mahavidyalaya for their support required to complete our project work.

I would like to extend my sincere and heartfelt thanks. Towards all those who have helped me in making this project. Without their active guidance, help, co-operation and encouragement, I would not have been able to present the project on time.

Certified that work incorporated in M.sc dissertation entitled ""Bio-Inspired Nanoparticle Synthesis" submitted by Ms. Kalbhor Priti Ganesh was carried out candidates under my guidance. Such material has been obtained from other sources has been duly in the dissertation.

#### Guide

Mrs. Dhangar Urmila Shankar

Department of Microbiology.

Annasaheb Magar Mahavidyalaya,

Hadapsar, Pune-411028.

Date:

Place:Pune

Internal examiner

Dx' Khizh L'V



Pune District Education Association's Annasaheb Magar Mahavidyalaya Hadapsar, Pune-411028 Website: www.ame.pdeapune.org E-mail: plasma ammm@yahoo.co.in Id No.: PU/PN/ASC/029/1971



### Declaration by the Candidate

I hereby declare that the Project titled "Bio-Inspired Nanoparticle Synthesis" submitted by me for the degree of M.Sc. Microbiology (MBCP 243- Dissertation) is the work done by me under the supervision of Mrs. Urmila S. Dhangar and has not formed the basis for the award of any degree in this or any other University or other Institution of Higher Learning. I also declare that any information obtained from other sources has been properly acknowledged in the thesis.

Date:

Internal examiner

Dr Khish Div.

External examiner

5

### Abstract

Recent advances in Nano science and nanotechnology radically changed the way we diagnose, treat, and prevent various diseases in all aspects of human life. Silver nanoparticles (AgNPs) are one of the most vital and fascinating nanomaterial's among several metallic nanoparticles that are involved in biomedical applications. AgNPs play an important role in Nano science and nanotechnology, particularly in Nano medicine.

In this report, we discuss the synthesis of AgNPs using biological method. We also discuss the properties of AgNPs and methods for their characterization. More importantly, we extensively discuss the multifunctional bio- applications of AgNPs; as antibacterial activity of AgNPs, the antimicrobial activity of silver nanoparticles was determined by spread plate method and found the silver nanoparticles have significant antibacterial activity against *S. aureus*, *E.coli*, *Psedomonas* and *Klebsiella*.

Azo dyes such as Acid red 3BN, Patent Blue, Acid yellow and Yellow 186 which are used in various textile industries which are very toxic to the environment, by using AgNPs this dye can be degrade by Dye degradation assay.

Silver nanoparticles were extracellular synthesized using *Aspergillus Niger* which are isolated from the industrial area and *Curvularia* found in area near textile industry the formation of nanoparticles was observed after 144hrs of incubation. The result recorded from colour changes UV-visible spectroscopy, FT-IR, X-Ray diffraction XRD and SEM (EDX) supported the biosynthesis and characterization of silver nanoparticles. From the SEM images, it is confirmed that the silver nanoparticles are crystalline in nature, which was confirmed by the FT-IR peak at 518 cm<sup>-1</sup>corresponding to the Ag vibration present in crystalline structure.

Guide

Mrs.Urmila.S.Dhanger

Student Name

Ms. Bagade Siddhi Mohan

Ms. Kalbhor Priti Ganesh

Ms. Ghule Neha Kantilal

Ms. Navale Sonal Sandip

### "BIO-INSPIRED NANOPARTICLE SYNTHESIS."

### DISSERTATION SUBMITTED TO



## FOR PARTIAL FULFILLMENT TOWARDS THE DEGREE OF MASTER OF SCIENCE (MICROBIOLOGY)

Submitted By,

Ms. Bagade Siddhi Mohan

Ms. Kalbhor Priti Ganesh

Ms. Ghule Neha Kantilal

Ms. Navale Sonal Sandip

UNDER THE GUIDANCE OF

Mrs. Dhangar Urmila Shankar



DEPARTMENT OF MICROBIOLOGY,
ANNASAHEB MAGAR MAHAVIDYALAYA,
HADAPSAR, PUNE-28

2023-2024

### Acknowledgment

It's tradition of our culture to share the fruits of Success with all those who made it possible It's my pleasure to have an opportunity of showing gratitude towards all of them and give extreme pleasure in presenting my project report at Department of Microbiology, Annasaheb Magar Mahavidyalaya

First of all, I would like to thank Mrs. Urmila. S. Dhanger, our Project Guide for supporting us so much with all literature and also thanks to Dr. Shubhangi .R. shinde. We express our thanks and profound affection to our head of department Dr. Neha. N. Patil for encouraging us to carry out our project work efficiently.

We are also thankful to Ms. Meghmala waghmode, Dr U.V. Khisti from Annasaheb Magar Mahavidyalaya for their support required to complete our project work.

I would like to extend my sincere and heartfelt thanks. Towards all those who have helped me in making this project. Without their active guidance, help, co-operation and encouragement, I would not have been able to present the project on time.

Certified that work incorporated in M.sc dissertation entitled ""Bio-Inspired Nanoparticle Synthesis" submitted by Ms. Navale Sonal Sandip was carried out candidates under my guidance. Such material has been obtained from other sources has been duly in the dissertation.

Guide

Mrs. Dhangar Urmila Shankar

Department of Microbiology.

Annasaheb Magar Mahavidyalaya,

Hadapsar, Pune- 411028.

Date: 02/05/2024

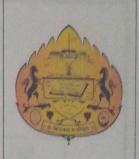
Place:Pune

Internal examiner 2/5/2024

Do Khish U'V.



Pune District Education Association's Annasaheb Magar Mahavidyalaya Hadapsar, Pune-411028 Website: www.ame.pdeapune.org E-mail: plasma ammm@yahoo.co.in Id No.: PU/PN/ASC/029/1971



### Declaration by the Candidate

I hereby declare that the Project titled "Bio-Inspired Nanoparticle Synthesis" submitted by me for the degree of M.Sc. Microbiology (MBCP 243- Dissertation) is the work done by me under the supervision of Mrs. Urmila S. Dhangar and has not formed the basis for the award of any degree in this or any other University or other Institution of Higher Learning. I also declare that any information obtained from other sources has been properly acknowledged in the thesis.

-			
	100	-	
•	BО		~ 4
	82	87	43.

Internal examiner

### Abstract

Recent advances in Nano science and nanotechnology radically changed the way we diagnose, treat, and prevent various diseases in all aspects of human life. Silver nanoparticles (AgNPs) are one of the most vital and fascinating nanomaterial's among several metallic nanoparticles that are involved in biomedical applications. AgNPs play an important role in Nano science and nanotechnology, particularly in Nano medicine.

In this report, we discuss the synthesis of AgNPs using biological method. We also discuss the properties of AgNPs and methods for their characterization. More importantly, we extensively discuss the multifunctional bio- applications of AgNPs; as antibacterial activity of AgNPs, the antimicrobial activity of silver nanoparticles was determined by spread plate method and found the silver nanoparticles have significant antibacterial activity against *S. aureus*, *E.coli*, *Psedomonas* and *Klebsiella*.

Azo dyes such as Acid red 3BN, Patent Blue, Acid yellow and Yellow 186 which are used in various textile industries which are very toxic to the environment, by using AgNPs this dye can be degrade by Dye degradation assay.

Silver nanoparticles were extracellular synthesized using *Aspergillus Niger* which are isolated from the industrial area and *Curvularia* found in area near textile industry the formation of nanoparticles was observed after 144hrs of incubation. The result recorded from colour changes UV-visible spectroscopy, FT-IR, X-Ray diffraction XRD and SEM (EDX) supported the biosynthesis and characterization of silver nanoparticles. From the SEM images, it is confirmed that the silver nanoparticles are crystalline in nature, which was confirmed by the FT-IR peak at 518 cm<sup>-1</sup>corresponding to the Ag vibration present in crystalline structure.

