



Vinayak Vidnyan Mahavidyalaya, Nandgaon Kh.

Affiliated to Sant Gadge Baba Amravati University, Amravati

NAAC

Criterion-I

Curricular Aspects

<https://vinayakmahankh.in> 

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vvm197@sgbau.ac.in 

Nandgaon Khandeshwar, Amravati 

CRITERION –I

ACADEMIC ENRICHMENT

D.V.V CLARIFICATION



1.3.2.1 *Provide List of students along with the details of title, place of work, duration etc., Provide Internship completion certificate / project work completion certificate from the organization where internship / project was completed.*



VINAYAK VIDNYAN MAHAVIDYALAYA

Nandgaon Khandeshwar, Dist. Amravati

(An Institute run by Pravin Khodke Memorial Trust, Amravati)

Sau. Sulbha Sanjay Khodke
(MLA, Amravati)
President, P.K.M Trust, Amt.

College Code: 197, Ph. No. 07221-222245
Email: vym197@sgbau.ac.in

Dr. Alka Anant Bhise
(Principal)
Mob.9823526341

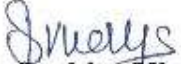
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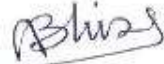
D. 10/05/2023

SELF DECLARATION

This is to certify that, the information, reports, true copies of the supporting documents, numerical data and web links furnished in this file are verified by I.Q.A.C. and head of the Institution and found correct.

Hence this certificate is issued.


Dr. Suchita Khodke
I.Q.A.C. Co-ordinator
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.


Dr. Alka A. Bhise
PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan, Dist. Amravati





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Dr. Alka Anant Bhise
Principal
Mob. 98235 26341

Date: 10/07/2023

DVV Clarification:

1.3.2.1 Percentage of students undertaking project work/field work/ internships
(Data for the latest completed academic year)

Provide List of students along with the details of title, place of work, duration etc.,
Provide Internship completion certificate / project work completion certificate from
the organization where internship / project was completed.

Institute point-wise Response to clarification asked by NAAC in metric 1.3.2.1

- 1. List of students:** List of students along with the details of title, place of work, duration etc. are attached herewith.
- 2. Project work completion certificate:** Project work completion certificates from the organization where project was completed are attached herewith.
- 3. Internship completion certificate:** Internship completion certificate from the organization where internship was completed are attached herewith.

Sulabha

I.Q.A.C. Co-ordinator
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



Bhise

PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan. Dist. Amravati

Vinayak Vidnyan Mahavidyalaya, Nandgaon Kh.

Contents							
Sr. No.	Year	Name of Course	Project Work/ Field Work/ Internship	Place of Work	Duration	Page No	
1.	2021-22	Botany B.Sc.-II Sem. III & IV B.Sc.-III Sem. V & VI	Project Work	Vinayak Vidnyan Mahavidyalaya, Nandgaon(Kh.)	1 Month	1	
2.		Zoology B.Sc.-II Sem. III & IV B.Sc.-III Sem. V & VI	Project Work	Vinayak Vidnyan Mahavidyalaya, Nandgaon(Kh.)	1 Month	37	
3.		Chemistry B.Sc.-II Sem. III & IV B.Sc.-III Sem. V & VI	Project Work	Vinayak Vidnyan Mahavidyalaya, Nandgaon(Kh.)	1 Month	72	
4.		Physics B.Sc.-II Sem. III & IV B.Sc.-III Sem. V & VI	Project Work	Vinayak Vidnyan Mahavidyalaya, Nandgaon(Kh.)	1 Month	149	
5.		Mathematics B.Sc.-II Sem. III & IV B.Sc.-III Sem. V & VI	Project Work	Vinayak Vidnyan Mahavidyalaya, Nandgaon(Kh.)	1 Month	185	
6.		Computer Science B.Sc.-II Sem. III & IV B.Sc.-III Sem. V & VI	Project Work	Vinayak Vidnyan Mahavidyalaya, Nandgaon(Kh.)	1 Month	232	
7.		Electronics B.Sc.-II Sem. III & IV B.Sc.-III Sem. V & VI		Vinayak Vidnyan Mahavidyalaya, Nandgaon(Kh.)	1 Month	257	
8.		Sample Copies of Project Completion Certificates	Project Work	Vinayak Vidnyan Mahavidyalaya, Nandgaon(Kh.)		260	
9.		Physics B.Sc.-I Sem. I	Field Visit	Raman Science Centre, Nagpur (Maharashtra)	1 Day	378	
10.		Botany and Zoology	Field Visit	Savner Lake, Nandgaon(Kh.) (Maharashtra)	1 Day	385	
11.		B.Sc. III	Internship	Special Biochem (P) Ltd. Amravati-444602 (Maharashtra)	15 Days	388	
12.		B. Com. III	Internship	DCB Bank, Yevatmal Branch 445001(Maharashtra)	15 Days	389	

NAAC CRITERION - I



PROJECT WORK

BOTANY



Vinayak Vidnyan Mahavidyalaya, Nandgaon Kh.



Project Topics (B.Sc. II Sem III)

Session 2021-22

Date 14 Feb 2022

Sr No	Name of Students	Project Topics	Signature
1	Ku. Akshada D. Dhandare	A Review on Study on Different plants in Malvaceae family and their medicinal uses.	Dhandare
2	Ku. Sejal G.Chandurkar		Sejal G.Chandurkar
3	Ku. Shreyaswi R. Devtale		Shreyaswi R. Devtale
4	Ku. Kirti D. Pophale	Brassicaceae- A rich source of health improving edible oil and medicinal values.	Pophale
5	Ku. Vaishnavi R.Zatale		Zatale
6	Ku. Arpita P. Thakare		Thakare
7	Ku. Shreya G.Dhoke	Review of family Fabaceae	S.G. Dhoke
8	Ku. Snehal B.Kaware		Snehal B.Kaware
9	Ku. Kiran R.Banarase	Edible and Traditional uses of Family Leguminosae	Kaware
10	Ku. Vaishnavi D. Rumne		Rumne
11	Ku. Komal J. Sen	Traditional Uses of Medicinal Plants of Asclepiadaceae by Rural People	Sen
12	Ku. Ravina S. Navnage		Ravnage
13	Ku. Achal R. Hambarde		Achal R. Hambarde
14	Ku. Achal N. Charde	Medicinal Importance of Apocynaceae	Achal N. Charde
15	Ku. Komal D.Pund		K. D. Pund
16	Ku. Amruta S. Kale	Review on Different Medicinal Plants from Apocynaceae	A.Kale
17	Mr. Pranay S. Marape		P.S. Marape
18	Mr. Pratik K.Inzalkar		Pratik K.Inzalkar
19	Mr. Aman A. Makwani		A. Makwani
20	Mr. Nikhil N.Praghane		N.Praghane
21	Ku. Pratiksha A. Ingle	Medicinal Uses of Family Verbenaceae	Pratiksha A. Ingle
22	Ku. Priyanka R.Gajbhiye		P.R. Gajbhiye
23	Ku. Mayuri P. Kapade		Mayuri P. Kapade
24	Ku. Rina P. Pophale	A study on different plants of Apocynaceae Family and their medicinal uses	Pophale
25	Ku. Sakshi R.Gulhane		Gulhane
26	Ku. Samiksha P.Dakare		Dakare
27	Ku. Sakshi S.Inzalkar		Sakshi S.Inzalkar
28	Mr. Kartik R. Mahure	Traditional Uses of Lamiaceae	Kartik R. Mahure
29	Mr. Ashutosh D. Ingole		Ashutosh D. Ingole
30	Mr. Mohd Anas Makwani		Mohd Anas Makwani
31	Mr. Rohan R. Jadhao		Rohan R. Jadhao
32	Ku. Shital S.Lonare	Review on Medicinal Uses of family Apocynaceae	Shital S.Lonare
33	Ku. Shital V. Gadhve		Shital V. Gadhve
34	Ku. Shraddha A. Bankar		S.A. Bankar
35	Ku. Mayuri R.Deotale	Ethnomedicinal uses of family Apiaceae	Mayuri R.Deotale
36	Ku. Sharayu P. Chaudhari		Sharayu P. Chaudhari
37	Ku. Vaishnavi R.Khobragade	Study on different plants of Family Euphorbiaceae and medicinal uses	Vaishnavi R.Khobragade
38	Ku. Divya P.Salve		Divya P.Salve
39	Ku. Achal D. Deshmukh	Study of economic importance of family Poaceae	Achal D. Deshmukh
40	Ku. Rakhi R.Sonone		Rakhi R.Sonone
41	Ku. Shivani J. Chavhan		Shivani J. Chavhan

Mr. S.V. Hivare
(Mr. S.V. HIVARALE)
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Project Topics (B.Sc. III Sem V)

Session 2021-22

Date 14 Feb 2022

Sr. No.	Name of Students	Topics	Signature
1	Mr. Abhishek P. Chauragade	To study the effects of different light on photosynthesis	<i>Abhishek P. Chauragade</i>
2	Ku. Achal A. Bansod	-----//-----	<i>Achal A. Bansod</i>
3	Ku. Achal G. Masram	-----//-----	<i>Achal G. Masram</i>
4	Ku. Achal R. Saire	-----//-----	<i>Achal R. Saire</i>
5	Ku. Amrapali B. Wahane	-----//-----	<i>Amrapali B. Wahane</i>
6	Ku. Ankita S. Mandavgade	-----//-----	<i>Ankita S. Mandavgade</i>
7	Ku. Anushka S. Izate	-----//-----	<i>Anushka S. Izate</i>
8	Ku. Asmita G. Sable	-----//-----	<i>Asmita G. Sable</i>
9	Ku. Bhagyashri J. Shelke	To study the effects of Vernalization on seed germination	<i>Bhagyashri J. Shelke</i>
10	Ku. Dimpal V. Jagtap	-----//-----	<i>Dimpal V. Jagtap</i>
11	Ku. Divya M. Kakade	-----//-----	<i>Divya M. Kakade</i>
12	Ku. Gauri U. Dhawas	-----//-----	<i>Gauri U. Dhawas</i>
13	Mr. Harshad G. Dofe	-----//-----	<i>Harshad G. Dofe</i>
14	Ku. Jayashree R. Tankar	-----//-----	<i>Jayashree R. Tankar</i>
15	Ku. Kajal V. Shinde	-----//-----	<i>Kajal V. Shinde</i>
16	Mr. Krunal M. Barde	-----//-----	<i>Krunal M. Barde</i>
17	Mr. Kunal R. Bitale	To study the physiological effects of Gibberellic acid on plant growth.	<i>Kunal R. Bitale</i>
18	Ku. Manisha M. Pongle	-----//-----	<i>Manisha M. Pongle</i>
19	Ku. Md Atique Ab Rahim .	-----//-----	<i>Md Atique Ab Rahim .</i>
20	Mr. Pallavi P. Gulhane	-----//-----	<i>Pallavi P. Gulhane</i>
21	Ku. Pallavi R. Tangale	-----//-----	<i>Pallavi R. Tangale</i>
22	Ku. Pooja W. More	-----//-----	<i>Pooja W. More</i>
23	Mr. Prajwalsing P. Deshmukh	-----//-----	<i>Prajwalsing P. Deshmukh</i>
24	Ku. Pranali G. Agashe	-----//-----	<i>Pranali G. Agashe</i>
25	Ku. Pratiksha V. Shahade	To study the effect of Photoperiodism on flowering	<i>Pratiksha V. Shahade</i>
26	Ku. Priyanka P. Gulhane	-----//-----	<i>Priyanka P. Gulhane</i>
27	Ku. Punam S. Banarase	-----//-----	<i>Punam S. Banarase</i>
28	Ku. Rajani A. Chavhan	-----//-----	<i>Rajani A. Chavhan</i>
29	Ku. Rupali V. Mahato	-----//-----	<i>Rupali V. Mahato</i>
30	Ku. Rushali G. Vairagade	-----//-----	<i>Rushali G. Vairagade</i>
31	Ku. Rutuja S. Zanzat	-----//-----	<i>Rutuja S. Zanzat</i>
32	Mr. Sachin V. Bhagat	-----//-----	<i>Sachin V. Bhagat</i>
33	Ku. Sanika M. Darwhatkar	The study the stress physiology of plants due to water	<i>Sanika M. Darwhatkar</i>
34	Mr. Sarthak U. Raut	-----//-----	<i>Sarthak U. Raut</i>
35	Mr. Satish B. More	-----//-----	<i>Satish B. More</i>
36	Mr. Saurabh R. Kalekar	-----//-----	<i>Saurabh R. Kalekar</i>
37	Ku. Shamal D. Ingole	-----//-----	<i>Shamal D. Ingole</i>
38	Ku. Shruti S. Ravekar	-----//-----	<i>Shruti S. Ravekar</i>
39	Mr. Shubham B. Sanap	-----//-----	<i>Shubham B. Sanap</i>
40	Ku. Snehal D. Dhurte	-----//-----	<i>Snehal D. Dhurte</i>
41	Mr. Sumit M. Jadhao	To study the Ecological adaptation in plants	<i>Sumit M. Jadhao</i>
42	Ku. Tejaswini B. Deotale	-----//-----	<i>Tejaswini B. Deotale</i>
43	Mr. Vaibhav D. Dhande	-----//-----	<i>Vaibhav D. Dhande</i>
44	Ku. Vaishnavi G. Gawner	-----//-----	<i>Vaishnavi G. Gawner</i>
45	Ku. Vaishnavi S. Khope	-----//-----	<i>Vaishnavi S. Khope</i>

