

**RAJEEV GANDHI GOVT. P.G. COLLEGE AMBIKAPUR  
SURGUJA (C.G.)**

**"SEISMIC WAVES AND EARTHQUAKES AROUND THE WORLD"**



**DEPARTMENT OF PHYSICS**

**DISSERTATION**

Submitted in partial of the  
Requirement for the degree of  
**Master of Science In Physics**

Session- 2020-2021

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Rajiv Gandhi Govt. P.G.College  
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This is to certify that the Dissertation entitled "SEISMIC WAVES AND EARTHQUAKES" is a bonafire record of independent research work done by Deeksha Verma under my supervision during 2020-2021 submitted to the, Rajeev Gandhi Government P. G. Autonomous college, Ambikapur-497001, Surguja (C.G.) India in partial fulfillment for the award of the degree of M.Sc. Physics and that the dissertation has not previously formed the basis for the award of any other degree or title.



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# RAJEEV GANDHI GOVT. P.G. COLLEGE



## A DISSERTATION

*Entitled*

**'Study of microwave satellite for soil moisture estimation in Remote Sensing'**

*Submitted to the Department of Physics in partial fulfilment of the Requirement for the degree of Master of Science in Physics Session: 2020-2021*

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**estimation in Remote Sensing.”** is a bonfire record of independent research work done by **Durga Sharma** under my supervision during 2020-2021 submitted to the , Rajeev Gandhi Government P.G. Autonomous College, Ambikapur-497001, Sarguja (C.G.) India in partial fulfillment for the award of the degree of M.Sc. physics and that the dissertation has not previously formed the basis for the award of any other degree or other title.

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Place: - AMBIKAPUR

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# Rajeev Gandhi Govt. P.G. College



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30/11/21

**A Dissertation**

*entitled*

***“Study of superfluid properties of Helium and effective pinning energy in Neutron Star Crust”***

**submitted to the Department of Physics in partial fulfilment of the Requirement for the degree of**

***Master of science in Physics***

**Session:2020-2021**

***Under the supervision of:-***  
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**(Assist. Professor)**

***Submitted by:-***  
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AMBIKAPUR, SARGUJA, (C.G.)  
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This is to certify that the dissertation entitled "Study of superfluid properties of Helium-II and effective interacting pinning energy in Nuclear Star Crust." is a bonfire record of independent research work done by *HARLEEN BABRA* under my supervision during 2020-2021 submitted to the, Rajeev Gandhi Government P.G. Autonomous College, Ambikapur-497001, Surguja (C.G.) India in partial fulfillment for the award of the degree of M.Sc. physics and that the dissertation has not previously formed the basis for the award of any other degree or other title.




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Ambikapur, C. G.



Signature

Of the principal

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**RAJEEV GANDHI GOVT. P.G COLLEGE AMBIKAPUR**



**AMBIKAPUR SURGUJA (C.G)**

Session- 2020-21

**A Dissertation**

*Entitled*

**‘Study of Functionalities and Technologies of  
Quantum Internet’**

*Submitted to Department of Physics in partial fulfilment of the  
requirement of the degree of Masters of Science in Physics .*

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DEPARTMENT OF PHYSICS

M.SC. FOURTH SEMESTER

**A Dissertation**

**Entitled**

**"Plasma Physics"**

Submitted to the department of physics in partial  
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**Master of Science in Physics**

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**AMBIKAPUR SURGUJA CG**

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**A DISSERTATION**

**SESSION : – 2020-21**

**STUDY OF MICROWAVE REMOTE SENSING**

**Submitted To The Department Of Physics In Partial Fulfilment Of  
The Requirement For The Degree Of**

**MASTER OF SCIENCE IN PHYSICS**

**SUPERVISED BY**

H.O.D PHYSICS  
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India in partial fulfillment for the award of the degree of MSc. Physics and that the  
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# **Study of Microwaves in remote sensing**

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CHAPTER -5 Summary & Conclusion.

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**AMBIKAPUR SURGUJA (C.G)**

Session- 2020-21

**A Dissertation**

*Entitled*

**'STUDY OF ELECTROMAGNETIC RADIATION AND  
MICROWAVE TOWER RADIATION'**

*Submitted to Department of Physics in partial fulfilment of the  
requirement of the degree of Masters of Science in Physics .*

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RAJEEV GANDHI GOVT. P.G. COLLEGE AMBIKAPUR SURGUJA (C.G.)