Guide

Mrs.Urmila.S.Dhanger

Student Name

Ms. Bagade Siddhi Mohan Ms. Kalbhor Priti Ganesh

Ms. Ghule Neha Kantilal

Ms. Navale Sonal Sandip

## "BIO-INSPIRED TIO2 NANOPARTICLE SYNTHESIS & APPLICATIONS."

Dissertation Submitted to



## FOR PARTIAL FULFILMENT TOWARDS THE DEGREE OF MASTER OF SCIENCE (MICROBIOLOGY)

Submitted By,

Ms. Deshmukh Mrunali Pradip

Mr. Divekar Omkar Rajendra

Mr. Gaikwad Akshay Abhimanyu

### UNDER THE GUIDENCE OF

Mrs. Dhangar Urmila Shankar



Department of Microbiology,

Annasaheb Magar Mahavidyalaya,

Hadapsar, Pune-412307

2023-2024

### **Acknowledgment**

It is tradition of our culture to share the fruits of Success with all those who made it possible It is my pleasure to have an opportunity of showing gratitude towards all of them and give extreme pleasure in presenting my project report at Department of Microbiology, Annasaheb Magar Mahavidyalaya

First, I would like to thank Mrs. Urmila. S. Dhanger, our Project Guide for supporting us so much with all literature and also thanks to Dr. Shubhangi R. Shinde. We express our thanks and profound affection to our head of department Dr. Neha. N. Patil for encouraging us to carry out our project work efficiently.

We are also thankful to Ms. Meghmala Waghmode, Dr U.V. Khisti from Annasaheb Mager Mahavidyalaya for their support required to complete our project work.

I would like to extend my sincere and heartfelt thanks. Towards all those who have helped me in making this project. Without their active guidance, help, co-operation and encouragement, I would not have been able to present the project on time.

Certified that work incorporated in M.sc dissertation entitled "Bio-Inspired TiO<sub>2</sub> Nanoparticle Synthesis and their Applications." submitted by Mr. Divekar Omkar Rajendra was carried out candidates under my guidance. Such material has been obtained from other sources has been duly in the dissertation.

Guide

Mrs. Dhangar Urmila Shankar

Department of Microbiology

Annasaheb Magar Mahavidyalaya,

Hadapsar, Pune- 411028.

Internal examiner

Date:

Place: -Pune

I hereby declare that dissertation entitled, "Bio-Inspired TiO<sub>2</sub> Nanoparticle Synthesis and Applications" submitted by me for the degree of M.Sc. is the record of work carried out by my guidance Mrs. Urmila. S. Dhanger. and has not formed the basis for the award of any degree in this or another university or other institution of higher learning.

I further declare that the material obtained from other sources has been duly acknowledged in the dissertation.

Students Sign Outo 3.

Mr. Divekar Omkar Rajendra

Guide:

Mrs. Urmila S. Dhangar

### Abstract

Recent advances in Nano science and nanotechnology radically changed the way we diagnose, treat, and prevent various diseases in all aspects of human life. TiO<sub>2</sub>nanoparticles (TiO<sub>2</sub>NPs) are one of the most vital and fascinating nanomaterials among several metallic nanoparticles that are involved in biomedical applications. TiO<sub>2</sub>NPs play an important role in Nano science and nanotechnology, particularly in Nano medicine.

In this report, we discuss the synthesis of TiO<sub>2</sub>NPs using biological method. We also discuss the properties of TiO<sub>2</sub>NPs and methods for their characterization. More importantly, we extensively discuss the multifunctional bio- applications of TiO<sub>2</sub>NPs; as antibacterial activity of TiO<sub>2</sub>NPs, the antimicrobial activity of TiO<sub>2</sub> nanoparticles was determined by spread plate method and found the TiO<sub>2</sub> nanoparticles have significant antibacterial activity against <u>S. aureus</u>, <u>E. coli</u>, <u>Psedomonas spp.</u> and <u>Klebsiella</u>.

Azo dyes such as Acid red 3BN & Acid yellow which are used in various textile industries which are very toxic to the environment, by using TiO<sub>2</sub> NPs this dye can be degrade by Dye degradation assay.

TiO<sub>2</sub> nanoparticles were extracellular synthesized using <u>Aspergillus Niger</u> which are isolated from the industrial area and <u>Curvularia spp.</u> found in area near textile industry the formation of nanoparticles was observed after 144hrs of incubation. The result recorded from colour changes UV-visible spectroscopy, FT-IR, X-Ray diffraction XRD and SEM (EDX) supported the biosynthesis and characterization of TiO<sub>2</sub> nanoparticles. From the SEM images, it is confirmed that the TiO<sub>2</sub> nanoparticles are crystalline in nature, which was confirmed by the FT-IR peak at 1550 cm<sup>-1</sup>corresponding to the TiO<sub>2</sub> vibration present in crystalline structure.

Guide

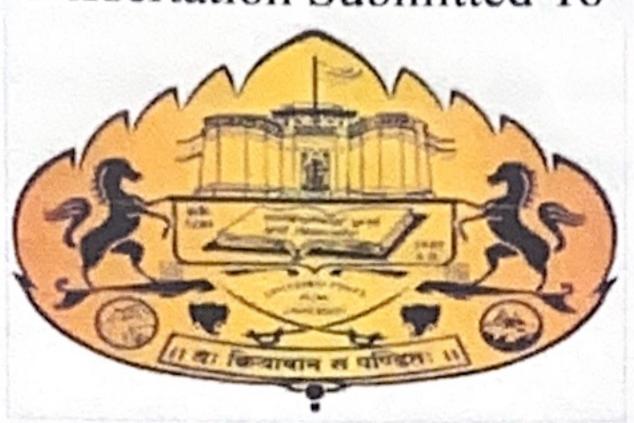
Student Name

Mrs.Urmila.S.Dhanger

Ms. Deshmukh Mrunali Pradip Mr. Divekar Omkar Rajendra Mr. Gaikwad Akshay Abhimanyu

# "Screening of Endophytic microorganisms from leaves of medicinal plants"

Dissertation Submitted To



For partial fulfillment toward the degree of Master of science (Microbiology)

## Submitted by

Mr. Jagtap Omkar Manikchand

Mr. Jagtap Somnath Anil

Mr. Jangid Chandraprakash Genaram

Under the Guidance of

Ms. Jagtap Poonam Dnyaneshwar



Department of Microbiology, Annasaheb Magar Mahavidyalaya, Hadapsar, Pune-28 2023-2024

## Acknowledgement

We Express our deep gratitude to our project guide Jagtap Poonam Dnyaneshwar, Department of microbiology, Annasaheb Magar College for her constant inspiration, timely counseling admirable guidance of the work carried out in this project. We would like to express our gratitude towards Dr Neha Nitin Patil, Head, Department of microbiology, Annasaheb Magar College for her inspiring guidance.

We express our thanks to faculty of microbiology Department, Dr. Khisti.U.V., Dr. Shinde S.R., Ms. Dhangar U.S., Ms. Jagtap P.D., Ms. Sherkar S.D., Ms. Borade U.B., and Ms. Kamashetty A.O from Annashaeb Magar Mahavidhyalaya, for their support to complete my project work.

Our unequivocal sincere thanks to Mr. Jedhe S., Mr. Shinde S.D., for their cooperation during the course of Dissertation. We would like to express our gratitude towards all our friends for their moral support and cooperation. We express our deep sense of gratitude towards our parents and our family members.

We apologize for those people whose names are missed out inadvertently, but helped us a lot in presenting this work in front of you.

Thankfully we ever remain

Mr. Jagtap Omkar Manikchand

Mr. Jagtap Somnath Anil

Mr. Jangid Chandraprakash Genaram

Certified that work incorporated in M.Sc. Dissertation entitled "Screening of endophytic microorganisms from leaves of medicinal plants" submitted by candidate Mr. Jagtap Omkar Manikchand was carried out under my guidance. Such material has been obtained from other sources has been duly in the dissertation.

Date: 3-5-2024

Place: Pune

Internal Examiner

Guide .

Ms. Jagtap Poonam Dnyaneshwar

We hereby declare that dissertation entitled, "Screening of endophytic microorganisms from leaves of medicinal plants" submitted by us for the degree of M.Sc. Microbiology (MBCP 243) Dissertation is the record of work carried out by us under guidance of Jagtap Poonam Dnyaneshwar and has not formed the basis for the award of any degree in this or any other university or other institution of higher learning.