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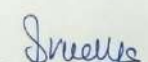
Project Topics (B.Sc. II Sem IV)

Session 2021-2022

Date: 21 May 2022

Sr No	Name of Students	Topics	Signature
1	Ku. Achal Rajendra Hambarde	Eukaryotic cell	A.Hambarde
2	Ku. Achal Dilip Deshmukh	Plant cell	A.Deshmukh
3	Ku. Achal Nandkishor Charde	Plasma membrane (Sandwich Model)	A.Charde
4	Ku. Akshada Dnyaneshwar Dhandare	Plasma membrane (Fluid Mosaic model)	A.Dhandare
5	Mr. Aman Ashpak Makwani	Eukaryotic cell	A.Makwani
6	Ku. Amruta Sopan Kale	Prokaryotic cell	A.Kale
7	Ku. Arpita Pradiprao Thakare	Structure of Chloroplast	A.Thakare
8	Mr. Ashutosh D. Ingole	Endoplasmic Reticulum	A.Ingole
9	Ku. Divya P.Salve	Endoplasmic Reticulum	D.Salve
10	Mr. Kartik Ravindra Mahure	Golgi Complex	K.Mahure
11	Ku. Kiran Raju Banarase	Structure of Ribosome	K.Banarase
12	Ku. Kirti Dilip Pophale	Golgi Complex	K.Pophale
13	Ku. Komal Dnyaneshwar Pund	Structure of Mitochondria	K.D.Pund
14	Ku. Komal Jitendra Sen	Peroxisome	K.Sen
15	Ku. Mayuri Pravin Kapade	Structure of Mitochondria	M.Kapade
16	Ku. Mayuri Rameshwar Deotale	Structure of Chloroplast	M.Deotale
17	Mr. Mohd Anas Makwani	Structure Chromosome	A.Makwani
18	Mr. Nikhil Nandu Praghane	Eukaryotic cell	N.Praghane
19	Mr. Pranay Sanjay Marape	Prokaryotic cell	P.S.Marape
20	Mr. Pratik Kanteshwar Inzalkar	Structure Chromosome	P.Inzalkar
21	Ku. Pratiksha Anand Ingale	Deletion	P.Ingale
22	Ku. Priyanka Rajkumar Gajbhiye	Duplication	P.Gajbhiye
23	Ku. Rakhi Ruprao Sonone	Chromosomal organization	R.Sonone
24	Ku. Ravina Sandip Navnage	Structure of Nucleus	R.Navnage
25	Ku. Rina Pravin Pophale	Meiosis II	R.Pophale
26	Mr. Rohan Ramrao Jadhao	Crossing over	R.Jadhao
27	Ku. Sakshi Rameshwar Gulhane	Structure of plant cell	S.Gulhane
28	Ku. Sakshi Santosh Inzalkar	Chromosomal organization	S.Inzalkar
29	Ku. Samiksha Pramod Dakare	Meiosis I	S.Dakare
30	Ku. Sejal Gajanan Chandurkar	Eukaryotic cell	S.Chandurkar
31	Ku. Sharayu Purshottam Chaudhari	Mitosis	S.Chaudhari
32	Ku. Shital Subhashrao Lonare	Eukaryotic cell	S.Lonare
33	Ku. Shital Vijay Gadhare	Golgi Complex	S.Gadhare
34	Ku. Shivani Jaypalsingh Chavhan	Structure of Enzyme	S.Chavhan
35	Ku. Shraddha Anil Bankar	Structure of Nucleus	S.Bankar
36	Ku. Shreya Gajanan Dhoke	Ultrastructure of Nucleus	S.Dhoke
37	Ku. Shreyaswi Ramesh Devtale	Metaphase	S.Devtale
38	Ku. Snehal Balu Kaware	Anaphase	S.Kaware
39	Ku. Vaishnavi Damodhar Rumne	Structure of Ribosome	V.Rumne
40	Ku. Vaishnavi Ravindra Khobragade	Structure of Cell Wall	V.Khobragade
41	Ku. Vaishnavi Ravindra Zatale	Euploidy	V.Zatale


Mr. S. V. Hiwarale
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Vinayak Vidyan Mahavidyalaya, Nandgaon Kh.




Project Topics (B.Sc. III Sem VI)


Session 2021-2022

Date: 16 May 2022


Sr No	Name of Students	Topics	Signature
1	Mr. Abhishek Prakash Chauragade	Translation in Eukaryotes.	A Chauragade
2	Ku. Achal Arun Bansod	Endomembrane system	A Bansod
3	Ku. Achal Gajanan Masram	Protein Folding (Secondary Structure)	A G Masram
4	Ku. Achal Rajesh Satre	Double Helical model of DNA	A Satre
5	Ku. Amrapali Bhashkar Wahane	Protein Folding (Secondary Structure)	A Wahane
6	Ku. Ankita Shankarrao Mandavgade	Double Helical model of DNA	A Mandavgade
7	Ku. Anushka Sureshrao Izate	Solenoid Model	A Izate
8	Ku. Asmita Gopal Sable	DNA Packaging	A Sable
9	Ku. Bhagyashri Jaykumar Shelke	Solenoid Model	B Shelke
10	Ku. Dimpal Vijayrao Jagtap	Translation in Eukaryotes.	D Jagtap
11	Ku. Divya Murlidhar Kakade	Double Helical model of DNA	D M Kakade
12	Ku. Gauri Uddhavrao Dhawas	Chemical Composition of DNA	G Dhawas
13	Mr. Harshad Gunvantrao Dofe	Genetic code	H Dofe
14	Ku. Jayashree Rajendra Tankar	Structure Ribosome	J Tankar
15	Ku. Kajal Vitthalrao Shinde	Structure Ribosome	K Shinde
16	Mr. Krunal Mukundrao Barde	Genetic code	K Barde
17	Mr. Kunal Rajendra Bitale	Genetic code	K Bitale

18	Ku. Manisha Madhukar Pongle	Structure Ribosome	M Pongle
19	Mr. Md Atique Ab Rahim	Central Dogma	A Rahim
20	Ku. Pallavi Prabhakar Gulhane	Nucleosome Model	P Gulhane
21	Mr. Pallavi Ramrao Tangale	Nucleosome Model	P Tangale
22	Ku. Pooja Wasudev More	Chemical Composition of DNA	P More
23	Mr. Prajwalsing P. Deshmukh	Lac Operon	P Deshmukh
24	Ku. Pranali Gajananrao Agashe	Protein Folding (Secondary Structure)	P Agashe
25	Ku. Pratiksha Vilasrao Shahade	Nucleosome Model	P Shahade
26	Ku. Priyanka Pramodrao Gulhane	DNA Packaging	P Gulhane
27	Ku. Punam Shaligram Banarase	Central Dogma	P Banarase
28	Ku. Rajani Ashokrao Chavhan	Endomembrane system	R Chavhan
29	Ku. Rupali Vasudeo Mahato	Central Dogma	R Mahato
30	Ku. Rushali Ganesh Vairagade	Endomembrane system	R Vairagade
31	Ku. Rutuja Subhashrao Zanzat	Solenoid Model	R Zanzat
32	Mr. Sachin Vilasrao Bhagat	Lac Operon	S Bhagat
33	Ku. Sanika Mohan Darwhatkar	DNA Packaging	S Darwhatkar
34	Mr. Sarthak Uttamrao Raut	Fine structure of Gene	S Raut
35	Mr. Satish Bhujiangrao More	Lac Operon	S More
36	Mr. Saurabh Ramesh Kalekar	Translation in Eukaryotes.	S Kalekar
37	Ku. Shamal Divakar Ingole	Central Dogma	S Ingole
38	Mr. Shruti Sanjay Ravekar	Chemical Composition of DNA	S Ravekar
39	Mr. Shubham Bandu Sanap	Fine structure of Gene	S Sanap
40	Ku. Snehal Dattatray Dhurte	Central Dogma	S Dhurte
41	Mr. Sumit Madhukar Jadhao	Fine structure of Gene	S Jadhao
42	Ku. Tejaswini Balu Deotale	Central Dogma	T Deotale
43	Mr. Vaibhav Dipakrao Dhande	Plasmids	V Dhande
44	Ku. Vaishnavi G. Gawner	Plasmids	V Gawner
45	Ku. Vaishnavi Sanjay Khope	Plasmids	V Khope


Mr. S.V. Hwarale
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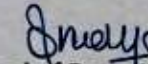


Department of
Botany

PROJECT
B.Sc.III SemIV

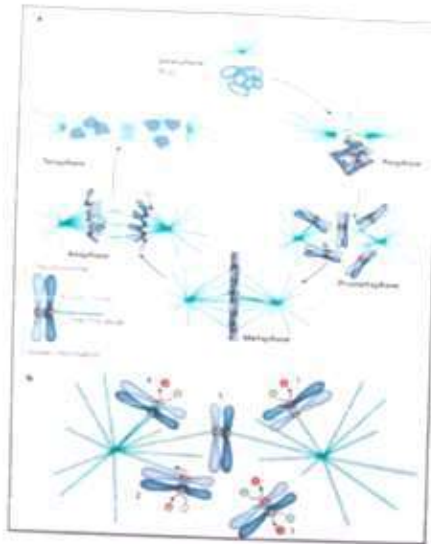
PROJECT TOPIC: Chromosomal organization
Submitted by: Ku. Rakhi Ruprao Sonone


Supervisor
(Mr. S. V. HIWARALE)
Mr. Shilpaand Hiwarale
Assistant Professor
Department of Botany
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh. Dist. Amravati.


Head of Department
Head
Department of Botany
Vinayak Vidnyan Mahavidyalaya
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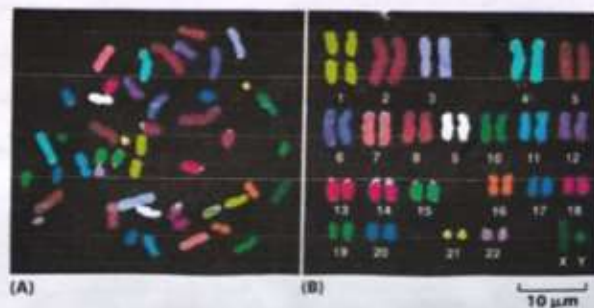
Date: 21 May 2022
Supervisor Remark _____

Academic Session 2021-2022

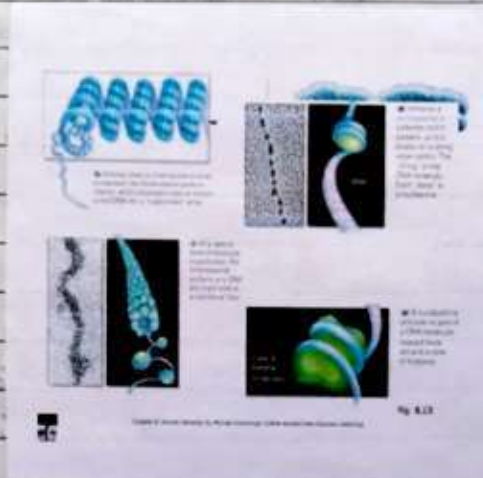


- Kinetochore is the centromeric substructure that binds microtubules and directs chromosome movement in mitosis.
- Gene is a segment of DNA encoding a functional RNA or protein product.

