

# ABSORPTION SPECTRUM ANALYSIS OF PLANT PIGMENTS EXTRACTED FROM LAWSONIA INERMIS

Project report Submitted to the

**UNIVERSITY OF KERALA**

*In the partial fulfillment for the award of degree*

BACHELOR OF SCIENCE IN

PHYSICS

UNDER THE FACULTY OF SCIENCE

BY

NAME	REG.NO
ABHIRAMI R SEKHAR	23020118001
ABHISHEK G S	23020118002
ADITHYAN S	23020118003
AKSHAYA A S	23020118005
AMAL A NAIR	23020118006



POST GRADUATE AND RESEARCH DEPARTMENT OF PHYSICS

MAHATMA GANDHI COLLEGE

KESAVADASAPURAM 695004,

THIRUVANANTHAPURAM, INDIA

May 2023

# **STUDY OF VARIATION OF CURRENT USING A LDR**

Report submitted to the **UNIVERSITY OF KERALA** In partial  
fulfillment for the award of the degree of Bachelor of Science

In

**PHYSICS**

UNDER THE FACULTY OF SCIENCE

BY

ANJAI VINOD	(Reg.No: 23020118007)
ANJANA JOSE J	(Reg.No: 23020118008)
ANOOP S	(Reg.No: 23020118009)
APARNA J S	(Reg.No: 23020118010)
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DEPARTMENT OF PHYSICS

MAHATMA GANDHI COLLEGE

THIRUVANANTHAPURAM- 695004, INDIA

MAY 2023

# **STUDY OF VARIATION OF SURFACE TENSION WITH CONCENTRATION OF DETERGENTS**

Report submitted to the **UNIVERSITY OF KERALA** In partial  
fulfillment for the award of the degree of Bachelor of Science In

**PHYSICS**

**UNDER THE FACULTY OF SCIENCE**

**BY**

<b>ARYA M R</b>	<b>(Reg.No:23020118012)</b>
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<b>KARTHIKA S NAIR</b>	<b>(Reg.No: 23020118015)</b>
<b>LEKSHMI SURESH</b>	<b>(Reg.No: 23020118016)</b>
<b>MUJEEB RAHMAN</b>	<b>(Reg.No: 23020118017)</b>



**DEPARTMENT OF PHYSICS**  
**MAHATMA GANDHI COLLEGE**

# **EXPERIMENTAL DETERMINATION OF PLANCK'S CONSTANT USING LEDS**

Report submitted to the **UNIVERSITY OF KERALA** In partial  
fulfillment for the award of the degree of Bachelor of Science

In

**PHYSICS**

UNDER THE FACULTY OF SCIENCE

BY

NANDANA GOPAN (Reg.No: 23020118018)  
NIKITHA SYAM (Reg.No: 23020118019)  
PALLAVI A D (Reg.No: 23020118020)  
PRANAV P (Reg.No: 23020118021)  
REMYA B (Reg.No: 23020118022)



DEPARTMENT OF PHYSICS

MAHATMA GANDHI COLLEGE

THIRUVANANTHAPURAM- 695004, INDIA

MAY 2023

# **STUDY OF ULTRASOUND WAVES IN** **LIQUIDS**

Report submitted to the **UNIVERSITY OF KERALA** in partial  
fulfillment for the award of the degree of Bachelor of Science

In

**PHYSICS**

UNDER THE FACULTY OF SCIENCE

BY

RENJITH LAL S B

(Reg.No: 23020118023)

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ROOPA D M

(Reg.No: 23020118025)

SOORAJ S

(Reg.No: 23020118026)

ABHIJITH M

(Reg.No: 23020118029)



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THIRUVANANTHAPURAM- 695004, INDIA

MAY 2023

# Current Systems in the Earth Upper Atmosphere

Project report submitted to the  
UNIVERSITY OF KERALA  
In partial fulfilment for the award of the degree of  
Bachelor of science In  
Physics

UNDER THE FACULTY IN SCIENCE  
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ABHISHEK. A (23020118032)

ADHWAITH.S.J (23020118033)

AKSHAY .J.M (23020118034)

DEPARTMENT OF PHYSICS



MAHATMA GANDHI COLLEGE THIRUVANANTHAPURAM -  
695004,INDIA  
MAY 2023

POST GRADUATION DEPARTMENT OF PHYSICS & RESEARCH  
CENTRE MAHATMA GANDHI COLLEGE, TVPM-695004

**A METHOD FOR DETERMINING REFRACTIVE INDEX OF A  
LIQUID ( WATER ) USING STEEL PLATE AND LASER**

**Project report submitted to the  
UNIVERSITY OF KERALA  
In partial fulfilment for the award of the degree of  
Bachelor of science In  
Physics**

**UNDER THE FACULTY IN SCIENCE  
BY**

**ANAND.P.NAIR (Reg. No:23020118035)  
ASWIN.G.L (Reg. No:23020118039)  
ARATHY.L.S (Reg. No:23020118038)  
ANIKA.M.S (Reg. No:23020118036)  
ANOOP.A.S (Reg. No:23020118037)**

**DEPARTMENT OF PHYSICS**



**MAHATMA GANDHI COLLEGE**

**THIRUVANANTHAPURAM -695004.**

**MAY 2023**

# **C++ Program To Perform Calculations for Laboratorial Experiments**

**Report submitted to the UNIVERSITY OF KERALA In partial fulfillment for the award of the degree of Bachelor of Science In**

**PHYSICS**

**UNDER THE FACULTY OF SCIENCE**

**BY**

Aswin J S	(23020118040)
Aswin M S	(23020118041)
Bharathkrishna P S	(23020118042)
Dethan R S	(23020118043)
Kishore Madhav	(23020118045)