We further declare that the material obtained from other sources has been duly acknowledged in the dissertation.

Students Sign: 3-5-2024

Mr. Jagtap Omkar Manikchand

Date: 3-5-24.

lage

Guide

Ms. Jagtap Poonam Dnyaneshwar Department of Microbiology, Annasaheb Magar Mahavidyalaya, Hadapsar, Pune-28.

Internal Examiner

## Abstract

Endophytic bacteria and fungi are microorganisms that live inside plant tissues without causing any harm to the host. Endophytes that are known to have several health benefits. In this study, we isolated and characterized endophytic bacteria from different plants. The bacterial isolates were identified by morphological and biochemical characters were found to belong to different genera such as Micrococcus spp. and Sporosarcina spp. These plant were collected from different locations as Loni Kalbhor, Hadapsar, Nhavi Sandas for the proper study of biodiversity of endophytic organisms. The isolates were screened for their ability to produce bioactive compounds such as antibiotic, enzymes and plant growth promoting substance.

The results showed that some of the isolates exhibited antimicrobial activity. Our findings suggest that endophytic bacteria and fungi from different plants have the potential to be used as biocontrol agents and plants growth promoters in agriculture. Secondary Metabolites produced by endophytic bacteria and fungi from plants. Endophytic bacteria and fungi live and colonize in

plant tissues without causing disease to their plant host.

In this study, we have isolated and characterized endophytic bacteria and fungi from different plants. A total of 2 bacterial and 5 fungal strains were isolated from 7 plant samples. The results showed that the endophytic bacteria and fungi belonged to various genera, including Micrococcus, Sporosarcina, Phyllosticta, Aspergillus. Furthermore, the isolates exhibited diverse functional traits such as nitrogen fixation, phosphate solubilization, plant growth promoting activities and anti-microbial activity. The findings of this study suggest that endophytic bacteria and fungi from plants have great potential for use in agriculture as biofertilizers and biocontrol agents.

### Guide

Ms. Jagtap Poonam Dnyaneshwar

### Students Name

- 1) Mr. Jagtap Omkar Manikchand
- 2) Mr. Jagtap Somnath Anil
- 3) Mr. Jangid Chandraprakash Genaram

### "Screening of Endophytic microorganisms from leaves of medicinal plants"

Dissertation Submitted To



For partial fulfillment toward the degree of Master of science (Microbiology)

### Submitted by

Mr. Jagtap Omkar Manikchand

Mr. Jagtap Somnath Anil

Mr. Jangid Chandraprakash Genaram

Under the Guidance of

Ms. Jagtap Poonam Dnyaneshwar



Department of Microbiology, Annasaheb Magar Mahavidyalaya, Hadapsar, Pune-28 2023-2024

### Acknowledgement

We Express our deep gratitude to our project guide Jagtap Poonam Dnyaneshwar, Department of microbiology, Annasaheb Magar College for her constant inspiration, timely counseling admirable guidance of the work carried out in this project. We would like to express our gratitude towards Dr Neha Nitin Patil, Head, Department of microbiology, Annasaheb Magar College for her inspiring guidance.

We express our thanks to faculty of microbiology Department, Dr. Khisti.U.V., Dr. Shinde S.R., Ms. Dhangar U.S., Ms. Jagtap P.D., Ms. Sherkar S.D., Ms. Borade U.B., and Ms. Kamashetty A.O from Annashaeb Magar Mahavidhyalaya, for their support to complete my project work.

Our unequivocal sincere thanks to Mr. Jedhe S., Mr. Shinde S.D., for their cooperation during the course of Dissertation. We would like to express our gratitude towards all our friends for their moral support and cooperation. We express our deep sense of gratitude towards our parents and our family members.

We apologize for those people whose names are missed out inadvertently, but helped us a lot in presenting this work in front of you.

Thankfully we ever remain

Mr. Jagtap Omkar Manikchand

Mr. Jagtap Somnath Anil

Mr. Jangid Chandraprakash Genaram

Certified that work incorporated in M.Sc. Dissertation entitled "Screening of endophytic microorganisms from leaves of medicinal plants" submitted by candidate Mr. Jagtap Somnath Anil was carried out under my guidance. Such material has been obtained from other sources has been duly in the dissertation.

Date: 3-5-2024

Place: Pune

Internal Evaminer

Guide

Ms. Jagtap Poonam Dnyaneshwar

We hereby declare that dissertation entitled, "Screening of endophytic microorganisms from leaves of medicinal plants" submitted by us for the degree of M.Sc. Microbiology (MBCP 243) Dissertation is the record of work carried out by us under guidance of Jagtap Poonam Dnyaneshwar and has not formed the basis for the award of any degree in this or any other university or other institution of higher learning.

We further declare that the material obtained from other sources has been duly acknowledged in the dissertation.

#### Students Sign:

Mr. Jagtap Somnath Anil

Date: 3-5-2024

Guide

Ms. Jagtap Poonam Dnyaneshwar Department of Microbiology, Annasaheb Magar Mahavidyalaya, Hadapsar, Pune-28.

**Internal Examiner** 

#### **Abstract**

Endophytic bacteria and fungi are microorganisms that live inside plant tissues without causing any harm to the host. Endophytes that are known to have several health benefits. In this study, we isolated and characterized endophytic bacteria from different plants. The bacterial isolates were identified by morphological and biochemical characters were found to belong to different genera such as *Micrococcus spp. and Sporosarcina spp.* These plant were collected from different locations as Loni Kalbhor, Hadapsar, Nhavi Sandas for the proper study of biodiversity of endophytic organisms. The isolates were screened for their ability to produce bioactive compounds such as antibiotic, enzymes and plant growth promoting substance.

The results showed that some of the isolates exhibited antimicrobial activity. Our findings suggest that endophytic bacteria and fungi from different plants have the potential to be used as biocontrol agents and plants growth promoters in agriculture. Secondary Metabolites produced by endophytic bacteria and fungi from plants. Endophytic bacteria and fungi live and colonize in

plant tissues without causing disease to their plant host.

In this study, we have isolated and characterized endophytic bacteria and fungi from different plants. A total of 2 bacterial and 5 fungal strains were isolated from 7 plant samples. The results showed that the endophytic bacteria and fungi belonged to various genera, including *Micrococcus, Sporosarcina, Phyllosticta, Aspergillus*. Furthermore, the isolates exhibited diverse functional traits such as nitrogen fixation, phosphate solubilization, plant growth promoting activities and anti-microbial activity. The findings of this study suggest that endophytic bacteria and fungi from plants have great potential for use in agriculture as biofertilizers and biocontrol agents.

Guide

Ms. Jagtap Poonam Dnyaneshwar

#### Students Name

- 1) Mr. Jagtap Omkar Manikchand
- 2) Mr. Jagtap Somnath Anil
- 3) Mr. Jangid Chandraprakash Genaram

### "Screening of Endophytic microorganisms from leaves of medicinal plants"

Dissertation Submitted To



For partial fulfillment toward the degree of Master of science (Microbiology)

### Submitted by

Mr. Jagtap Omkar Manikchand

Mr. Jagtap Somnath Anil

Mr. Jangid Chandraprakash Genaram

Under the Guidance of

Ms. Jagtap Poonam Dnyaneshwar



Department of Microbiology, Annasaheb Magar Mahavidyalaya, Hadapsar, Pune-28 2023-2024 Acknowledgement

We Express our deep gratitude to our project guide Jagtap Poonam Dnyaneshwar,

Department of microbiology, Annasaheb Magar College for her constant inspiration, timely

counseling admirable guidance of the work carried out in this project. We would like to express

our gratitude towards Dr Neha Nitin Patil, Head, Department of microbiology, Annasaheb Magar

College for her inspiring guidance.

We express our thanks to faculty of microbiology Department, Dr. Khisti.U.V., Dr.

Shinde S.R., Ms. Dhangar U.S., Ms. Jagtap P.D., Ms. Sherkar S.D., Ms. Borade U.B., and Ms.