• chromosomes - structures



• Nucleus chromosome :



- chromatin makes up chromosomes : it is a complex of DNA and protein
- Histone are DNA-binding proteins
 - They assist in compacting and folding DNA into a chromosome
 - shorten the DNA length by a factor of 6 to 7.
- Nucleosomes are bead-like structures composed of histones wrapped with DNA.
- DNA is packed into chromosome by several levels of coiling and compaction.

• DNA Replication :

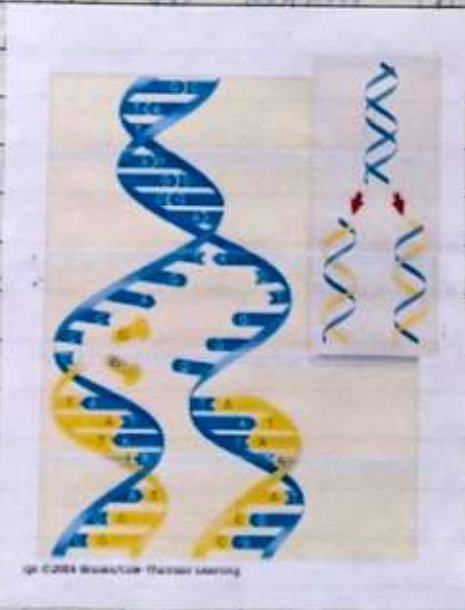
- strands are unwound and separate

- New bases pair G with C
T with A

- New DNA composed of one "old" strand
and one "new" strand

- 5' ATGCTGACTCATGCTA 3' template
3' TACGCCATACGCAAT 5' New strand

• semi-conservative Replication of DNA :



- DNA polymerase catalyzes the
synthesis of DNA using a
template of DNA and nucleotides.

- Number of gene per one million bp.
 - 483 budding yeast
 - 197 in *C. elegans*
 - 117 in fruit fly
 - 7-9 in human
- Distributions of genes on chromosome are highly variable.
- Much (40-50%) of non-protein-coding DNA in the human genome is transcribed into RNA.
- coding regions are usually unique.
- Eukaryotic genomes often contain in large numbers of repetitive DNA sequence that are present in many copies.
- Pseudogenes are DNA treatments that contains too many mutations that render a n-ancestral gene inactive and nonfunctional.
- Transposons are DNA segments that can move from one location of the genome to another location.
- These are three types of Transposons
 - DNA-only
 - Retroviral-like
 - Non-retroviral-like.

Chromosomal Organization :

- Gene Ontology Term: chromosome organization.

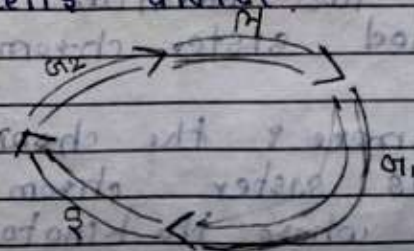
A process that is carried out at the cellular level that results in the assembly, reorganisation of constituent parts, or disassembly of chromosome structures composed of a very long molecule of DNA and associated proteins that carries hereditary information.

- structural and functional organization of chromosome:

- chromosome organization in the cell cycle

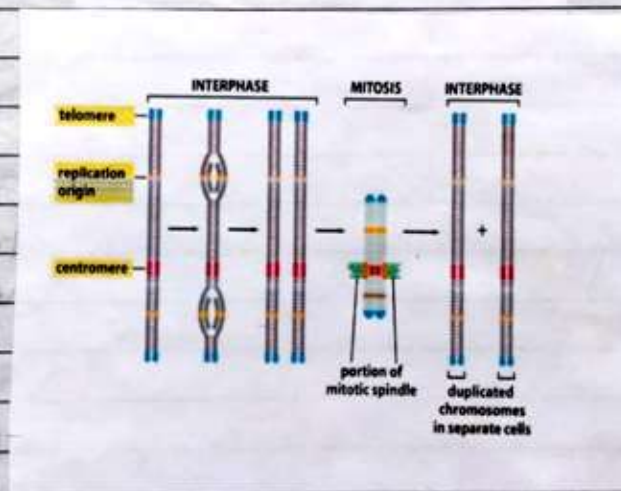
- DNA are packaged with associated proteins into chromosome

- chromosome undergo dramatic reorganization when cells divide

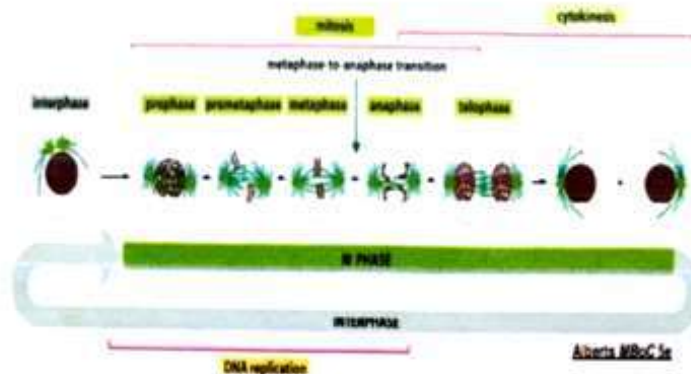


• General organization of chromosomes:

- Basically the basic structural unit of chromosome is the nucleosome, which is formed by DNA wrapped around histone proteins.
- These connected nucleosomes form chromatin fibres, which further gets condensed into a chromosome.



- In the nucleus of each cell, the DNA molecule is packaged into thread like structure called chromosome.
- Each chromosome is made up of DNA tightly coiled many times around proteins called histone that support its structure.




• chromosome Related Nomenclature

- chromatid: the complex of DNA histones, and a nonhistone protein within the nucleus of a eukaryotic cell. The material of which chromosomes are made.

- chromatid: one of the two copies of a replicated chromosome that is joined at the centromere to the other copy. The two identical chromatids are called sister chromatids.

- centromere: the chromosomal region that holds sister chromatids together and where the kinetochore forms.

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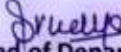
Department of
Botany

PROJECT
B.Sc.III Sem VI

PROJECT TOPIC: DNA Packaging

Submitted by: ku- Saika Dhawalkar, Poojanika Gulhane
ku- Anurita Sable


(Mr. Shilpaand Hwarale)
Assistant Professor
Department of Botany
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Head of Department
Head
Dr. Suchita Khodke
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Date: 16 May 2022
Supervisor Remark _____

Academic Session 2021-2022

1

DNA packaging

Regener Kornberg in 1974 reported that chromosome is made up of DNA and protein. The organization of DNA is much more complex in eukaryotes.

Each chromosome contains a single DNA molecule, extending from one end of the chromosome to the other end. DNA molecules is coiled and folded many times and associated with various proteins, forming a "chromatin" which contains roughly equal amounts of DNA and proteins.

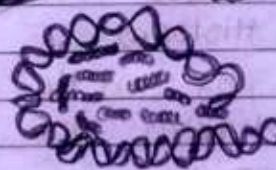
The chromosomal proteins are divided into histone proteins and non-histone proteins.

organization of Eukaryotic chromosome

DNA double helix



DNA wrapped around histone



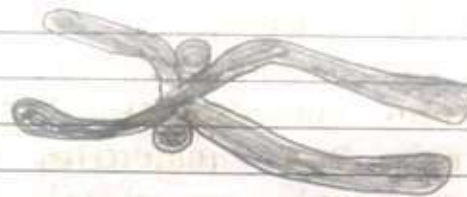
nucleosomes coiled into a chromatin fiber.



Further
Condensation
of chromatin



Duplicated
Chromosome



Compaction of the Eukaryotic Chromosome.

Histones are the proteins that facilitate of DNA packaging into chromatin fibres.

Histone proteins are positively charged and have many arginine and lysine amino acids that bind to the negatively charged DNA. Histones are of two types.

- Core Histones
- Linker Histones.

H₂A, H₂B, H₃ and H₄ are the core histones. Two H₃, H₄ dimers and two H₂A, H₂B dimers form an octamer.

Linker histones lock the DNA in place onto the nucleosome and can be removed for transcription.

3

Histones can be modified to change the amount of packaging a DNA does. The addition of methyl group increases the hydrophobicity of histones. This results in tight DNA packaging. Acetylation and phosphorylation make the DNA more negatively charged and loosens the DNA packaging.

Non-histones are histones are heterogeneous groups of structural and regulatory proteins with many functions found in the structure of chromatin and they present in little amount. Non-histone proteins have many different functions because they contain:

- Structural proteins enter in the structure of some definite parts of DNA molecule and play the main role in the spatial organization of DNA within the nucleus as they are responsible for shortening DNA about 100,000 times by forming the packed chromatin.
- Regulatory proteins determine whether the DNA code will be used in making RNA, proteins and enzymes or not.

4

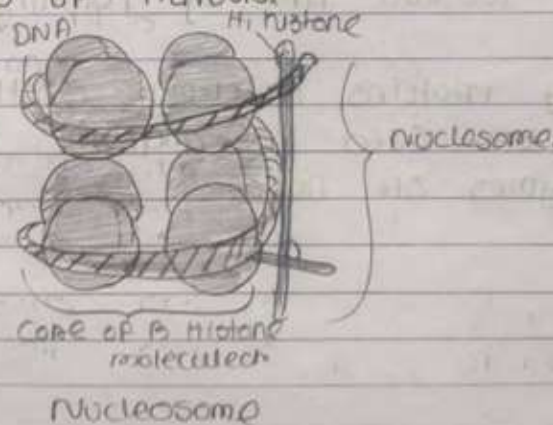
Packaging of DNA

At the first level of packaging the DNA double helix is packaged into so-called nucleosomes.

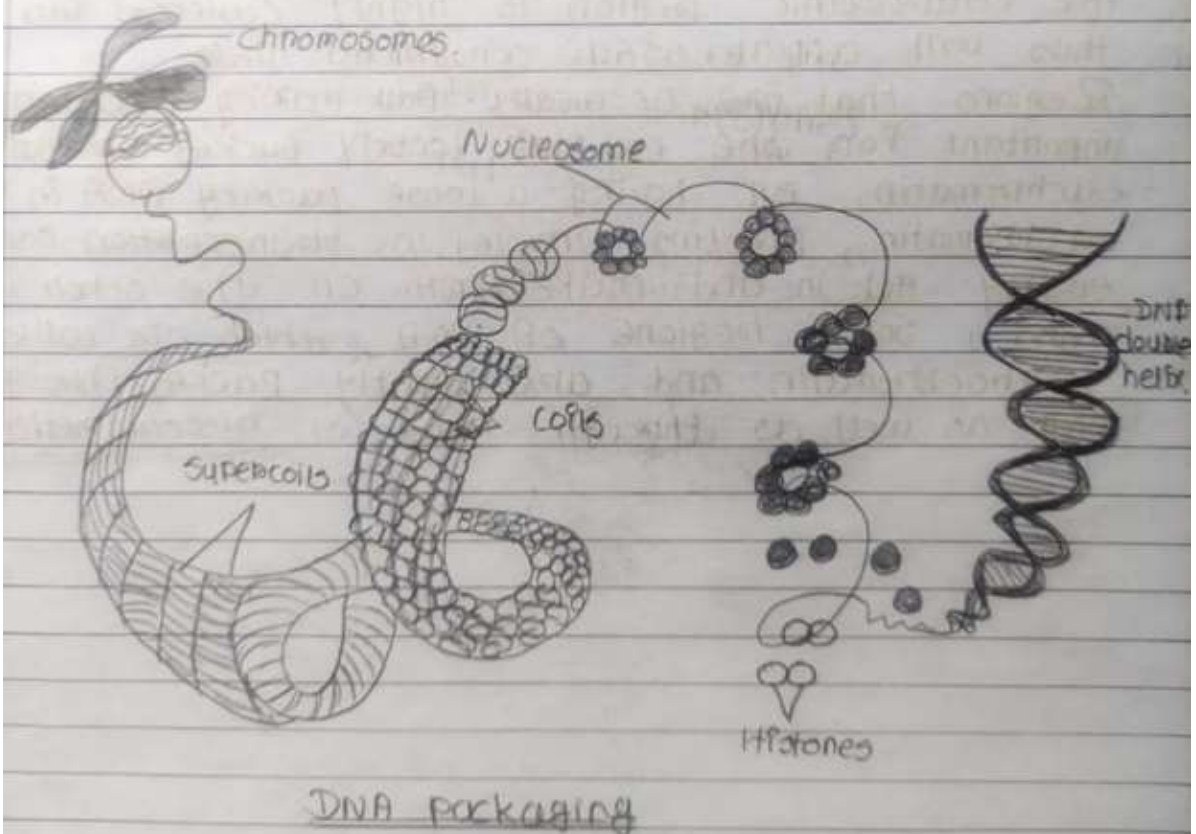
Sets of about 200 base pairs of the DNA are wound round a nucleosome of eight proteins, the histones.

