

## Certificate

This is to certify that **Ms. Khemalata Uttam Dharne** has finished all her research work in Department of Physics. She has completed all the formalities of our research Centre. Her Project is hereby forwarded to Gondwana University, Gadchiroli for the **Post Graduate Degree in Physics** award.

Date: 29/05/2023

Place: Chandrapur



**Urvashi P Manik**  
Head  
Department of Physics  
S.P College, Chandrapur



29/05/2023



**Dr. P. M. Katkar**  
Principal  
Sardar Patel Mahavidyalaya  
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Chandrapur

## CERTIFICATE

This is to certify that Mr. Amol Arvind Sonwane is a bonafied student of M.Sc. Sem. – IV of this college for the session of 2022-2023. He has completed this dissertations under the guidance of Dr. VarshaThakre on the project entitled of **“SYNTHESIS AND PHOTOLUMINESCENCE STUDY OF POTASSIUM MAGNESIUM PYROPHOSPHATE [K<sub>2</sub>MgP<sub>2</sub>O<sub>7</sub>] DOPED WITH Dy<sup>3+</sup>”**, Approved by the department.


This dissertation is being, submitted to Gondwana University, Gadchiroli in the partial fulfillment of the award of **MASTER OF SCIENCE IN PHYSICS**.

Place : Chandrapur

Date : 11-05-2023

  
**Urvashi P. Manik**  
Head  
Department of Physics  
S.P College, Chandrapur

  
28/05/2023

  
**Dr. P. M. Katkar**  
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**Sardar Patel Mahavidyalaya**  
Chandrapur

## CERTIFICATE

This is to certify that the project report on "SYNTHESIS AND PHOTOLUMINESCENCE STUDY OF  $\text{Ce}^{3+}$  & Na DOPED CALCIUM STRONTIUM SULFATE  $[\text{CaSr}(\text{SO}_4)_2:\text{Ce}^{3+}, \text{Na}]$ " is a bonafied work carrying out by Miss. Pranali Vivek Potdukhe student of M.Sc. Physics Department, during the academic year 2022-23, in partial fulfillment of the requirement for the award of the degree of **Master of Science in Physics** offered by **Gondwana University, Gadchiroli**. The project report has been approved as it satisfies the academic requirements in respect of project report prescribed for the Master of Degree Physics.

Place : Chandrapur

Date : 29/05/23



29/05/2023



Dr. P. Katkar Sir  
Principal  
SARDAR PATEL MAHAVIDYALAYA  
Principal  
Sardar Patel Mahavidyalaya  
Chandrapur

## CERTIFICATE

This is certify that Miss, Nutan Bhaurao Nikode, is a bonafied student of M.Sc. Sem-IV of this college for the session of 2022-2023. She has completed this dissertations under the guidance of Dr. Urvashi P. Manik on the project entitled of "A STUDY ON VOLMETRIC AND THERMO-ACOUSTIC PROPERTIES OF AMINOACETIC ACID IN AQUEOUS SOLUTION". Approved by the department. This dissertation is being submitted to Gondwana University, Gadchiroli in the partial fulfilment of the award of Master of Science in Physics.

Place: Chandrapur

Date: 9-5-2023



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29/05/2023



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### CERTIFICATE

This is to certify that miss Arti Manoj Muchlot, is a bonafied student of M.Sc. physics part-II (sem- IV) of this college for the session of 2022-2023. she has completed this dissertation under the guidance of Dr. Varsha Thakre on the project entitled of "SYNTHESIS AND PHOTOLUMINESCENCE STUDY OF  $Ce^{3+}$  DOPED  $[K_2MgP_2O_7]$ " approved by the department.

This dissertation is being submitted to Gondwana university Gadchiroli in the partial fulfillment of the award of a **MASTER OF SCIENCE IN PHYSICS.**

Place: Chandrapur

Date: 12/05/2023



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Head  
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28/05/2023



**Dr. P. Katkar**

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## CERTIFICATE

This is to certify that Miss. PRADNYA PRASHANT MESHAM is a bonafied student of M.Sc. Sem- 4 of this college for the session of 2022-2023. She has completed this dissertations under the guidance of Dr. Urvashi Manik on the project entitled of "PHYSICS BEHIND MUFFLE FURNANCE", Approved by the department.