Kamashetty A.O from Annashaeb Magar Mahavidhyalaya, for their support to complete my

project work.

Our unequivocal sincere thanks to Mr. Jedhe S., Mr. Shinde S.D., for their cooperation

during the course of Dissertation. We would like to express our gratitude towards all our friends

for their moral support and cooperation. We express our deep sense of gratitude towards our

parents and our family members.

We apologize for those people whose names are missed out inadvertently, but helped us

a lot in presenting this work in front of you.

Thankfully we ever remain

Mr. Jagtap Omkar Manikchand

Mr. Jagtap Somnath Anil

Mr. Jangid Chandraprakash Genaram

2

Certificate of the Guide  Certified that work incorporated in M.Sc. Dissertation entitled "Screening of endophytic microorganisms from leaves of medicinal plants" submitted by candidate Mr. Jagtap Omkar Manikchand was carried out under my guidance. Such material has been obtained from other sources has been duly in the dissertation.		
Date:	Guide	
Place: Pune	Ms. Jagtap Poonam Dnyaneshwar	
Internal Examiner	External Examiner	

of

	·
endophytic microorganisms from leaves	d in M.Sc. Dissertation entitled "Screening of of medicinal plants" submitted by candidate Mr. my guidance. Such material has been obtained from on.
Date:	Guide
Place: Pune	Ms. Jagtap Poonam Dnyaneshwar
Internal Examiner	External Examiner

·	v	
Certified that work incorporated in M.Sc. Dissertation entitled "Screening of endophytic microorganisms from leaves of medicinal plants" submitted by candidate Mr Jangid Chandraprakash Genaram was carried out under my guidance. Such material has been obtained from other sources has been duly in the dissertation.		
Date:	Guide	
Place: Pune	Ms. Jagtap Poonam Dnyaneshwar	
Internal Examiner	External Examiner	

We hereby declare that dissertation entitled, "Screening of endophytic microorganisms from leaves of medicinal plants" submitted by us for the degree of M.Sc. Microbiology (MBCP 243) Dissertation is the record of work carried out by us under guidance of Jagtap Poonam Dnyaneshwar and has not formed the basis for the award of any degree in this or any other university or other institution of higher learning.

We further declare that the material obtained from other sources has been duly acknowledged in the dissertation.

### Students Sign:

Mr. Jagtap Omkar Manikchand

Date:

Guide

Ms. Jagtap Poonam Dnyaneshwar Department of Microbiology, Annasaheb Magar Mahavidyalaya, Hadapsar, Pune-28.

**Internal Examiner** 

We hereby declare that dissertation entitled, "Screening of endophytic microorganisms from leaves of medicinal plants" submitted by us for the degree of M.Sc. Microbiology (MBCP 243) Dissertation is the record of work carried out by us under guidance of Jagtap Poonam Dnyaneshwar and has not formed the basis for the award of any degree in this or any other university or other institution of higher learning.

We further declare that the material obtained from other sources has been duly acknowledged in the dissertation.

Students Sign:

Mr. Jagtap Somnath Anil

Date:

Guide

Ms. Jagtap Poonam Dnyaneshwar Department of Microbiology, Annasaheb Magar Mahavidyalaya, Hadapsar, Pune-28.

**Internal Examiner** 

We hereby declare that dissertation entitled, "Screening of endophytic microorganisms from leaves of medicinal plants" submitted by us for the degree of M.Sc. Microbiology (MBCP 243) Dissertation is the record of work carried out by us under guidance of Jagtap Poonam Dnyaneshwar and has not formed the basis for the award of any degree in this or any other university or other institution of higher learning.

We further declare that the material obtained from other sources has been duly acknowledged in the dissertation.

### Students Sign:

Mr. Jangid Chandraprakash Genaram

Date:

Guide

Ms. Jagtap Poonam Dnyaneshwar Department of Microbiology, Annasaheb Magar Mahavidyalaya, Hadapsar, Pune-28.

**Internal Examiner** 

#### **Abstract**

Endophytic bacteria and fungi are microorganisms that live inside plant tissues without causing any harm to the host. Endophytes that are known to have several health benefits. In this study, we isolated and characterized endophytic bacteria from different plants. The bacterial isolates were identified by morphological and biochemical characters were found to belong to different genera such as *Micrococcus spp. and Sporosarcina spp.* These plant were collected from different locations as Loni Kalbhor, Hadapsar, Nhavi Sandas for the proper study of biodiversity of endophytic organisms. The isolates were screened for their ability to produce bioactive compounds such as antibiotic, enzymes and plant growth promoting substance.

The results showed that some of the isolates exhibited antimicrobial activity. Our findings suggest that endophytic bacteria and fungi from different plants have the potential to be used as biocontrol agents and plants growth promoters in agriculture. Secondary Metabolites produced by endophytic bacteria and fungi from plants. Endophytic bacteria and fungi live and colonize in plant tissues without causing disease to their plant host.

In this study, we have isolated and characterized endophytic bacteria and fungi from different plants. A total of 2 bacterial and 5 fungal strains were isolated from 7 plant samples. The results showed that the endophytic bacteria and fungi belonged to various genera, including *Micrococcus, Sporosarcina, Phyllosticta, Aspergillus*. Furthermore, the isolates exhibited diverse functional traits such as nitrogen fixation, phosphate solubilization, plant growth promoting activities and anti-microbial activity. The findings of this study suggest that endophytic bacteria and fungi from plants have great potential for use in agriculture as biofertilizers and biocontrol agents.

Guide

Ms. Jagtap Poonam Dnyaneshwar

Students Name

- 1) Mr. Jagtap Omkar Manikchand
- 2) Mr. Jagtap Somnath Anil
- 3) Mr. Jangid Chandraprakash Genaram

"Isolation, Identification and Characterization of endophytic organisms isolated from leaves of multiple medicinal herbs"

Dissertation Submitted To



For partial fulfillment towards the degree of Master of science (Microbiology)

### Submitted by

Mr. Farakte Pranav Ravindra Mr. Sadambar Bhavesh Tukaram

Under the Guidance of

Ms. Jagtap Poonam Dnyaneshwar



Department of Microbiology, Annasaheb Magar Mahavidyalaya, Hadapsar, Pune-411028 2023-2024

### Acknowledgement

We Express our deep gratitude to our project guide Jagtap Poonam Dnyaneshwar, department of microbiology, Annasaheb Magar College for her constant inspiration, timely counseling admirable guidance of the work carried out in this project. We would like to express our gratitude towards Dr Neha Nitin Patil, Head, department of microbiology, Annasaheb Magar College for her inspiring guidance.

We express our thanks to faculty of Microbiology Department, Dr. Khisti. U. V., Dr. Shinde S. R., Ms. Waghmode M. S., Ms. Dhangar U.S., Ms. Jagtap P. D., Ms. Sherkar S. D., Ms. Borade U.B., Ms. Kamashetty A. O. from Annashaeb Magar Mahavidhyalaya, for their support to complete my project work.

Our unequivocal sincere thanks to Mr. Jedhe S., Mr. Shinde S.D. for their cooperation during the course of Dissertation. We would like to express our gratitude towards all our friends for their moral support and cooperation. We express our deep sense of gratitude towards our parents and our family members.

We apologize for those people whose names are missed out inadvertently, but helped us a lot in presenting this work in front of you.

Thankfully we ever remain,

Mr. Farakte Pranav Ravindra Mr. Sadambar Bhavesh Tukaram

2

Certified that the work incorporated in M.sc dissertation entitled "Isolation, Identification and Characterization of endophytic organism isolated from leaves of multiple medicinal herbs" submitted by candidate Mr. Sadambar Bhavesh Tukaram was carried out under my guidance. Such material has been obtained from other sources has been duly in the dissertation.

Date: 03-05-2024

Place: Pune

Internal Examiner

Guide

Ms. Jagtap Poonam Dnyaneshwar

### Declaration by the Candidate

We hereby declare that dissertation estitled, "Isolation, Identification and Characterization of endophytic organism isolated from leaves of multiple medicinal herbs" submitted by us for the degree of M. Sc is the record of work carried out by us under guidance of Jagtap Poenam Doymeshwar and has not formed the basis for the award of any degree in this or any other university or other institution of higher learnings.