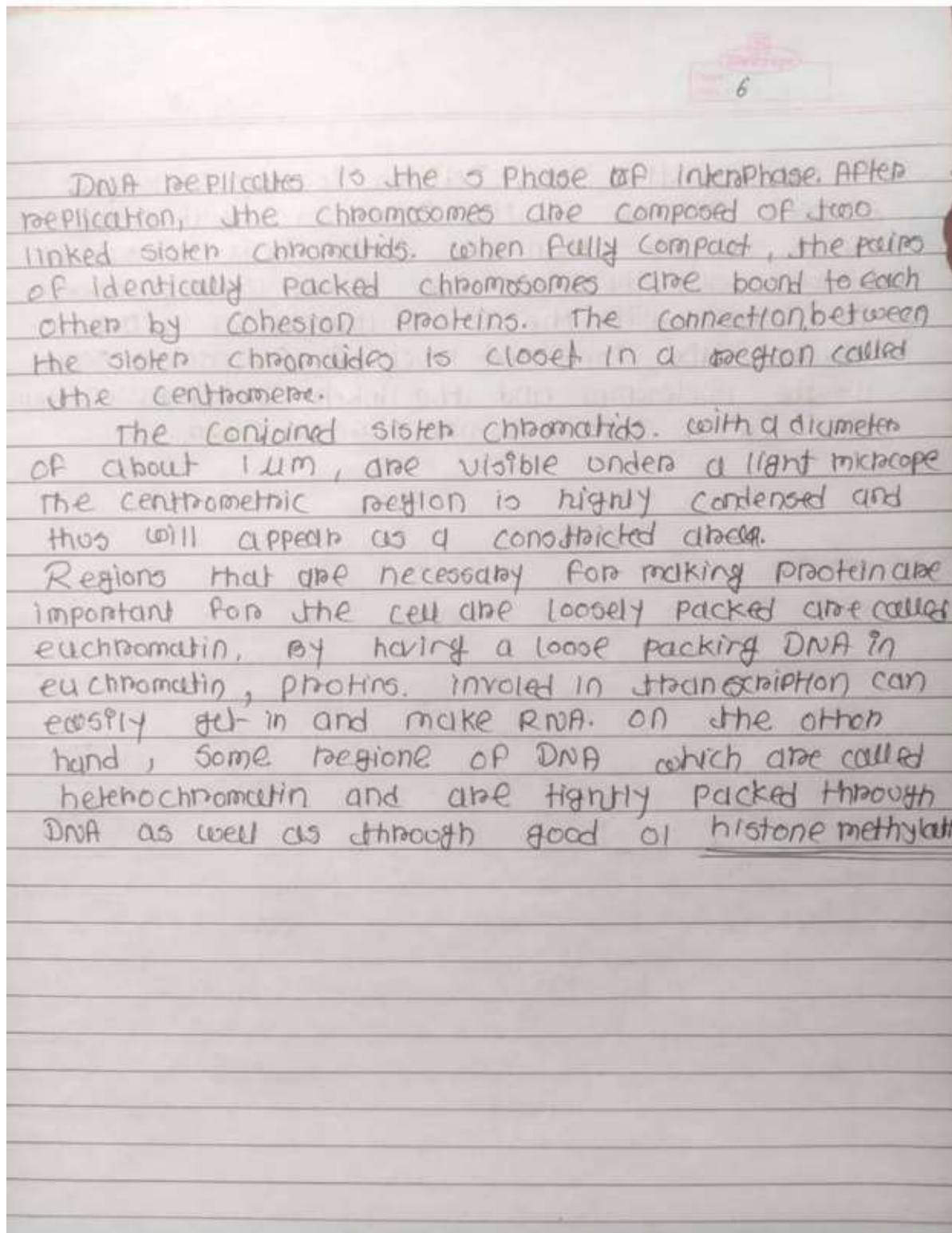
Due to their amino acid composition the histone proteins are positively charged, but they can be modified by enzymes, so that the total charge change. Thus, a certain class of enzymes—histone acetyl transferases—carry acetyl moieties to be attached.

DNA can be further packaged by forming coils of nucleosomes, called chromatin fibers. These fibers are condensed into chromosome during mitosis, on the process of cell division. However packaging of chromatin in chromosome that we are most familiar with occurs only during a few stages of mitosis.




Most of the time, DNA is loosely packaged. A DNA molecule in this form is about seven times shorter than the double helix without the histones and the beads are about 10 nm in diameter. In contrast with the 2-nm diameter of a DNA double helix. The next level of compaction occurs as the nucleosomes and the linker DNA between them are coiled into a 30-nm chromatin fiber.





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Nandgaon khandeshwar, Dist-Amravati



Department of
Botany

PROJECT
B.Sc.III Sem VI

PROJECT TOPIC: Central Dogma

Submitted by: Ku. Shamal Ingle, Rupali Mahato, Mohd. Atique
Ku. Tejaswini Deotale, Puman Banarase

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Supervisor
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Date: 16 May 2022
Supervisor Remark _____

Academic Session 2021-2022

Central Dogma

'The central dogma is the process by which the instruction in DNA are converted into a functional product.'

The central dogma of molecular biology is an explanation of the flow of genetic information within a biological system. It is often stated as "DNA makes RNA, and RNA makes protein", although this is not its original meaning. It was first stated by Francis Crick in 1957, then published in 1958.

central dogma - An inheritance mechanism. In molecular biology, central dogma illustrates the flow of genetic information from DNA to RNA to protein. It is defined as a process in which the information in DNA is converted into a functional product.

The central dogma of molecular biology explains that DNA codes for RNA, which codes for protein. In the central dogma, you can see the learn about the important roles of messenger RNA,

Transfer RNA and ribosomal RNA in the protein building process.

Thus, the central dogma provides the basic framework for how genetic information flows from a DNA sequence to a protein product inside cells and thus given an insight to the important processes going on inside the cells.

The central dogma however, it is not a linear step, but instead required two steps - Transcription and translation. With an intermediate molecule, RNA.

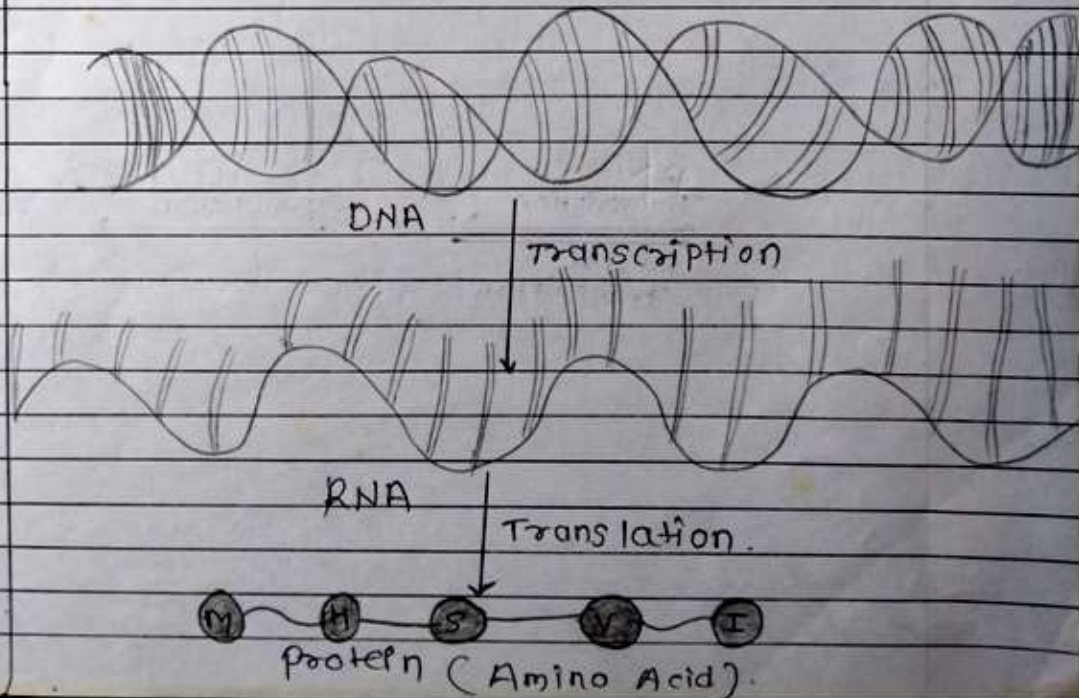
The central dogma states that the pattern of information that occurs most frequently in our cells is:

- From existing DNA to make new DNA (DNA replication).
- From DNA to make new RNA (Transcription)
- From RNA to make new protein (Translation.)

Central dogma transcription -

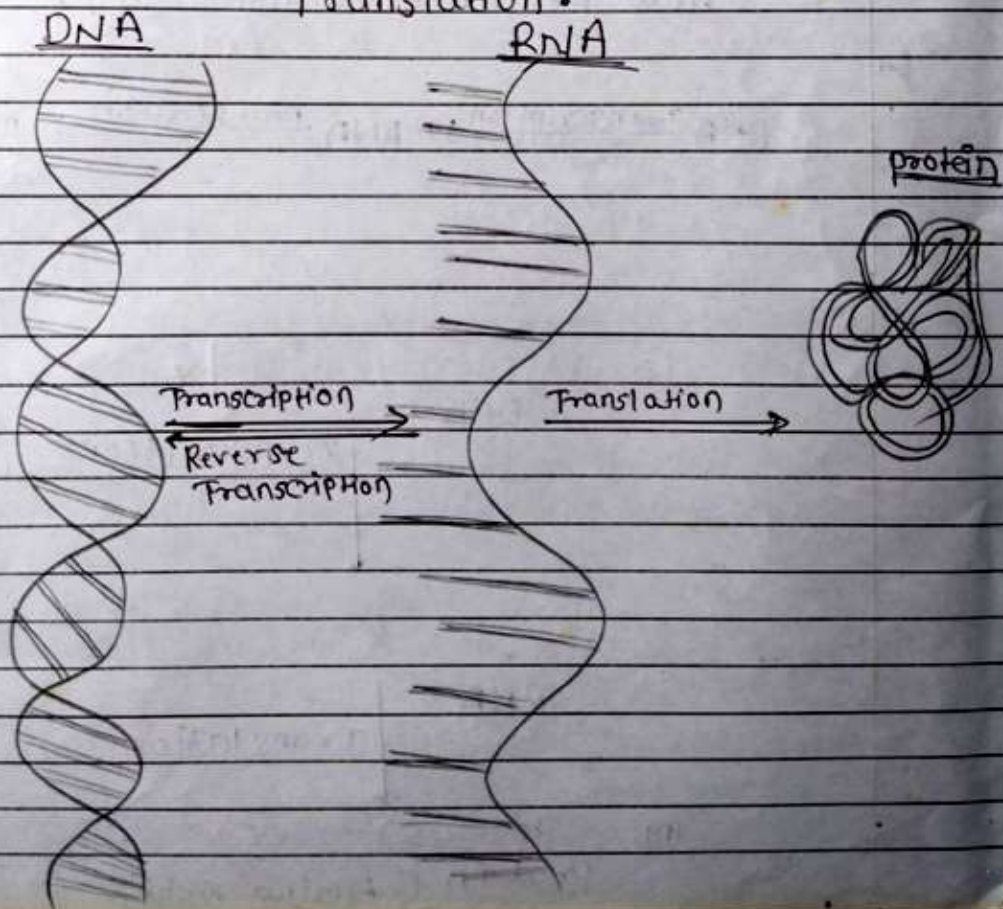
The central dogma states that the pattern of information that occurs most frequently in our cells from existing DNA to make new DNA (DNA replication) from DNA to make new RNA (Transcription) from RNA to make new protein (translation).