DEPARTMENT OF PHYSICS

A DISSERTATION

entitled

STUDY OF TEMPERATURE DEPENDENT  
CHARACTERISTIC OF RECOIL FREE EMISSION FROM  
BOUND ATOMS IN SOLID

*Submitted in partial fulfilment of the*

*Requirement for the degree of*

*Master of Science in Physics*

Session: 2020-21

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Place:- Ambikapur

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# RAJEEV GANDHI GOVT. P.G. COLLEGE



## A DISSERTATION

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BEHIND THE UNIVERSE"**

Submitted to the Department of Physics in partial Fulfillment the  
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Master of Science in Physics  
Session 2020-2021

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A DISSERTATION

Entitled

"STUDY OF POWER ABSORPTION DEPENDENCE

AND

CAVITY LIFE TIME IN OPTICAL RESONATOR"

*Submitted in partial fulfillment of the*

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*Master of Science in Physics*

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AMBIKAPUR, SURGUJA, CHHATTISGARH

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This is to certify that the dissertation entitled “ **STUDY OF POWER ABSORPTION DEPENDENCE AND CAVITY LIFE TIME IN OPTICAL RESONATOR** ” is a bonafide record of independent research work done my supervision during 2020-2021 submitted to the Rajeev Gandhi Government P.G. Autonomous College, Ambikapur-497001, Surguja (C.G.) India in partial fulfillment for the award of the degree of M.Sc. Physics and that the dissertation has not previously formed the basis for the award of any other degree or title.



(Signature of the supervisor)

**Dr. M. K. MAURYA**

Designation- Assistant Professor

Department of Physics

**Dr. M. K. Maurya**  
Assistant Professor  
Department of Physics  
R.G. Govt. P.G. College Ambikapur



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**AMBIKAPUR SURGUJA (C.G)**

**Session:- 2020-21**

**A DISSERTATION**

*Entitled*

**‘Study of Synthesis of ZnO Quantum Dot  
and its Application as a Gas Sensor’**

*Submitted to Department of Physics in partial fulfilment of the  
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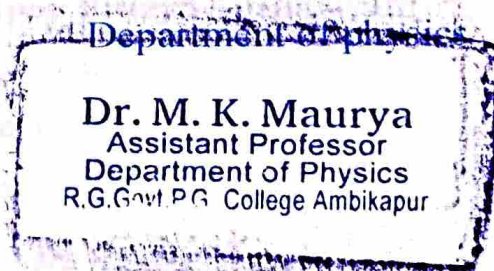
**RAJEEV GANDHI POST GRADUATE AUTONOMOUS COLLEGE,  
AMBIKAPUR (SURGUJA ,CHATTISGARH)**

This is to certify that **Pragya Kesharwani** has successfully completed the dissertation entitled, “**STUDY OF SYNTHESIS OF ZNO QUANTUM DOT AND ITS APPLICATION AS A GAS SENSOR**” for requirement of the degree of Master of Science in Physics during in the session 2020-21 under my supervision.

**(Dr. M.K. Maurya )**

Date: 18/11/21

Place:-Ambikapur



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**RAJEEV GANDHI GOVT. P.G. COLLEGE  
AMBIKAPUR**



**AMBIKAPUR SURGUJA (C.G)**

Session- 2020-21

**A Dissertation**

*Entitled*

**'STUDY OF NANOTECHNOLOGY AND ITS APPLICATIONS'**

*Submitted to Department of Physics in partial fulfilment of the  
requirement of the degree of Masters of Science in Physics .*

**Guided By:-**

**Dr. S.K. hrivastava**

Asst. Professor

(Deptt. Of Physics

RGGPG College Ambikapur)

**Submitted By:-**

**Pratham Baranwal**

M.Sc. Physics

4<sup>th</sup> Semester

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This is to certify that the Dissertation entitled "**Study of Nanotechnology and its application**" is a bonafire record of independent research work done by Pratham Baranwal under my supervision during 2020-2021 submitted to the, Rajeev Gandhi Government P. G. Autonomous college, Ambikapur-497001, Surguja (C.G.) India in partial fulfillment for the award of the degree of M.Sc. Physics and that the dissertation has not previously formed the basis for the award of any other degree or title.