We further declare that the material obtained from other sources has been duly acknowledged in the dissertation.

Students Sign:

Mr. Sadambar Bhavesh Tukaram

Date:

Guide

Ms. Jagtap Poonam Dayaneshwar Department of Microbiology, Annasaheb Magar Mahavidyalaya, Hadapsar, Punc-28.

Internal Examiner

## Abstract

Endophytic bacteria and fungi are microorganisms that live inside plant tissues without causing any harm to the host. Endophyte that is known to have several health benefits. This study was conducted with the aim to isolate and identify endophytic bacteria from medicinal plants. In this study, we isolated and characterized endophytic bacteria and fungi from leaves of Kalanchoe Pinnata, Mentha Piperita, Piper Betle Ocimum sanctum. These plant were collected from different locations as Loni Kalbhor, Hadapsar, Kolhapur region for the proper study of biodiversity of endophytic organisms.

Isolation of endophytes was done on PDA and characterized on the basis of morphological and biochemical characteristics. A total 3 bacterial and 1 fungal endophytes were obtained from of Kalanchoe Pinnata, Mentha Piperita, Piper Retle, Ocimum sanctum.

The results showed that some of the isolates exhibited antimicrobial activity. Our findings suggest that endophytic bacteria and fungi from Kalanchoe Pinnata, Mentha Piperita, Piper Betle, Ocimum sanctum have the potential to be used as biocontrol agents in agriculture. Secondary Metabolites produced by endophytic bacteria and fungi from plants i.e. saponins, tannin, alkaloids, flavonoids and steroids. Endophytic bacteria and fungi live and colonize in plant tissues without

In this study, we have isolated and characterized endophytic bacteria and fungi from different plants. A total of 3 bacterial and 1 fungal strain were isolated from 4 plant samples. The results showed that the endophytic bacteria and fungi may belonged to various genera, including Pseudomonas, Aspergillus and Arthrobacter spp. Furthermore, the isolates exhibited diverse functional traits such as nitrogen fixation, oxidase reduction, activities and anti-microbial activity. The findings of this study suggest that endophytic bacteria and fungi from plants have great potential for use in agriculture as biofertilizers and biocontrol agents.

Guide

Ms. Jagtap Poonam Dnyaneshwar

Students Name:

Mr. Farakte Pranav Ravindra Mr. Sadambar Bhavesh Tukaram



# "Isolation, Identification and Characterization of endophytic organisms isolated from leaves of multiple medicinal herbs"

Dissertation Submitted To



For partial fulfillment towards the degree of Master of science (Microbiology)

#### Submitted by

Mr. Farakte Pranav Ravindra Mr. Sadambar Bhavesh Tukaram

#### Under the Guidance of

Ms. Jagtap Poonam Dnyaneshwar



Department of Microbiology, Annasaheb Magar Mahavidyalaya, Hadapsar, Pune-411028 2023-2024

#### Acknowledgement

We Express our deep gratitude to our project guide Jagtap Poonam Dnyaneshwar, department of microbiology, Annasaheb Magar College for her constant inspiration, timely counseling admirable guidance of the work carried out in this project. We would like to express our gratitude towards Dr Neha Nitin Patil, Head, department of microbiology, Annasaheb Magar College for her inspiring guidance.

We express our thanks to faculty of Microbiology Department, Dr. Khisti. U. V., Dr. Shinde S. R., Ms. Waghmode M. S., Ms. Dhangar U.S., Ms. Jagtap P. D., Ms. Sherkar S. D., Ms. Borade U.B., Ms. Kamashetty A. O. from Annashaeb Magar Mahavidhyalaya, for their support to complete my project work.

Our unequivocal sincere thanks to Mr. Jedhe S., Mr. Shinde S.D. for their cooperation during the course of Dissertation. We would like to express our gratitude towards all our friends for their moral support and cooperation. We express our deep sense of gratitude towards our parents and our family members.

We apologize for those people whose names are missed out inadvertently, but helped us a lot in presenting this work in front of you.

Thankfully we ever remain,

Mr. Farakte Pranav Ravindra Mr. Sadambar Bhavesh Tukaram

#### Certificate of the Guide

Certified that the work incorporated in M.sc dissertation entitled "Isolation, Identification and Characterization of endophytic organism isolated from leaves of multiple medicinal herbs" submitted by candidate Mr. Farakte Pranav Ravindra was carried out under my guidance. Such material has been obtained from other sources has been duly in the dissertation.

Date: 3/05/2024

Place: Pune

Internal Examiner

Guide

Ms. Jagtap Poonam Dnyaneshwar

## Declaration by the Candidate

We hereby declare that dissertation entitled, "Isolation, Identification and Characterization of endophytic organism isolated from leaves of multiple medicinal herbs" submitted by us for the degree of M. Sc is the record of work carried out by us under guidance of Jagtap Poonam Dnyaneshwar and has not formed the basis for the award of any degree in this or any other university or other institution of higher learnings.

We further declare that the material obtained from other sources has been duly acknowledged in the dissertation.

Students Sign:

Mr. Farakte Pranav Ravindra

Date: 03/05/2024

Guide Guide

Ms. Jagtap Poonam Dnyaneshwar Department of Microbiology, Annasaheb Magar Mahavidyalaya, Hadapsar, Pune-28.

Internal Examiner

**External Examiner** 

#### Abstract

Endophytic bacteria and fungi are microorganisms that live inside plant tissues without conducted with the aim to isolate and identify endophytic bacteria from medicinal plants. This study was isolated and characterized endophytic bacteria and fungi from leaves of Kalanchoe Pinnata, Mentha Kalbhor, Hadapsar, Kolhapur region for the proper study of biodiversity of endophytic organisms. Isolation of endophytes was down and surface sterilized

Isolation of endophytes was done on PDA and characterized on the basis of morphological and biochemical characteristics. A total 3 bacterial and 1 fungal endophytes were obtained from of Kalanchoe Pinnata, Mentha Piperita, Piper Betle, Ocimum sanctum.

The results showed that some of the isolates exhibited antimicrobial activity. Our findings suggest that endophytic bacteria and fungi from Kalanchoe Pinnata, Mentha Piperita, Piper Betle, Metabolites produced by endophytic bacteria and fungi from plants i.e. saponins, tannin, alkaloids, causing disease to their plant host.

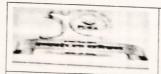
In this study, we have isolated and characterized endophytic bacteria and fungi from different plants. A total of 3 bacterial and 1 fungal strain were isolated from 4 plant samples. The results showed that the endophytic bacteria and fungi may belonged to various genera, including Pseudomonas, Aspergillus and Arthrobacter spp. Furthermore, the isolates exhibited diverse functional traits such as nitrogen fixation, oxidase reduction, activities and anti-microbial activity. The findings of this study suggest that endophytic bacteria and fungi from plants have great potential for use in agriculture as biofertilizers and biocontrol agents.

#### Guide

Ms. Jagtap Poonam Dnyaneshwar

#### **Students Name:**

Mr. Farakte Pranav Ravindra Mr. Sadambar Bhavesh Tukaram



#### Pune District Education Association's Annasaheb Magar Mahavidyalaya, Hadapsar, Pune-28.



#### **Activity Report**

Name of Department:	Computer Science	Academic Year: 2023-24	Name of Coordinator: Dr. A. B. Nimbalkar
Name of the Activity:	Placement Activity fo	r under graduate students	by WIT Solutions

## 1. Brief information about the Activity:

Topic	Campus Drive for TYBSc(C.S), TYBCA(Sci) and TYBVoc(S.D)
61.	Students.(internship)
Objectives	Student can get live project experience.
Methodology	Online training for selected student on various technologies.
Detail Report of Activity	Enclosure sheet.