DNA $\xrightarrow{\text{Transcription}}$ mRNA $\xrightarrow{\text{Translation}}$ protein



Central dogma Translation -

The central Dogma of molecular Biology states that DNA makes RNA makes protein. The central dogma process of which DNA is copied to RNA is called transcription, and that protein by which RNA is used to produce protein is called - Translation.



Central Dogma steps : (Two)

• Transcription →

Transcription is the process by which the information is transferred from one strand of the DNA to RNA by the enzyme RNA polymerase.

The DNA strand which undergoes this process consists of three parts namely promoter, structural gene, and a terminator.

The DNA strand that synthesizes the RNA is called the template strand and the other strand is called the coding strand. The DNA dependent RNA polymerase binds to the promoter and catalyzes the polymerization in the 3' to 5' direction.

As it approaches the terminator sequence, it terminates and releases the newly synthesized RNA strand. The newly released RNA strand further undergoes post-transcriptional modification.

• Translation →

Translation is the process by which the RNA codes for specific protein. It is an active process which requires energy. This energy is provided by the charged tRNA molecules.

Ribosomes the translation process. The ribosome consist of a larger subunit, in turn, consist of two tRNA molecules placed close enough so that peptide bond can be formed at the expense of enough energy.

The mRNA enter the smaller subunit which is then held by the tRNA molecules of the complementary codon present in the larger subunit. Thus two codons are held by two tRNA molecules place close to each other and a peptide bond is formed between them.

As this process repeats, long polypeptide chain of amino acid are synthesize.

Central dogma of protein synthesis.

The process by which the biological information contained in the gene made available to the cell, is called as gene expression. First time demonstrated the steps involve in the gene expression or in protein synthesis. where information in RNA is transferred to protein. is called as central dogma.

DNA transcription → RNA translation → protein

This flow of information was supposed to be unidirectional. This means protein cannot direct synthesis of RNA and RNA cannot direct the synthesis of DNA.

But, In 1970, Temin and Baltimore discovered that some viruses contain genetic information in the form of RNA and hence the central dogma changed as follows.

DNA transcription → RNA translation → protein
Reverse transcription.

Page No. 8
Date

In such viruses, enzyme reverse transcriptase perform reverse transcription process in which genetic material RNA is reversely transcribed into DNA which then transcribed into RNA and then translated into proteins.

$$\text{RNA} \xrightarrow[\text{reverse Transcription}]{\text{Reverse transcriptase}} \text{DNA} \xrightarrow{\text{Transcription}} \text{RNA} \xrightarrow{\text{Translation}} \text{protein}$$

The sequence of three nucleotide present in DNA or RNA molecule.

The triplet codon form amino acid after translation.

AUG code for methionine amino acid.

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Department of
Botany

PROJECT
B.Sc.II Sem III

PROJECT TOPIC: Plant Cell
Submitted by: *Ku Achal Diliprao Deshmukh.*

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Dr. Sachita Khodke
Head of Department
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Date: *21 May 2022*
Supervisor Remark _____

Academic Session 2021-2022

Introduction :-

The cell is the basic unit of life in all organisms like humans and animals. Plants are also composed of several cells. The plant cell is surrounded by a cell wall which is involved in providing shape to the plant cell. Apart from the cell wall, there are other organelles that are associated with different cellular activities.

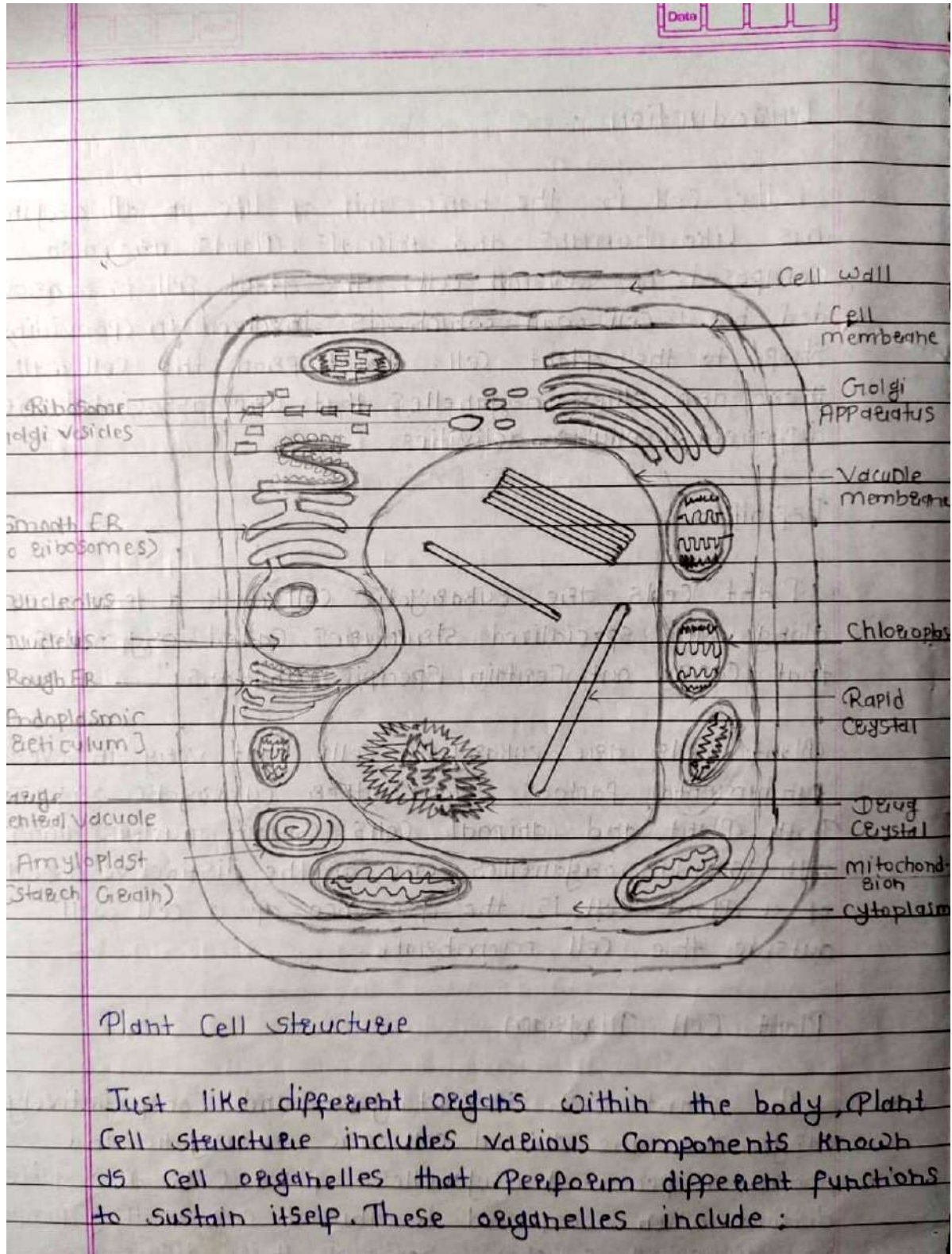
Definition :-

"Plant cells are eukaryotic cells with a true nucleus along with specialized structures called organelles that carry out certain specific functions."

Plant cells are eukaryotic cells that vary in several fundamental factors from other eukaryotic organisms. Both plant and animal cells contain nucleus along with similar organelles. One of the distinctive aspects of a plant cell is the presence of a cell wall outside the cell membrane.

Plant Cell Diagram.

The plant cell is rectangular and comparatively larger than the animal cell. Both are eukaryotic and share a few cell organelles. Plant cells are quite distinct when compared to animal cells as they perform different functions. Some of these differences can be clearly understood when the cells are examined.



It is a rigid layer which is composed of cellulose, glycoproteins, lignin, pectin and hemicellulose. It is located outside the cell membrane. It comprises proteins, polysaccharides and cellulose.

The primary function of the cell wall is to protect and provide structural support to the cell. The plant cell wall is also involved in protecting the cell against mechanical stress and to provide form and structure to the cell. It is also filters the molecules passing in and out of the cell.

The formation of the cell is guided by microtubules. It consists of three layers, namely, primary, secondary and the middle lamella. The primary cell wall is formed by cellulose laid down by enzymes.

Cell membrane

It is the semi-permeable membrane that is present within the cell wall. It is composed of a thin layer of protein and fat.

The cell membrane plays an important role in regulating the entry and exit of specific substances within the cell.

For instance, cell membrane keeps toxins from entering inside, while nutrients and essential minerals are transported across.

Nucleus :

The nucleus is a membrane-bound structure

that is present only in eukaryotic cells. The vital function of nucleus is to store DNA or hereditary information required for cell division.

1. Nucleolus : It manufactures cell's protein - producing structures and ribosomes.
2. Nucleopore : Nuclear membrane is perforated with holes called nucleopore that allows protein and nucleic acid to pass through.

Plastids

They are membrane-bound organelles that have their own DNA. They are necessary to store starch to carry out the process of photosynthesis. It is also used in the synthesis of many molecules which form the building blocks of the cell. Some of the vital types of plastids and their function are stated below:

Leucoplasts

They are found in non-photosynthetic tissues of plants. They are used for the storage of protein, lipid and starch.

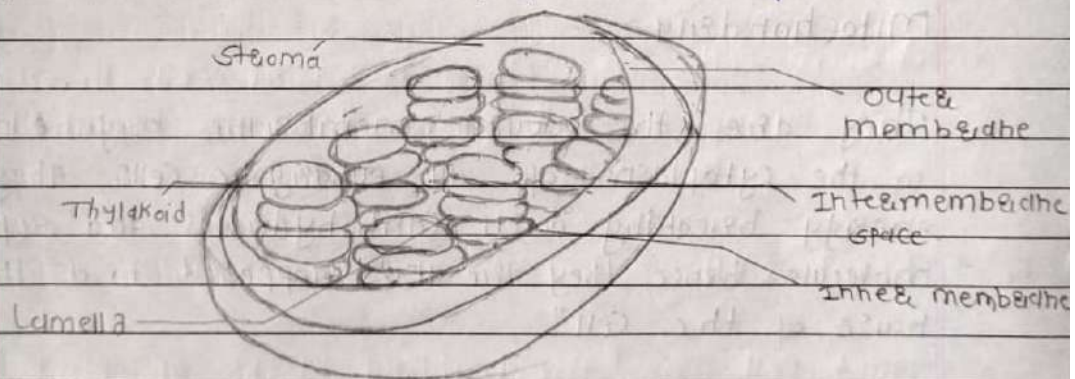
Chloroplasts

It is an elongated organelle enclosed by phospholipid membrane. The chloroplast is shaped like a disc and

and the stroma is the fluid within the chloroplast that comprises a circular DNA. Each chloroplast contains a green coloured pigment called chlorophyll which absorbs light energy from the sun and uses it to transform carbon dioxide and water into glucose.

Chromoplasts

They are heterogeneous, coloured plastids which are responsible for pigment synthesis and storage in photosynthetic eukaryotic organisms. Chromoplasts have red, orange and yellow coloured pigments which provide colour to all ripe fruits and flowers.



Central Vacuole

It occupies around 30% of the cell's volume in a mature plant cell. Tonoplast is a membrane that surrounds the central vacuole. The vital function of the central vacuole apart from storage is to sustain turgid pressure against the cell wall. The central vacuole consists of cell sap. It is a mixture of salts, enzymes, and

Golgi Apparatus

They are found in all eukaryotic cells which are involved in distributing synthesized macromolecules to various parts of the cell.