  
(Signature of the supervisor)

**Dr. S. K. SHRIVASTAVA**

Designation- Professor

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**RAJEEV GANDHI GOVT. P.G COLLEGE AMBIKAPUR**



**AMBIKAPUR SURGUJA (C.G)**

Session- 2020-21

**A Dissertation**

*Entitled*

**'STUDY OF CHARACTERISTICS PROPERTIES OF  
TEMPERATURE DEPENDENCE SUPERCONDUCTING  
MATERIALS'**

*Submitted to Department of Physics in partial fulfilment of the  
requirement of the degree of Masters of Science in Physics .*

**Guided By:-**

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**“study of characteristics properties of temperature dependence superconducting materials ”** is a bonfire

record of independent research work done by **Preeti Baghel** under my supervision during 2020-2021 submitted to the , Rajeev Gandhi Government P.G. Autonomous College, Ambikapur-497001, Surguja (C.G.) India in partial fulfillment for the award of the degree of M.Sc. physics and that the dissertation has not previously formed the basis for the award of any other degree or other title.

  
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of the H.O.D. physics

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of the Principal

Date: - 18-11-2021

Place: - AMBIKAPUR.

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**RAJEEV GANDHI GOVT. P.G COLLEGE AMBIKAPUR**



**AMBIKAPUR SURGUJA (C.G)**

**DEPARTMENT OF PHYSICS**

**A DISSERTATION**

**Entitled**

**“Study of characteristics properties of injection laser  
threshold current in three level laser semiconducting  
materials.”**

*Submitted in partial fulfilment of the Requirement for the degree of **Master  
of science in Physics***

**Session: 2020-2021**

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Place: - AMBIKAPUR. ...18/...11./2021



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# RAJIV GANDHI GOVT. P.G. COLLEGE



AMBIKAPUR, DIST - SURGUJA (C.G.)

## DEPARTMENT OF PHYSICS

STUDY OF MICROWAVE DIELECTRIC BEHAVIOR OF SOIL

### DISSERTATION

Submitted in partial fulfillment of the  
requirement for the degree of  
Master of Science in Physics

Session : 2020-21

Supervisor

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Signature  
of the Principal

# Study Of Microwave Dielectric Behavior Of Soil

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# STUDY OF ABOUT BLACKHOLE IN UNIVERSE



## DISSERTATION

Submitted in partial of the requirement for the degree of

### Master of science in physics

Session -2020-21

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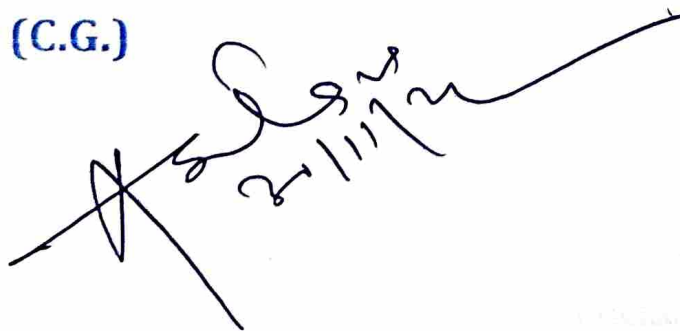
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Introduction

BASIC PRINCIPLE OF BLACK HOLES

CHARACTERISTIC OF BLACK HOLES

TRAPPED SURFACE

RINDLER SPACE TIME

ABRIF HISTORY OF BLACK HOLE GENERAL RELATIVITY

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**RAJEEV GANDHI GOVT. P.G COLLEGE AMBIKAPUR**



**AMBIKAPUR SURGUJA (C.G)**

Session- 2020-21

**A Dissertation**

*Entitled*

**‘STUDY OF INFLUENCE OF REFLECTIVITY &  
ABSORPTION STRENGTH OF MATERIALS ON QUALITY  
FACTOR ON OPTICAL RESONATOR ’**

*Submitted to Department of Physics in partial fulfilment of the  
requirement of the degree of Masters of Science in Physics .*

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This is to certify that the dissertation entitled  
**“study of influence of reflectivity & absorption strength of materials on quality factor on optical resonator .”** is a bonfire record of independent research work done by **yugeshwari** under my supervision during 2020-2021 submitted to the , Rajeev Gandhi Government P.G. Autonomous College, Ambikapur-497001, Surguja (C.G.) India in partial fulfillment for the award of the degree of M.Sc. physics and that the dissertation has not previously formed the basis for the award of any other degree or other title.

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Date 18.11.2021

. Place: - AMBIKAPUR

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