#### 2. Proofs and Documents Submitted:

Documents	Yes/No	Documents	Yes/No
Detail Report of Activity	Yes	Activity Photos(Geotagged)	Yes
Notice	Yes	News Published	Yes(on college Website)
Invitation and Thank giving Letters	No	Participant Certificate(Specimen)	Yes(Offer Letter)
Attendance of Participants	Yes	Feedback Forms	No

Signature of

Signature of HOD

Department of Computer Serences Coordinator Annaseheb Maga Mahevidyalava

Hadapsar, Pune-411 028

Signature of IQAC Coordinator

VICE IRRIBICIPAL
Annasaheb Magar Mahavidyalaya Hadapsar, Pune-411028.

#### 3. For IQAC Use Only:

IQAC File NO	IQAC Document No	Criteria/Metric no

#### Pune District Education Association's

## Annasaheb Magar Mahavidyalaya Hadapsar, Pune-28

#### **Computer Science Department**

#### Report On Placement Activity by Winner IT Solutions

Department of Computer Science organized a placement activity for under graduate students with the collaboration of WIT Solution on 26/08/2023. This activity conducted in computer science department.

College signed MOU with WIT solutions. Under this MOU activity we conducted campus placement drive. This unique activity helpful for students to work on live project. Mr. Ganesh Hargude CEO of WIT solutions is our prominent alumni.

WIT provides students with significant skills and practical knowledge and motivates them to become a professional and successful developer. The students can select their career in different work environments.

total 03 students were appeared to the aptitude test. Lest vias bised on logical reasoning, technical skills likes Web Technology, Object Oriented Concepts and SQL. The students who cleared the test goes for technical interview.

This activity was conducted under the guidance of Dr. Mulay P. P (Vice Principal)., Prof More R.N (H.O.D. Computer science dept.), Dr. A. B. Nimbalkar (Placement Co-ordinator).

All the staff from Computer Science Dept., was involved in this activity.

Signature of Coordinator

Mean Signature of HOSeences
Department of Computer Sciences
Annacaheb Maga Mahavhiyalaya
Hadapsar, Pune-411 028

VICE PRINGIPAL Annasaheb Magar Mahavidyalaya Hadapsar, Pune-411028.

#### Pune District Education Association's Annasaheb Magar Mahavidyalaya, Hadapsar, Pune – 28 Department of Computer Science

25-08-2023

#### **Student Notice**

Students of T.Y.B.Sc.(C.S.), T.Y.B.C.A.(Sci.) and T.Y.B.Voc.(S.D.) are hereby informed that campus placement activitivity of Winners IT Solutions will be conducted on 26<sup>th</sup> August 2023 at 9.30 am. So, all students should present in Shivaji Hall at 9.15 am.

Attendance is compulsory.

Placement Co-ordinator

25, 8, 2023

H.O.D.

Department of Computer Serences

Annasaheb Maga Mahavittyalaya

Hadapsar, Pune-411 028

# Computer Science Department

## **Campus Placement Test**

Company Name: Winner IT Solutions

Time: 9.30 to 11.00



Date: 26/08/2023

Sr.	9.30 to 11.00  Student Name	Mobile No.	Class	Sign
No.	Student rame			
	al Ibara Parilla Paiendra	9309057546	TYBOS (B)	\$
1.	Dhamdhete Prajkta Rajendra	7507130519	TYBCS (A)	SK
2.	Khote Sonali Vishwanath	8208048390	TYB(S(A)	Mangalit
3.	Mundhe Manjali shivaji	9373579413	TYB (SCA)	fancing
4	Gailwad Tanaya Ganpat	7741051325	TYBIS(A)	Acidhar
5.	Jadhar Apurra Rupesh Jakhande siddhi Ganesh	8379838585	TYB(S(B)	Charle
6 .		973039 6170	TYBCS (A)	thutg
7.	Wable Shueta Arvind	7498007478	TyBCS(A)	(Deallar
8.	Jadhar Sejal Manohar	90 226 7 28 7 3	Types (A)	Rutuja.
9.	Kanble Rutya Vattatraya	9890734572	TYBCS (A)	Balubala
10.	Sharma Madhubala Ashok	9623902673	TYBCA	Nhawar
11.	Nhovale Yajana Sun'il		Tybes	Marti B.
12	Bhujbal Marsi pardurang.	9011216227	TyBes(A)	STOPAL
13.	Sagar Sakshi Tukaram		TYBC3(B)	Para
13.	Davare Payor Rahul	9881519339	TYBCS(B)	1
15.	Deorras Podyanna monthinga	8087248555	TyBCSCB)	Fends
16.	Zende Renuka Bilip.	898314050	TYBCS(B)	Kelai
17.	Desai sanika Ravindra		TyBCS(B)	Ru
18.	Sasane Renuko Sanjay	9529426968	TYBCS (B)	Pish
19.	Gaikard Vaishnavi Bhausaheb	9860615025	TYBCS(B)	
20	Akhode Disha Nivrutti	9021428276		1
21	shinde Ankila Manohar	7507871376	TYBUSCA	1
22	Atone swati Sachin	¥8217830651	TyBcs(A	1
2'	1	7823071512		
24		9665132101	TYBCSCE	
25	Rambage sonal suresh	914603275	7 54 MCS	Symbol
26	Shendkar Snehal Satish	911944 2886	TYBCS (B	
27	1 - O III O O III	9175132478	TYBCSCB	
28		9423211563	TYBCACSCI	
29	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	dra 9921193006	TYBES (	A) Seinui

	1.1			
30	Raut sakshi Ramchondo	8080396678	74. B C S(1	1) fokshi
31.	Tupe Vaishnavi Rajendra	9172525585		Aure
51.	Rathod Sushma visiaskuma	9822763616	TY. BESCA	32
33.	Duxoi Shruti Paramech nr.	8767937223	TY BSCEC. JLB	Lower.
34	- Lirange Ginia	8208107736	TYB(S(A)	ling
36.	+ Truge Damkuan rupesh	89850947577	T.YBCS(A)	Boidge.
	Daravorkar Kullya Sitarcam	9370130761	TY BCS (A)	Rutian
20	Shivarkay Shrufi Rahul	9322150032	TY.BCS (A)	But
39.	Moxe Sanskred K.	7559104876	TY. BCACSW	A) (355)
	TOURS OF THE PROPERTY OF THE P	8626084552	TYBSC (C.S)	-Am
41	Minaske sakshi khanderan	9763103860	TYBS((CS)	
42	Kshirsagar Shruti Sanjay	7758812374	TYBCA (SLI)	
		7822998394	TYBCA(Sci)	
46	Lonkar Sonali Anil	9860907506	TYB(A (sci)	Donkou
45	· Kad Divya santosh	8080459399	TYBCA(Sci)	Timaskad
46	Dimpal. Raju. Khude. Sushma Kalidas fartade	9112298270	TYBCA(Sc)	1. Ohude.
47	Sutar Vaishnavi Balaji			Carlyan
	say of varshiaut bary	9743921145	TyBCA (sci)	June
-			1-1	
1				,
-		14-3-27-17-17		
-				
-				
13	134047	4-23 - 101-21		
		er en betre	Alexante 3	
			2-11/1/11/11	
		1	46-21-17-1	
	N. C.			
		The second second	a soul	*
		* 1 * 1 * 1 * 1	NATY BE	

# Computer Science Department

# Campus Placement Test

Company Name: Winner IT Solutions



Date: 26/08/2023

Sr.	Student Name  Matil N			08/2023
No.	Student Name	Mobile No.	Class	Sign
7	Shinde Vishal Sakharam	8007 427 320	TY. BCA	विराज शिं
2	Salashish Sanjay Tapshalkar	8698601321	TY.BCA	A)-
3	Mandar Shashikant Mahamuni Jayesh Dayanard Yadal		TYBCA	Mare.
5.	Yashvardhan Vijay Phonate	9890885823 8830026996	TYBCA TYBCA	Troute
6.	Gove Jackin Suresh	9309259625	T. J. B.C.5	Sahing
7.	Bhokare Asinkya Sunil	9011134151	TY. B.C.S.	- syate
9	Ksharija Omkar Sunil	9763819998	T.Y.B.C.5	(P)
101	Tavare Aditya Mahendro	8623841936	T.Y.B.C.S.	Rodor
12)	Kadam sushant Laxman Pathan Zaheer Raju	9322012127	T.Y.B.C.S	co Polar
13	Ohone umesh Anlaush	7378367475	74.8.6.5	Ø .
14)		8080055423	TY.BCS	Gaurar
16	Jagdale Rutvik Govind	7499395921	T.Y.BCS	A G. Jogdole
17		9075704013	T.y.BCS	Graduskon
18)	Landage Pravin Bhagwart	7414964458	T.Y.BCS	feralage
19		7448096676	T.Y.BCS	15311
20)	Patil Prouthnesh Sanjay Telang Kalides Naynath	8379905501	T.Y. BCA	Belevil
22)	Bhosyle Tunnay Sundap	9405524523	T. Y. 3 CS	12
23		7666766436	T.Y.BCS	omker.
25		7028374726	TYBCS	ROW
26	) Shelar vikas Rajendra	7058488846	TYB65	Mala
28		9459284557587 7620789302	TYBCS	Home
29		9763656641	TYBCS	torque.