Ribosomes

They are the smallest membrane-bound organelles which comprise RNA and protein. They are the sites for protein synthesis. Hence, also referred to as the protein factories of the cell.

Mitochondria

They are the double-membrane organelles found in the cytoplasm of all eukaryotic cells. They provide energy breaking down carbohydrates and sugar molecule. Hence they are also referred to as the "power house of the cell".

Lysosome

Lysosome are called as suicidal bags as they hold digestive enzymes in an enclosed membrane. They perform the function of cellular waste disposal by digesting worn-out organelles, food particles and foreign bodies of the cell.

Plant Cell Types

NAAC CRITERION - I



PROJECT WORK

ZOOLOGY



Vinayak Vidnyan Mahavidyalaya, Nandgaon (Kh)

Session: Winter 2021-22

Department: Zoology

B.Sc. II, Sem III (Winter)

Internal Assessment (Project: Making of printed chart)

Submission Attendance

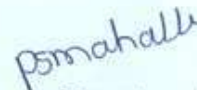
Sr. No.	Name of Students	Project Title	Teacher Incharge	Signature of students
1	Aman Ashpak Makwani	Beak	Mr. Subodh Bansod	<i>(Aman)</i>
2	Aachal Rajendra Hambarde	Modification in birds		<i>AR Hambarde</i>
3	Achal Diliprao Deshmukh			<i>Achal</i>
4	Achal Nandkishor Charde			<i>Charde</i>
5	Akshada Dnyaneshwar Dhandare			<i>Adhandare</i>
6	Amruta Sopan Kale			Leg
7	Arpita Pradiprao Thakare	Modification in birds		<i>Arthakare</i>
8	Ashutosh Dilip Ingole			<i>Ashingole</i>
9	Deep Chaudhary			<i>Deepest</i>
10	Divya Pramod Salve			<i>Divyga</i>
11	Kiran Raju Banarase	Life Cycle of Silk worm	Dr. Pratibha Mahalle	<i>(K) Banarase</i>
12	Kirti Dilip Pophale			<i>(K) Pophale</i>
13	Komal Dnyaneshwar Pund			<i>K.D. Pund</i>
14	Komal Jitendra Sen			<i>K.Sen</i>
15	Mayuri Pravin Kapade			<i>Mayuri</i>
16	Mayuri Rameshwar Deotale	Life Cycle of Honey bee	Dr. Pratibha Mahalle	<i>mayuri</i>
17	Mo Anas Mo Mustafa Makwani			<i>milly</i>
18	Nikhil Nandu Praghane			<i>NPrao</i>
19	Pranay Sanjay Marape			<i>Pranay</i>
20	Pratik Kanteshwar Inzalkar			<i>Pratik</i>
	Vaishnavi Ravindra Zatale			<i>Vaishnavi</i>
21	Pratik Pramodrao Chaudhari	Types of feathers of birds	Dr. Gajendrasingh Pachlore	<i>(P) Chaudhari</i>
22	Pratiksha Anand Ingle			<i>Pratiksha</i>
23	Priyanka Rajkumar Gajbhiye			<i>Priyanka</i>
24	Rakhi Ruprao Sonone			<i>Rakhi</i>
25	Ravina Sandip Navnage			<i>Ravina</i>
26	Rina Pravin Pophale			Poisonous Snakes

27	Sakshi Rameshwar Gulhane			Sakshi Gulhane
28	Sakshi Santosh Inzalkar			Sakshi Inzalkar
29	Samiksha Pramod Dakare			Samiksha Dakare
30	Sejal Gajananrao Chandurkar			Sejal Chandurkar
31	Sharayu Purshottam Chaudhari	Non-poisonous Snakes	Dr. Swapnil Tinkhede	Sharayu Chaudhari
32	Shital Subhashrao Lonare			Shital Lonare
33	Shital Vijay Gadhave			Shital Gadhave
34	Shivani Jaypalsingh Chavhan			Shivani Chavhan
35	Shraddha Anilrao Bankar			Shraddha Bankar
36	Shreya Gajanan Dhoke	Analogous Organs	Dr. Swapnil Tinkhede	S.G. Dhoke
37	Shreyaswi Ramesh Devtale			Shreyaswi Devtale
38	Snehal Balu Kaware			Snehal Kaware
39	Vaishnavi Damodhar Rumne			Vaishnavi Rumne
40	Vaishnavi Ravindra Khobragade			Vaishnavi Khobragade

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 ② 2000

 Teacher Incharge


 Head of Department
Head
Dept. of Zoology
 Vinayak Vidnyan Mahavidyalaya
 Nandgaon Kh.

Vinayak Vidnyan Mahavidyalaya, Nandgaon Kh.

Vinayak Vidnyan Mahavidyalaya, Nandgaon (Kh)

Session: 2021-22

Department: Zoology

B.Sc. III, Sem V (Winter)

Internal Assessment (Project)

(Weightage 04 marks)

Sl. No.	Project Title	Name of Students	Teacher (Signature)	Signature
1.	Biodiversity of Butterfly of Nandgaon Tahasil of Amravati District	Ankita. Shankarrao. Mandvgade.	Mr. Subodh Bansod	<i>[Signature]</i>
2.		Achal Arun Bansod		<i>[Signature]</i>
3.		Abhishek Prakash Chauragade		<i>[Signature]</i>
4.		Dimpal Vijayrao Jagtap		<i>[Signature]</i>
5.		Asmita Gopal Sable		<i>[Signature]</i>
6.	Biodiversity of Birds of Nandgaon Tahasil of Amravati District	Anushka Suresh Izate	Mr. Subodh Bansod	<i>[Signature]</i>
7.		Bhagyashri Jayakumar Shelke		<i>[Signature]</i>
8.		Sanika Mohan Darwhatkar		<i>[Signature]</i>
9.		Pooja Wasudev More		<i>[Signature]</i>
10.		Priyanka Pramod Gulhne		<i>[Signature]</i>
11.	Biodiversity of Zooplanktons of Nandgaon Tahasil of Amravati District	Vaishnavi Gajanan Gawner	Dr. Pratibha Mahalle	<i>[Signature]</i>
12.		Kajal Vitthalrao Shinde		<i>[Signature]</i>
13.		Pranali Gajanan Agashe		<i>[Signature]</i>
14.		Krunal Mukundrao Brode		<i>[Signature]</i>
15.		Amrapali Bhaskar Wahane		<i>[Signature]</i>
16.	Biodiversity of Beetles of Nandgaon Tahasil of Amravati District	Achal Rajesh Satre	Dr. Pratibha Mahalle	<i>[Signature]</i>
17.		Pallavi Prabhakar Gulhane		<i>[Signature]</i>
18.		Rupali Vasudeo Mahato		<i>[Signature]</i>
19.		Rutuja Zanzat		<i>[Signature]</i>
20.		Shamal Divakar Ingole		<i>[Signature]</i>
21.	Biodiversity of Moths of	Pratiksha Vilasrao Shahade	Dr.	<i>[Signature]</i>

Vinayak Vidnyan Mahavidyalaya, Nandgaon Kh.

	Nandgaon Tahasil of Amravati District		Gajendrasingh Pachlore	
22.		Shruti Sanjay Ravekar		Ravekar
23.		Sumit Madhukar Jadhao		Jadhao
24.		Prajwalsing Pratapsing Deshmukh		Deshmukh
25.		Sachin Vilas Bhagat		Bhagat
26.	Blood group survey of Vinayak Vidnyan Mahavidyalaya, Nandgaon staff and students	Snehal Dattatray Dhurte	Dr. Gajendrasingh Pachlore	Dhurte
27.		Jayashree Rajendra Tankar		Tankar
28.		Manisha Madhukar Pongle		Pongle
29.		Rushali Ganesh Vairagade		Vairagade
30.		Rajani Ashok Chavhan		Chavhan
31.	Haemoglobin survey of Vinayak Vidnyan Mahavidyalaya, Nandgaon staff and students	Vaishnavi Sanjayrao Khope	Dr. Swapnil Tinkhede	Khope
32.		Divya Murlidhar Kakade		Kakade
33.		Kunal Rajendra Bitale		Bitale
34.		Achal Gajanan Masram		Masram
35.		Harshad Gunvantrao Dote		Dote
36.	Biodiversity of Fishes of some selected waterbodies of Nandgaon Tahasil of Amravati District	Pallavi Ramrao Tangale	Dr. Swapnil Tinkhede	Tangale
37.		Shubham Bandu Sanap		Sanap
38.		Gauri Uddhavrao Dhawas		Dhawas
39.		Tejasvini Deotale		Deotale
40.		Punam Shaligram Banarse		Banarse
41.	Biodiversity of snakes of Nandgaon Tahasil of Amravati District	Sarthak Uttamrao Raut		Raut
42.		Saurabh Ramesh Kalekar		Kalekar
43.		Vaibhav Dipak Dhande		Dhande
44.		Vikram Arun Gavner		Gavner
45.				

P. S. Mahalle
Head Dept. of Zoology

Head
Dept. of Zoology
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Nandgaon Kh.

Vinayak Vidnyan Mahavidyalaya, Nandgaon (Kh)

Session: 2021-22

Department: Zoology

B.Sc. II, Sem IV (Summer)

Internal Assessment (Project)

Submission Attendance

Incharge teacher	Name	Project/model	sign
Group 1 PSM	Aachal Rajendra Hambarde	Types of Chromosome including Polyetene and Lampbrush	A Hambarde
	Achal Dilip Deshmukh		Achal Deshmukh
	Achal Nandkishor Charde		Achal Charde
	Akshada Dnyaneshwar Dhandare		Akshada Dhandare
	Aman Ashpak Makwani		Aman Makwani
Group 2 GSP	Amruta Sopan Kale	Seven Mendelian traits	A Kale
	Arpita Pradiprao Thakare		A Thakare
	Asutosh Ingole		A Ingole
	Divya Salve		Divya Salve
	Kartik Ravindra Mahure		K Mahure
Group 3 SNB	Kiran Raju Banarase	Human Karyotype	K Banarase
	Kirti Dilip Pophale		K Pophale
	Komal Dnyaneshwar Pund		K Pund
	Komal Jitendra Sen		K Sen
	Mayuri Pravin Kapade		M Kapade
Group 4 SPT	Mayuri Rameshwar Deotale	Aquatic Ecosystem	M Deotale
	Mohd Anas Mohd Mustafa Makwani		M Makwani
	Nikhil Nandu Praghane		N Praghane
	Pranay Sanjay Marape		P Marape
	Pratik Kanteshwar Inzalkar		P Inzalkar
Group 5 PSM	Pratiksha Anand Ingale	Food Pyramid	P Ingale
	Priya Gajbhiye		P Gajbhiye
	Rakhi Ruprao Sonone		R Sonone
	Ravina Sandip Navnage		R Navnage
	Rina Pravin Pophale		R Pophale
Group 6 GSP	Rohan Ramrao Jadhao	Pyramid of Energy	R Jadhao
	Sakshi Rameshwar Gulhane		S Gulhane
	Sakshi Santosh Inzalkar		S Inzalkar

	Samiksha Pramod Dakare		<i>S. Dakare</i>
	Sejal Gajanan Chandurkar		<i>Sejal</i>
Group 7 SNB	Sharayu Purshottam Chaudhari	Desert Ecosystem	<i>Sharayu</i>
	Shital Subhashrao Lonare		<i>Shital</i>
	Shital Vijay Gadhave		<i>Shital</i>
	Shivani Jaypalsingh Chavhan		<i>Shivani</i>
	Shraddha Anil Bankar		<i>Shraddha</i>
Group 8 SPT	Shreya Gajanan Dhoke	Terrestrial Ecosystem	<i>Shreya</i>
	Shreyaswi Ramesh Devtale		<i>Shreyaswi</i>
	Snehal Balu Kaware		<i>Snehal</i>
	Vaishnavi Damodhar Rumne		<i>V.D. Rumne</i>
	Vaishnavi Ravindra Khobragade		<i>Vaishnavi</i>
	Vaishnavi Ravindra Zatale		<i>Vaishnavi</i>