**DEPARTMENT OF PHYSICS**

**MAHATMA GANDHI COLLEGE**

**THIRUVANANTHAPURAM- 695004, INDIA**

**MAY 2023**



***A STUDY OF COMPARISON OF DAMPING CONSTANT OF  
DIFFERENT MEDIUMS USING SIMPLE PENDULUM***

**Project report submitted to the  
UNIVERSITY OF KERALA**

**In partial fulfilment for the award of the degree of  
Bachelor of science In  
Physics**

**UNDER THE FACULTY IN SCIENCE**

**BY**

**LEKSHMI PRADEEP.S (Reg.No:23020118046)**

**NANDA. S. S (Reg.No:23020118047)**

**PREETHI. P. S (Reg.No:23020118048)**

**SABARIKANTH. S. S (Reg.No:23020118049)**

**SNEHA. P (Reg.No:23020118051)**

**PRAVEENA. V. GOPAL (Reg.No:23020118058)**



**DEPARTMENT OF PHYSICS**

**MAHATMA GANDHI COLLEGE**

**THIRUVANATHAPURAM -695004, INDIA**

**MAY 2023**

# **CONSTRUCTING AN AMPLIFIER USING A TRANSISTOR**

**Project Report Submitted to the UNIVERSITY OF KERALA**

**In partial fulfillment for the award of the degree of**

**Bachelor of Science**

**In**

**Physics**

**UNDER THE FACULTY OF SCIENCE**

**By**

<b>NAME</b>	<b>REG.NO</b>
<b>SYAMKUMAR S</b>	<b>23020118052</b>
<b>VISHAL B</b>	<b>23020118053</b>
<b>JAZIM IBRAHIM</b>	<b>23020118054</b>
<b>NANDANA A S</b>	<b>23020118055</b>
<b>NOUREEN S N</b>	<b>23020118056</b>
<b>SREENADH S</b>	<b>23020118057</b>

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**THIRUVANANTHAPURAM- 695009, INDIA**



**MAY 2023**

**MAHATMA GANDHI COLLEGE  
DEPARTMENT OF PHYSICS  
THIRUVANANTHAPURAM**

**PROJECT COMPLETION CERTIFICATE**

This is to certify that the following students completed the project and submitted in partial fulfilment of the requirement for the award of degree of Bachelor of Science during the academic year 2022-23.

Candidate Code	Name of the candidate	Title of the project	Name of project Guide
23020118001	ABHIRAMI R SEKHAR	Absorption spectrum analysis of plant pigments extracted from lawsonia inermis	Dr PADMAKUMAR H
23020118002	ABHISHEK G S		
23020118003	ADITHYAN . S		
23020118005	Akshaya. A. S		
23020118006	Amal.A.Nair		


  
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MAHATMA GANDHI COLLEGE  
THIRUVANANTHAPURAM

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23020118007	ANJAI VINOD	STUDY OF VARIATION OF CURRENT USING A LDR	Dr.Deepa. V
23020118008	ANJANA JOSE. J		
23020118009	ANOOP S		
23020118010	APARNA J S		
23020118011	ARDRA S		

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23020118012	Arya M R	Study on variation of surface tension of various detergents	Dr. Prasanth C S
23020118014	G G Krishnan		
23020118015	KARTHIKA. S. NAIR		
23020118016	LEKSHMI SURESH		
23020118017	MUJEEB RAHUMAN.S		

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Candidate Code	Name of the candidate	Title of the project	Name of project Guide
23020118018	NANDANA GOPAN	Determination of Planck's constant using LEDs	Dr. Vaisakhan Thampi
23020118019	Nikitha Syam		
23020118020	Pallavi A D		
23020118021	PRANAV. P		
23020118022	REMYA B		

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Candidate Code	Name of the candidate	Title of the project	Name of project Guide
23020118023	RENJITH LAL. S. B	Study of Ultrasound waves in Liquids	Dr. Sujatha Lekshmy
23020118024	Rohith.U		
23020118025	ROOPA. D. M		
23020118026	Sooraj S		
23020118029	ABHIJITH M		

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23020118030	Abhirami B S	Current Systems in the Earth Upper Atmosphere	Dr Simi K G
23020118031	ABHISHEK P B		
23020118032	ABHISHEK. A		
23020118033	ADHWAITH.S.J		
23020118034	AKSHAY J.M		

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Candidate Code	Name of the candidate	Title of the project	Name of the guide
23020118035	Anand P Nair	A method for determining refractive index of a liquid using steel plate and laser.	Dr. Vaisakhan Thampi
23020118036	Anika M S		
23020118037	Anoop A S		
23020118038	Arathy L S		
23020118039	Aswin G L		



**Dr. PADMA KUMAR H**  
Associate Professor  
Department of Physics  
Mahatma Gandhi College  
Thiruvananthapuram-695004

Dr. Padma Kumar H.




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DEPARTMENT OF PHYSICS  
(Head of the Department)  
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THIRUVANANTHAPURAM

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23020118040	Aswin.J.S	C++ PROGRAM TO PERFORM CALCULATION FOR LABORATORIAL EXPERIMENTS	Dr.J.M.Raj
23020118041	ASWIN M S		
23020118042	BHARATHKRISHNA P S.		
23020118043	DETHAN R S		
23020118045	Kishore Madhav		

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23020118047	NANDA. S. S		
23020118048	PREETHI P.S.		
23020118049	SABARIKANTH S S		
23020118051	Sneha P		
23020118058	Praveena V Gopal		

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23020118052	SYAMKUMAR. S	Construction of sound amplifier using transistor	Dr Simi KG
23020118053	Vishal		
23020118054	JAZIM IBRAHIM		
23020118055	NANDANA. A.S		
23020118056	Noureen S N		
23020118057	SREENADH.S		



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