	7.1		TYBCS	KIZ
0	Deukare Kshilij Jilendra	9322456163	T.Y.BC.S.	Gold.
		8830385810	TYBUS.	Out.
31		9834909589	TYBCS	કાશાંદ
32	2004	7822972940	TUDGS	Haushad
33	sahir saklal popare	7667040789	TYBCS	Curit
34	Amari Hawhad Rahim	7618790968	TYBCS	-
35	Sumit Revanappa Bothai	8459935030	TYBCS	ARoye.
36	kale Ganesh marik	9921102468	TYBCS	
37	Rove Ajit Vasant	7249515056	TYBC5	Obharan
38	Bhosale Robit Kailas	9579396177	TYBCS	Jehner,
39	Shendikar Jayesh Sandcep	7377378	TYBCS	Quell ?
40	Sourably Sarray Jaras	7517424554	TYBCS	C. Balagi
41	Cuvala Balaji Ramulu	9067521842	TYBLA	P-P
42	Garkened Propod Laxman	9767-138585	TYBCA	Spegrach
43	Shegade Onkar Yuvray	9822480156		Bul
ии		8421512989	TYBCA	Panble.
45	Kample Prasad Ans!	7021424503	TYBCA	Dadey.
46		9356669525	TYBCA	
	1 Calil laik	9822026928	TYBCA	yester
47	VAZI MINI MIN			0
47	Kazi Sahil laik Outotale Dattatacy Dhanay)	8856074004	TY BBC	Datistra
1.8	Ornotale Dattatray Dhanay			Mishvente
49	Vishwase Abhijit Anil	8856074004	TY BBC	
49	Vishwase Abhijit Anil Juytap swapnil Poput	8856074004 853089/1 <b>8</b> 0	TYBSCLUS,	Mishvente
1.9 49 50 51	Vishwase Abhijit Anil  Jugtap swapnil Poput  Blhishek Sama Kakade	8856074004 853089/180 8010083106 7498424011	TYBSC(CS) TYBSC(CS) TYBCA	Mishvente
1,2 49 50 51	Vishwase Abhijit Anil Tuytap swapnil Poput Alhishek dama Kakade Akalh Satish Panchal	8856074004 8530891180 8010083106 7498424011 9021188938	TYBSC(CS) TYBSC(CS) TYBCA TYBCA	Selver Selver
1.0 49 50 51 52	Vishwase Abhijit Anil Juytap swapnii Poput Alhishek Sampa Kakade Akalh Satish Panchal. Shoulkh Amin Tutyub	8856074004 8530891180 8010083106 7498424011 9021188938 8767-91038 7875816269	TYBSC(CS) TYBSC(CS) TYBCA TYBCA TYBCA TYBCA	Mishwents Body St.
1.9 49 50 51 52 53	Vishwase Abhijit Anil Juytap swapnii Poput Alhishek Sama Kakade Akalh Satish Panchal. Shalkh Amih Tuttub Mahavudra 3. Dhavane	8856074004 8530891180 8010083106 7498424011 9021188938 8767-91038 7875816269	TYBSCLUS) TYBCA TYBCA TYBCA TYBCA TYBCS	Selver Selver
1.9 49 50 51 52 53 54	Vishwase Abhijit Anil  Jugtap swapnil Poput  Alhishek dama Kakade  Akalh Satuh Panchal.  Shoulkh Amin Tuttab  Mahayudra 3. Dhowane  Virhay dalve	8856074004 8530891180 8010083106 7498424011 9021188938 87-67-91038 7875816289 7057064707	TYBSCLUS) TYBCA TYBCA TYBCS TYBCS TYBCS TYBCS TYBCS	Selver Selver
1.9 49 50 51 52 53	Vishwase Abhijit Anil Taytap swapnil Polat Alhishek dama Kakade Akalh Satish Panchal Shoukh Amin Tuttab Mahayudra 3. Dhowane Virhay dalve	8856074004 8530891180 8010083106 7498424011 9021188938 8767-91038 7875816269	TYBSCLUS) TYBCA TYBCA TYBCA TYBCA TYBCS	Service of the servic
1.9 49 50 51 52 53 54	Vishwase Abhijit Anil  Jugtap swapnil Poput  Alhishek dama Kakade  Akalh Satuh Panchal.  Shoulkh Amin Tuttab  Mahayudra 3. Dhowane  Virhay dalve	8856074004 8530891180 8010083106 7498424011 9021188938 87-67-91038 7875816289 7057064707	TYBSCLUS) TYBCA TYBCA TYBCS TYBCS TYBCS TYBCS TYBCS	Service of the servic
1.9 49 50 51 52 53 54	Vishwase Abhijit Anil  Jugtap swapnil Poput  Alhishek dama Kakade  Akalh Satuh Panchal.  Shoulkh Amin Tuttab  Mahayudra 3. Dhowane  Virhay dalve	8856074004 8530891180 8010083106 7498424011 9021188938 87-67-91038 7875816289 7057064707	TYBSCLUS) TYBSCLUS) TYBCA TYBCA TYBCS TYBCS TYBCS TYBCS TYBCS	Service of the servic
1.9 49 50 51 52 53 54	Vishwase Abhijit Anil  Jugtap swapnil Poput  Alhishek dama Kakade  Akalh Satuh Panchal.  Shoulkh Amin Tuttab  Mahayudra 3. Dhowane  Virhay dalve	8856074004 8530891180 8010083106 749842 4011 9021188938 8767-91033 7875816269 7057064707 8110122542	TYBSCLUS) TYBSCLUS) TYBCA TYBCA TYBCS TYBCS TYBCS TYBCS TYBCS	Service of the servic
1.9 49 50 51 52 53 54	Vishwase Abhijit Anil  Jugtap swapnil Poput  Alhishek dama Kakade  Akalh Satuh Panchal.  Shoulkh Amin Tuttab  Mahayudra 3. Dhowane  Virhay dalve	8856074004 8530891180 8010083106 749842 4011 9021188938 8767-91033 7875816269 7057064707 8110122542	TYBSCLUS) TYBSCLUS) TYBCA TYBCA TYBCS TYBCS TYBCS TYBCS TYBCS	Service of the servic
1.9 49 50 51 52 53 54	Vishwase Abhijit Anil  Jugtap swapnil Poput  Alhishek dama Kakade  Akalh Satuh Panchal.  Shoulkh Amin Tuttab  Mahayudra 3. Dhowane  Virhay dalve	8856074004 8530891180 8010083106 749842 4011 9021188938 8767-91033 7875816269 7057064707 8110122542	TYBSCLUS) TYBSCLUS) TYBCA TYBCA TYBCS TYBCS TYBCS TYBCS TYBCS	Service of the servic
1.9 49 50 51 52 53 54	Vishwase Abhijit Anil  Jugtap swapnil Poput  Alhishek dama Kakade  Akalh Satuh Panchal.  Shoulkh Amin Tuttab  Mahayudra 3. Dhowane  Virhay dalve	8856074004 8530891180 8010083106 749842 4011 9021188938 8767-91033 7875816269 7057064707 8110122542	TYBSCLUS) TYBSCLUS) TYBCA TYBCA TYBCS TYBCS TYBCS TYBCS TYBCS	Service of the servic
1.9 49 50 51 52 53 54	Vishwase Abhijit Anil Juytap swapnii Poput Alhishek Sampa Kakade Akalh Satish Panchal. Shalkh Amih Tuttab Mahavudra 3. Dhavane Virhay dalve Pawar Atish Daharry	8856074004 8530891180 8010083106 7498424011 9021188938 8767-91033 7875816269 7057064707 8110122542	TYBSCL(S) TYBCA TYBCA TYBCS TYBCS TYBCS TYBCS TYBCS TYBCS	Service of the servic
1.9 49 50 51 52 53 54	Vishwase Abhijit Anil  Jaytap swapnij Poput  Alhishek danna Kakade  Akalh Satuh Panchal.  Shoukh Amin Tuttab  Mahayudra 3. Dhowane  Virhay dalve  Pawar Atish Dahalmy	8856074004 8530891180 8010083106 749842 4011 9021188938 8767-91033 7875816269 7057064707 8110122542	TYBSCLUS) TYBCA TYBCA TYBCS TYBCS TYBCS TYBCS TYBCS	Service of the servic