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Vinayak Vidnyan Mahavidyalaya, Nandgaon (Kh)

Session: 2021-22

Department: Zoology

B.Sc. III, Sem VI (Summer)

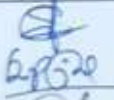
Internal Assessment (Project)

(Weightage 04 marks)

Submission Attendance

Sr. No.	Name of Students	Project Title	Teacher Incharge	Signature of student
1	Abhishek Prakash Chauragade	DNA Extraction from Mango leaf and onion by crude method	Dr. Pratibha Mahalle	<i>Abhishek</i>
2	Achal Arun Bansod			<i>Bansod</i>
3	Achal Gajanan Masram			<i>A G Masram</i>
4	Achal Rajesh Satre			<i>Achal</i>
5	Amrapali Bhaskar Wahane			<i>Amrapali</i>
6	Ankita. Shankarrao. Mandvgade.	DNA Extraction from papaya leaf and goat liver by crude method	Mr. Subodh Bansod	<i>Ankita</i>
7	Anushka Suresh Izate			<i>Anushka</i>
8	Asmita Gopal Sable			<i>Asmita</i>
9	Bhagyashri Jayakumar Shelke			<i>Bhagyashri</i>
10	Dimpal Vijayrao Jagtap			<i>Dimpal</i>
11	Divya Murlidhar Kakade	Collections of some important polypeptide sequence from NCBI data	Dr. Swapnil Tinkhede	<i>Divya</i>
12	Gauri Uddhavrao Dhawas			<i>Gauri</i>
13	Harshad Gunvantrao Dofe			<i>Harshad</i>
14	Jayashree Rajendra Tankar			<i>Jayashree</i>
15	Kajal Vitthalrao Shinde			<i>Kajal</i>
16	Kunal Rajendra Bitale	Collections of some important nucleotide sequence from NCBI data	Dr. Gajendrasingh Pachlore	<i>Kunal</i>
17	Manisha Madhukar Pongle			<i>Manisha</i>
18	Pallavi Prabhakar Gulhane			<i>Pallavi</i>
19	Pallavi Ramrao Tangale			<i>Pallavi</i>
20	Pooja Wasudev More			<i>Pooja</i>
21	Prajwalsing Pratapsing Deshmukh	List and its application of some bioinformatics softwares	Dr. Pratibha Mahalle	<i>Prajwalsing</i>
22	Pranali Gajanan Agashe			<i>Pranali</i>
23	Pratiksha Vilasrao Shahade			<i>Pratiksha</i>

24	Priyanka Pramod Gulhne			
25	Punam Shalikram Banarse			
26	Rajani Ashok Chavhan	Phylogeny of insulin of some selected species	Mr. Subodh Bansod	R. Bansod
27	Rupali Vasudeo Mahato			Rupali
28	Rushali Ganesh Vairagade			Rushali
29	Rutuja Zanzat			Rutuja
30	Sachin Vilas Bhagat			Sachin
31	Sanika Mohan Darwhatkar	Phylogeny of of some selected species	Dr. Swapnil Tinkhede	Dr. Swapnil Tinkhede
32	Sarthak Uttamrao Raut			Sarthak
33	Saurabh Ramesh Kalekar			Saurabh
34	Shamal Divakar Ingole			Shamal
35	Shruti Sanjay Ravekar			Shruti
36	Shubham Bandu Sanap	RT-PCR technique and applications	Dr. Gajendrasingh Pachlore	Dr. Gajendrasingh Pachlore
37	Snehal Dattatray Dhurte			Snehal
38	Sumit Madhukar Jadhao			Sumit
39	Tejasvini Deotale			Tejasvini
40	Vaibhav Dipak Dhande			Vaibhav
41	Vaishnavi Gajanan Gawner			Vaishnavi
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Department of Zoology

Project work submitted for the Degree course for B.Sc. (Final Year),

Semester V for session 2021-22

**BIODIVERSITY OF BIRDS OF NANDGAON
TAHASIL, DIST. AMRAVATI**

Submitted by

Anushka S. Izate
Bhagyashree J. Shelake
Sanika M. Dharwatkar
Pooja V. More
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Academic Year-2021-22

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Certificate


This is to certify that the group of students named **Anushka S. Izate, Bhagyashree J. Shelake, Sanika M. Dharwatkar, Pooja V. More, Priyanka P. Gulhane** has worked under my guidance for completion of internal assessment work as project entitled, **Biodiversity of Birds of Nandgaon Tahasil, Dist. Amravati** for the degree course of B.Sc. III, semester V in the faculty of science, department of Zoology, Vinayak Vidnyan Mahavidyalaya, Nandgaon. (Kh), Dist. Amravati.

They have completed their project work satisfactorily and it is ready for evaluation.

Date: 28 Feb. 2022

Place: Nandgaon

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Mr. Subodh Bansod
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Declaration

We are declared that with the exception of the guidance and suggestions from our supervisor Mr. Subodh Bansod the project entitled, “**Biodiversity of Birds of Nandgaon Tahasil, Dist. Amravati**” is our own review work. The work has not been submitted prior to the institute for the award of any degree.


Date: 28 Feb. 2022

Place: Nandgaon

1. Anushka S. Izate



2. Bhagyashree J. Shelake



3. Sanika M. Dharwatkar



4. Pooja V. More



5. Priyanka P. Gulhane



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1. Introduction

Birds are the endothermic vertebrates, characterized by feathers, toothless beaked jaws, hollow strong yet light weight skeleton with pneumatic cavities, streamline body. It minimizes their weight and makes them aerodynamic. Man is always enthralled by these flying beauties of various sizes and various colours since ancient time and hence they occupy an important place. Birds fly at different altitudes, longitude and latitude, with different speed. Some birds migrate from their breeding and resting to feeding and resting grounds. Avian population have a central role in ecosystem functioning and ecosystem services, economic benefits like seed dispersal, pollination and re colonization and restoration of disturbed ecosystem (Sekercioglu *et. al.* 2004). They are bioindicators and appraise the health of environment and ecosystems. Birds are one of the most studied animals in the world; about 1800 (American Museum of natural History) species of birds are recorded across the globe of which peninsular India contributes about 1375 varieties. Nandgaon Khandeshwar is the region in central Indian area will help to identify and understand bird diversity of this division for the students, nature enthusiasts, birders, researchers. This will also serve as valuable database for further study.

Importance of birds -

As Food

Birds have always been an important food source of man. Chickens, Turkeys, Geese and Ducks are raised for the production of meat and eggs.

In Food Chain

Birds occupy many levels of trophic webs, from midlevel consumers to top predators. All the eagles are secondary consumers and birds like vultures are scavengers.

In Agro-economy

Birds feed on insect and their larva and keep pest population in control. This help in increasing overall productivity of agriculture.

As Pollinators

Ornithophily is a type of pollination by birds. Flowering plants, especially species bearing red colour flowers shows modification in the structure and orientation of their stigmas and stamens holding ample of nectar and ensuring contact with brushy tongue and long bill of the birds like sunbirds.

As Bioindicators

Bioindicators are species used to appraise the health condition of the environment or species ecosystem and are capable of determining the environmental integrity using their functions and populations. Individual or groups of species are selected as models to evaluate the health of the ecosystem for eg. Black hooded oriole with conservation status least concern may be selected to understand habitat loss and other factors responsible for their decreasing population in a particular ecosystem

2. Review of Literature

Approximately 5% of geographical area in Maharashtra is covered by protected forest, which is crucial for conserving the state's natural resources including its wildlife. The birds since they are the second most studied group after mammals. About 9000 bird species are known across the globe, of which India contributes 1295 including 412 species from Vidarbha region of Maharashtra. Avian population plays an important role in ecosystem function and ecosystem services. Birds are bio-indicators and can be used to appraise the status and health of an environment and its ecosystems. Birds play a vital role in ecological processes in both forest and farmland ecosystems, particularly in pollination, seed dispersal, and pest control. (Whelan *et al.* 2008; Mulwa *et al.* 2012). Moreover, they also contribute to nutrient cycling and soil formation. They also richly contribute to the recolonization and restoration of disturbed ecosystems (Sekercioglu *et al.* 2004; Sekercioglu 2006). Birds act as mobile links which transfer energy both within and among ecosystems that are crucial for maintaining ecosystem function and resilience (Lundberg and Moberg 2003). In a way, it directly impacts human health, economy, food production as well as millions of other species. Therefore, it is important to understand regional diversity and ecology of birds (Ndang'ang'a *et al.* 2013). Many authors have studied bird diversity of Vidarbha region. The annotated checklist of Nagpur area represents 284 species of birds. In Pohara-Malkhed reserve Forest, district Amravati, 171 species have been studied (Wadatkar and Kasambe 2002; Kasambe 2009). 135 species of birds are observed in and around Ambazari Lake Nagpur (Kedar 2012). A total of 312 species of birds have been recorded from the nearby area of Navegaon National Park Gondia, 76 species of birds from Chaprala wildlife sanctuary, Gadchiroli (Paliwal 2013; Chauhan and Dhamani 2014; Wagh and Tiwari 2020). 92 species of birds are studied from Tamkarada forest near Malegaon tehsil of Washim district (Ingle *et al.* 2015). From Junona lake Chandrapur, 99 species of birds are listed. 296 species of birds have been recorded from Pandharkawada forest division (Virani 2021).

3. Material and Methods

Survey of birds diversity recorded by weekly visit nearby places and waterbodies of Nandgaon (Kh) Tahasil. Binocular and camera (Point shoot, Mobile) was used for bird watching and to photograph them. Population of birds was observed and documented.

Bird diversity is studied and observed the food of species They are categories into widespread resident, widespread winter visitor, local resident, seasonal resident, widespread resident and winter visitor, local resident and winter visitor, seasonal winter visitor and is classified on the basis of “The Book of Indian Birds” (Ali, 1996) and “Pocket Guides of Birds of the Indian Subcontinent” (Grimmet and Inskipp, 2010). Diversity of bird is taxonomically classified and categorized on threaten scale by using latest IUCN Red list.

Study Area

Sawaner Dam, Shivani River, Channi Dam, Outskirt of Nandgaon city was the places for the survey. Avifaunal observation as mention in table and shown in pictures and short information.

4. Observation and Result

The bird diversity is observed and recorded from some water bodies, garden, field and residential places of Nandgaon tehsil as follows...



Common name: **Grey francolin**

Scientific name: *Francolinus pondicerianus*

Description: Buff throat with dark necklace; reddish legs.

Size: 33 cm **Food:** Grains, Insects



Common name: **Indian peafowl**

Scientific name: *Pavo cristatus*

Description: Male - Long attractive train of ocellated feathers.

Size: 92-122 cm **Food:** Grains, Insects



Common name: **Spot billed duck**

Scientific name: *Anas poecilorhyncha*

Description: Yellow tip on black bill; red base; green speculum.

Size: 61 cm **Food:** small insects, worms



Common name: **Common hoopoe**

Scientific name: *Upupa epops*

Description: Zebra marking on wings;
erectile crown.

Size: 31 cm

Food: Insects



Common name: **Indian roller**

Scientific name: *Coracias benghalensis*

Description: Blue cap; lilac throat;
pale and dark blue wings.

Size: 31 cm

Food: Insects



Common name: **Common kingfisher**

Scientific name: *Alcedo atthis*

Description: Rufous orange ear converts;
greenish blue moustache.

Size: 18 cm

Food: small fishes, insects



Common name: **White throated kingfisher**

Scientific name: *Halcyon smyrnensis*

Description: White wing patch;
white throat and breast.

Size: 28 cm

Food: small fishes, insects



Common name: **Little Green bee-eater**

Scientific name: *Merops orientalis*

Description: Rufous head;
blue-green throat.

Size: 21 cm **Food:** honey-bees, insects



Common name: **Asian koel**

Scientific name: *Eudynamys scolopaceus*

Description: Male - red eyes, green bill, long tail.
Female - white spotted, brownish;
only male sings.

Size: 43 cm **Food:** Insects, fruits



Common name: **Southern Coucal**

Scientific name: *Centropus sinensis*

Description: With brighter & more uniform
chestnut wings.