This dissertation is being submitted to Gondwana University, Gadchiroli in the partial fulfilment of the award of MASTER OF SCIENCE IN PHYSICS.

Place: Chandrapur

Date 27/05/2023

  
29/05/2023

  
29/05/2023

  
Dr. P. M. Katkar

(Principal)  
Sardar Patel Mahavidyalaya  
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## CERTIFICATE

This is to certify that **Miss. Pratima P. Mandal**, is a bonafied student of M.Sc. Sem. – IV of this college for the session of 2022-2023. She has completed this dissertation under the guidance of **Dr. Varsha Thakare** on the project entitled of "SYNTHESIS AND PHOTOLUMINESCENCE STUDY OF  $\text{Sm}^{3+}$  DOPED  $[\text{SrAl}_2\text{O}_4]$ ", Approved by the department.


This dissertation is being submitted to Gondwana University, Gadchiroli in the partial fulfillment of the award of **MASTER OF SCIENCE IN PHYSICS**.

Place : Chandrapur

Date : 13/05/2023

  
**Urvashi P Manik**  
Head  
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29/05/2023

  
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## CERTIFICATE

This is to certify that Miss. Komal Santosh Deotale is a bonafide student of M.Sc. Sem IV of this college for the session of 2022-2023. He has completed this dissertations under the guidance of Dr. Varsha Thakre on the project entitled of "SYNTHESIS AND PHOTOLUMINESCENCE STUDY OF Sm<sup>3+</sup> DOPED [CaSrAl<sub>2</sub>O<sub>4</sub>] Approved by the department.

This dissertation is being submitted to Gondwana University, Gadchiroli in the partial fulfilment of the award of MASTER OF SCIENCE IN PHYSICS.

Place: Chandrapur

Date: 13/05/2023



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## CERTIFICATE

This is certifying that **Miss. Komal Shantaram Dhandre** is a bonafied student of M.Sc. Sem-IV of this college for the session of 2022-2023. She has completed this dissertation under the guidance of Dr. Urvashi P. Manik on the project entitled of **"STRUCTURAL STUDY ON INFLUENCE OF RARE EARTH IONS  $La^{3+}$  DOPING ON THE MAGNETIC PROPERTIES OF SPINEL Zn- Mg FERRITE** Approved by the department.

This dissertation is being submitted to Gondwana University, Gadchiroli in the Partial Fulfillment of the award of Master of Science in Physics.

Place - Chandrapur

Date- 29-05-2023



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## CERTIFICATE

This is certified that, Miss. Jasveer Kaur Hardev Singh Sandhu is a bonafied student of M.Sc. Sem-IV of this college for the session of 2021-2022. She has completed this dissertation under the guidance of Dr. Urvashi P. Manik on the project entitled of "A Study on Molecular Interaction between Nicotinamide (Vitamin B3) and Ascorbic Acid (Vitamin C) with Water at Different Temperature". Approved by the department. This dissertation is being submitted to Gondwana University, Gadechiroli in the partial fulfilment of the award of Master of Science in Physics.

Place: Chandrapur

Date: 09-08-23



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28/08/2023



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**Sardar Patel Mahavidyalaya**  
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## CERTIFICATE

This is to certify that Mr. Pratik Devidas Mohurle is a bonafied student of M.Sc. Sem-IV of this college for the session of 2022-2023. He has completed this dissertations under the guidance of Dr. Urvashi Manik on the project entitled of "INVESTIGATION OF HEAT TRANSFER AND MASS TRANSFER PARAMETERS IN A HOT AIR OVEN", Approved by the department.

This dissertation is being submitted to Gondwana University, Gadchiroli in the partial fulfillment of the award of MASTER OF SCIENCE IN PHYSICS.

Place : Chandrapur

Date : 27/05/2023



**Dr. Urvashi P. Manik**

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**Urvashi P Manik**

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## CERTIFICATE

This is to certify that Miss. Pooja Charandas Durge, is a Bonafede student of M.Sc. Sem IV of this college for the session of 2022-2023. She has completed this dissertation under the guidance of prof. Urvashi P. Manik on the project entitled of "Ultrasonic Characterization on Glucose in Aqueous Vitamin C Solution" Approved by the department.

This dissertation is being submitted to Gondwana University, Gadchiroli in the partial fulfilment of the award of Master of Science In Physics.