# Winners IT Solutions, Pune

20-Marks

1. Which of the following provides the ability to query information from the database and insert tuples into, delete tuples from, and modify tuples in the database?	2. Which of the following keys is generally used to represents the relationships between the tables?
a.DML(Data Manipulation Language) b.DDL(Data Definition Language) c.Query d.Relational Schema	a.Primary key b.Foreign key c.Secondary key d.None of the above
3. Which one of the following commands is used to modify a column inside a table?	4. Which join refers to join records from the write table that have no matching key in the left table are include in the result set:
a.Drop	
b.Update	a) Left outer join
c.Alter	b) Right outer join
d.Set	c) Full outer join

d) Half outer join

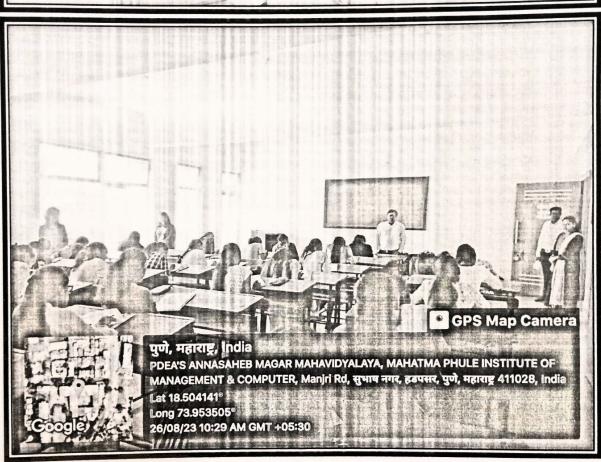
- 5. Which of the following is not a DDL command?
- a.TRUNCATE
- b.ALTER
- c.CREATE
- d.UPDATE

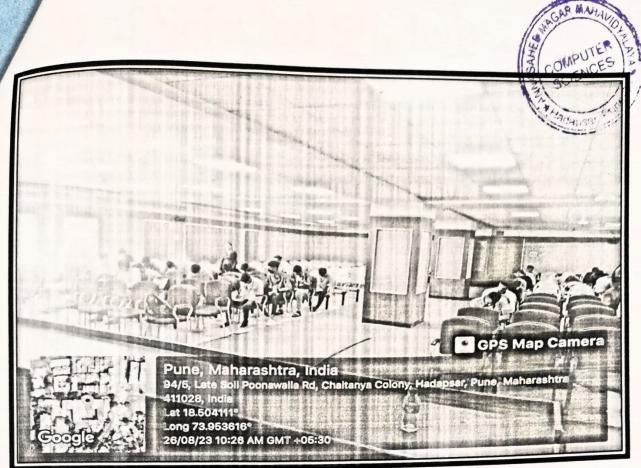
Please attempt any 3 Questions from the PHP CRUD Operations case study

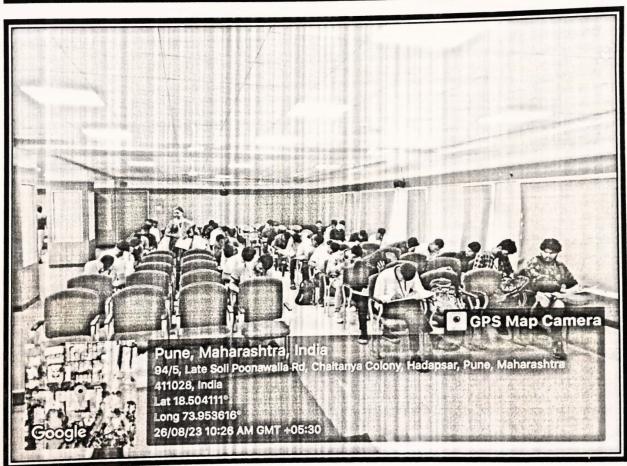
(3\*5=15 Marks)

- 1. Write a SQL script to create table design for students with name, address, marks?
- 2.Design a GUI screen for Student Details Form?
- 3. Write a code to creating the Config File?
- 4. Write a detailed php code for creating the add Page?
- 5. Write a detailed php code for creating the delete Page?
- 6. Write a detailed php code for creating the update Page?









# List of Selected Students:



No.	Developer Name		Email-id	Mobile No.	Class
	1 Kadam Nikhil	Tech-Tycoons	nikhilkadam2002@gmail.com	9356669525	
	2 Panchal Akash		akashpanchal2203@gmail.com	9021188938	
	3 Kakade Abhishek		abhishekkakade35@gmail.com	9922942828	TyBCA
	4 Khude Dimpal		dimpykhude123@gmail.com	9112298270	ТуВСА
	5 Fartade Sushma	Tech-Tycoons	Cheffartade@gmail.com	7498076343	TyBCA
	6 Shinde Vishal	Tech-Tycoons	vishalshinde4315@gmail.com	8007427320	ТуВСА
	7 Kad Divya	Tech-Tycoons	kaddivya4@gmail.com	8080459399	ТуВСА
	8 Lonkar Sonali	Tech-Tycoons	sonalilonkar65@gmail.com	9860907506	TyBCA
	9 Moze Sanskruti	Tech-Tycoons	mozesanskruti217@gmail.com	7559104876	_
	10 Singh Pratiksha	Tech-Tycoons	pratikshak2103@gmail.com	9423211563	_
	11 Gaikwad Tanaya	Tech-Army	gaikwadtanaya200216@gmail.com	937357941	_
	12 Guvala Balaji	Tech-Army	balajiguvala20@gmail.com	906752184	
	13 Rathod sushma	Tech-Army	rathodsushma9850@gmail.com	982276361	
	14 Ajane Swati	Tech-Army	swatiajane66@gmail.com	821783065	
	15 Bothgi Sumit	Tech-Army	sumitbothgi147@gmail.com	761879096	
	16 Shinde Ankita	Tech-Army	ankitashinde1005@gmail.com	750787137	_
	17 Taware Aditya	Tech-Army	adityatavare1996@gmail.com	830841908	
	18 Shiraskar Prakash	Tech-Army	prakashshiraskar2001@gmail.com	749802102	_
	19 Sharma Madhuba	la Tech-Army	madhubalasharma665@gmail.com	989073457	_
	20 Desai Sanika	Tech-Worriers	desaisanika700@gmail.com	898314050	-
	21 Pawar Atish	Tech-Worriers	atishpawar1193@gmail.com	80101225	
	22 Jarad Sourabh	Tech-Worriers	sourabhjarad09@gmail.com	75174245	_
	23 Jagtap Anushka	Tech-Worriers	THE RESERVE OF THE PARTY OF THE	91751324	_
	24 Gaikwad Vaishna	avi Tech-Worriers		98606150	_
	25 Akhade Disha	Tech-Worriers		90214282	_
	26 Sasane Renuka	Tech-Worriers		95294269	
1	27 Sawant Rushike	sh Tech-Worriers	rushikeshs239@gmail.com	70283747	726 TyBC