Place: Chandrapur

Date: 09-05-2023

  
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## CERTIFICATE

This is to certify that Mr. Kushal Santosh Ingale, is a bonafied student of M.Sc Physics part II (Sem-IV) of this college for the session of 2022-2023. He has completed this dissertation under the guidance of Dr. Urvashi P. Manik on the project entitled of "DESIGN AND FRABRICATED OF MUFFLE FURNACE".

This dissertation is being submitted to Gondwana University, Gadchiroli in the partial fulfillment of the award of MASTER OF SCIENCE IN PHYSICS.

Place :- Chandrapur

Date :- 27-05-2023



**Dr. Urvashi P. Manik**

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29/05/2023



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## CERTIFICATE

This is certifying that Miss. Shivani Purushottam Zade is a bonafied student of M.Sc. Sem-IV of this college for the session of 2022-2023. She has completed this dissertation under the guidance of Dr. Sanjay P. Ramteke on the project entitled of "STRUCTURAL AND FTIR SPECTROSCOPIC INVESTIGATION OF EFFECT OF RARE EARTH  $La^{3+}$  METAL DOPPING ON OF Zn-Mg FERRITE" Approved by the department.

This dissertation is being submitted to Gondwana University, Gadchiroli in the partial fulfillment of the award of Master of Science in Physics.

Place: Chandrapur

Date: 29-05-2023

  
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## CERTIFICATE

This is to certify that Miss. Monika Gautam Roy, is bonafied student of MSc. Physics parts III (Sem IV) of this college for the session of 2022-23. She has completed this dissertation under the guidance of Dr. Urvashi Manik on the project entitled of "DESIGN AND FABRICATION OF HOT AIR OVEN", approved by the department.


This dissertation is being submitted to Gondwana University, Gadchiroli in the partial fulfillment of the award of MASTER OF SCIENCE IN PHYSICS.

Place- Chandrapur

Date- 29/05/23

  
**Urvashi P Manik**  
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CERTIFICATE

This is certify that Gayatri Lalaji Ragit, is a bonafied student of M.Sc. Sem-IV of this college for the session of 2022-2023. She has completed this dissertations under the guidance of Dr. Urvashi P. Manik on the project entitled of " MOLECULAR INTERACTION BETWEEN ACETAMIDE AND SALT SOLUTION BY THERMO-ACOUSTICAL APPROACH". Approved by the department. This dissertation is being submitted to Gondwana University, Gadchiroli in the partial fulfilment of theaward of Master of Science in Physics

Place: Chandrapur

Date: 11/05/2023

  
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29/05/2023



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## CERTIFICATE

This is certifying that Miss. Asmita Ashok Borkar is a bonafied student of M.Sc. Sem-IV of this college for the session of 2022-2023. She has completed this dissertation under the guidance of Dr. Urvashi P. Manik on the project entitled of "MOLECULAR INTERACTION STUDIES IN BETWEEN AMINO ACIDS (Glycine) AND VITAMINS USING ULTRASONIC TECHNIQUE" approved by the department.

This dissertation is being submitted to Gondwana University, Gadchiroli in the partial fulfillment of the award of Master of Science in Physics.

Place - Chandrapur

Date - 9 - 05 - 2023

  
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CERTIFICATE

This is certified that, Miss. Chaitalee Ramesh Dange, is a bonafied student of M.Sc. Sem-IV of this college for the session of 2021-2022. She has completed this dissertation under the guidance of Dr. Urvashi P. Manik on the project entitled of "A Volumetric and Acoustical study to Explore Interaction between Acetamide and Electrolyte solution". Approved by the department. This dissertation is being submitted to Gondwana University, Gadchiroli in the partial fulfilment of the award of Master of Science in Physics.

Place: Chandrapur

Date: 09-05-2023



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## CERTIFICATE

This is certify that Miss. Rina R. Bangde, is a bonafied student of M.Sc. Sem-IV of this college for the session of 2022-2023, She has completed this dissertations under the guidance of Dr. Urvashi P. Manik on the project entitled of "A THERMO-ACOSTICAL INVESTIGATION AMNO ACID IN AQUAVAS KCl. SOLUTION", Approved by the department.

This dissertation is being submitted to Gondwana University, Gadchiroli in the partial fulfillment of the award of Master of Science in Physics.

**Place: Chandrapur**

**Date: 27/05/2023**



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Head  
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29/05/2023

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