Size: 48 cm **Food:** Insects, small animals



Common name: **Rose-ring Parakeet**

Scientific name: *Psittacula krameri*

Description: Male - black and rose coloured collar
(absent in female).

Size: 36 cm **Food:** Grains, Fruits



Common name: **Spotted Owlet**

Scientific name: *Athene brama*

Description: White spots on crown and back; underpart with less brown spots.

Size: 21 cm Food: small invertebrates, insects



Common name: **Rock Pigeon**

Scientific name: *Columba livia*

Description: Grey with two wing bands; terminal dark tail band.

Size: 33 cm Food: Grains, insects



Common name: **Little Brown Dove**

Scientific name: *Streptopelia senegalensis*

Description: Chessboard pattern on upper breast.

Size: 27 cm Food: Grains, Fruits



Common name: **Spotted Dove**

Scientific name: *Streptopelia chinensis*

Description: Chessboard pattern on hind neck.

Size: 30 cm Food: Grains, Fruits



Common name: **Red-wattled Lapwing**

Scientific name: *Vanellus indicus*

Description: Black throat & breast; red wattle;
Yellow legs.

Size: 32-35 cm **Food:** Small reptiles, insects



Common name: **River tern**

Scientific name: *Sterna aurantia*

Description: Uncrested head; forked tail;
red legs; yellow bill.

Size: 42 cm **Food:** Small reptiles, insects



Common name: **Black shoulder kite**

Scientific name: *Elanus caeruleus*

Description: Red iris; black shoulders and under-primaries.

Size: 33 cm **Food:** Small reptiles, Birds



Common name: **Little Cormorant**

Scientific name: *Phalacrocorax niger*

Description: Whitish chin;
lacks yellow gular pouch.

Size: 51 cm **Food:** Small reptiles



Common name: **Little Egret**

Scientific name: *Egretta garzetta*

Description: Black bill; black legs with yellow toes.

Size: 63 cm **Food:** small invertebrates, fishes



Common name: **Grey Heron**

Scientific name: *Ardea cinerea*

Description: Streaked neck and belly;
yellow beak; black crown & crest.

Size: 100 cm **Food:** small invertebrates, fishes



Common name: **Pond Heron**

Scientific name: *Ardeola grayii*

Description: Brownish plumage;
white wings in flight

Size: 45 cm **Food:** small invertebrates, fishes

Result and Discussion

Total 23 bird species are observed at various places of Nandgaon Khandeshwar Tahasil. Bird species detailed by its common name, Scientific name, its description, size, food, nest and IUCN status included by the standard reference books and field guide books.

On waterbodies 13 bird species are observed, at outskirts of Nandgaon city 16 birds species are observed, at Sawaner dam 19 species are observed, at Channi dam 12 species are observed.

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Vinayak Vidnyan Mahavidyalaya, Nandgaon. (Kh)

Department of Zoology

Project work submitted for the Degree course for B.Sc. II

Semester IV for session 2021-22

GENETIC DISORDERS

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Declaration

We are declared that with the exception of the guidance and suggestions from our supervisor Dr. Swapnil P. Tinkhede the project entitled, "Genetic Disorders" is our own review work. The work has not been submitted prior to the institute for the award of any degree.

Date: 28 Feb. 2022

Place: Nandgaon

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They have completed their project work satisfactorily and it is ready for evaluation.

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Introduction

A **genetic disorder** is a genetic problem caused by one or more abnormalities in the genome, especially a condition that is present from birth (congenital). Most genetic disorders are quite rare and affect one person in every several thousands or millions.

Genetic disorders may be hereditary, passed down from the parents' genes. In other genetic disorders, defects may be caused by new mutations or changes to the DNA. In such cases, the defect will only be passed down if it occurs in the germ line.

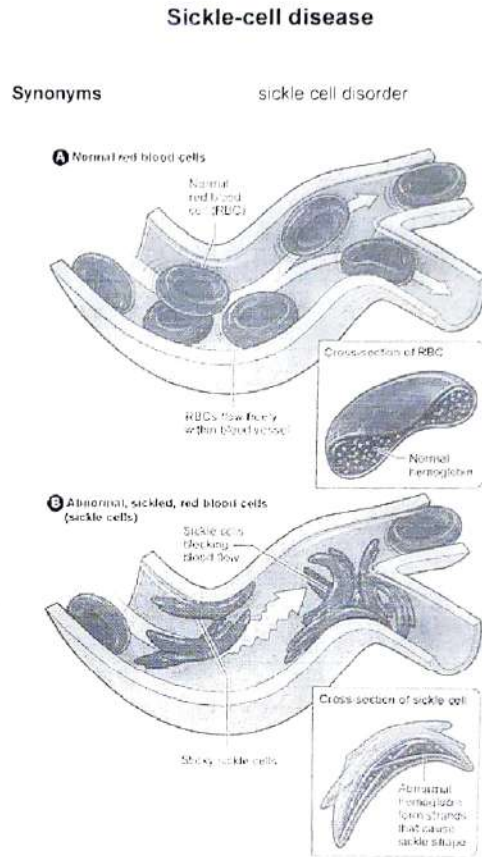
The same disease, such as some forms of cancer, may be caused by an inherited genetic condition in some people, by new mutations in other people, and mainly by environmental causes in other people. Whether, when and to what extent a person with the genetic defect or abnormality will actually suffer from the disease is almost always affected by the environmental factors and events in the person's development.

Some types of recessive gene disorders confer an advantage in certain environments when only one copy of the gene is present.

Contents

- Sickie cell
- Diabetes mellitus
- Huntingtons chorea
- Reference

Sickle-cell disease -



Sickle-cell disease (SCD) is a group of blood disorders typically inherited from a person's parents. The most common type is known as **sickle-cell anaemia (SCA)**. It results in an abnormality in the oxygen-carrying protein haemoglobin (hemoglobin S) found in red blood cells.

This leads to a rigid, sickle-like shape under certain circumstances. Problems in sickle cell disease typically begin around 5 to 6 months of age. A number of health problems may develop, such as attacks of pain ("sickle-cell crisis"), anemia, swelling in the hands and feet, bacterial infections, and stroke.

Long term pain may develop as people get older. The average life expectancy in the developed world is 40 to 60 years.^[1]

Sickle-cell disease occurs when a person inherits two abnormal copies of the haemoglobin gene, one from each parent. This gene occurs in chromosome 11. Several subtypes exist, depending on the exact mutation in each haemoglobin gene.

An attack can be set off by temperature changes, stress, dehydration, and high altitude. A person with a single abnormal copy does not usually have symptoms and is said to have sickle-cell trait. Such people are also referred to as carriers. Diagnosis is by a blood test and some countries test all babies at birth for the disease. Diagnosis is also possible during pregnancy.

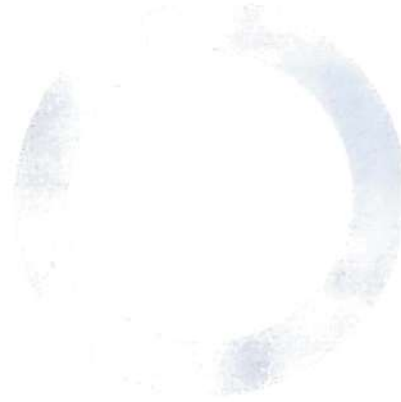
The care of people with sickle-cell disease may include infection prevention with vaccination and antibiotics, high fluid intake, folic acid supplementation, and pain medication. Other measures may include blood transfusion, and the medication hydroxycarbamide (hydroxyurea). A small proportion of people can be cured by a transplant of bone marrow cells.

As of 2013 about 3.2 million people have sickle-cell disease while an additional 43 million have sickle-cell trait. About 80% of sickle-cell disease cases are believed to occur in sub-Saharan Africa. It also occurs relatively frequently in parts of India, the Arabian peninsula, and among people of African origin living in other parts of the world.

In 2013, it resulted in 176,000 deaths, up from 113,000 deaths in 1990. The condition was first described in the medical literature by the American physician James B. Herrick in 1910. In 1949 the genetic transmission was determined by E. A. Beet and J. V. Neel. In 1954 the protective effect against malaria of sickle-cell trait was described.

Diabetes mellitus

Diabetes mellitus -



Universal blue circle symbol for diabetes

Diabetes mellitus (DM), commonly referred to as **diabetes**, is a group of metabolic diseases in

which there are high blood sugar levels over a prolonged period. Symptoms of high blood sugar include frequent urination, increased thirst, and increased hunger. If left untreated, diabetes can cause many complications.

Acute complications can include diabetic ketoacidosis, nonketotic hyperosmolar coma, or death. Serious long-term complications include heart disease, stroke, chronic kidney failure, foot ulcers, and damage to the eyes.

Diabetes is due to either the pancreas not producing enough insulin or the cells of the body not responding properly to the insulin produced. There are three main types of diabetes mellitus:

- Type 1 DM results from the pancreas's failure to produce enough insulin. This form was previously referred to as "insulin-dependent diabetes mellitus" (IDDM) or "juvenile diabetes". The cause is unknown.
- Type 2 DM begins with insulin resistance, a condition in which cells fail to respond to insulin properly. As the disease progresses a lack of insulin may also develop.

- This form was previously referred to as "non insulin-dependent diabetes mellitus" (NIDDM) or "adult-onset diabetes". The most common cause is excessive body weight and not enough exercise.
- Gestational diabetes is the third main form and occurs when pregnant women without a previous history of diabetes develop high blood-sugar levels.

Prevention and treatment involve maintaining a healthy diet, regular physical exercise, a normal body weight, and avoiding use of tobacco. Control of blood pressure and maintaining proper foot care are important for people with the disease.

Type 1 DM must be managed with insulin injections. Type 2 DM may be treated with medications with or without insulin. Insulin and some oral medications can cause low blood sugar.

Weight loss surgery in those with obesity is sometimes an effective measure in those with type 2 DM. Gestational diabetes usually resolves after the birth of the baby.

As of 2015, an estimated 415 million people had diabetes worldwide, with type 2 DM making up about 90% of the cases. This represents 8.3% of the adult population, with equal rates in both women and men. As of 2014, trends suggested the rate would continue to rise.

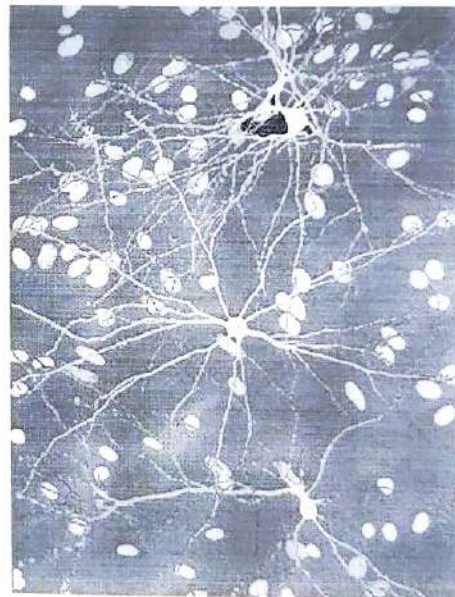
Diabetes at least doubles a person's risk of early death. From 2012 to 2015, approximately 1.5 to 5.0 million deaths each year resulted from diabetes. The global economic cost of diabetes in 2014 was estimated to be US\$612 billion. In the United States, diabetes cost \$245 billion in 2012.

Huntington's disease

Huntington's disease (HD)

Synonyms

Huntington's chorea



Huntington's disease (HD), also known as **Huntington's chorea**, is an inherited disorder that results in death of brain cells.

The earliest symptoms are often subtle problems with mood or mental abilities. A general lack of coordination and an unsteady gait often follow. As the disease advances, uncoordinated, jerky body movements become more apparent. Physical abilities gradually worsen until coordinated movement becomes difficult and the person is unable to talk. Mental abilities generally decline into dementia.

The specific symptoms vary somewhat between people. Symptoms usually begin between 30 and 50 years of age, but can start at any age. The disease may develop earlier in life in each successive generation.

About 8% of cases start before the age of 20 years and typically present with symptoms more similar to Parkinson's disease. People with HD often underestimate the degree of their problems.

HD is typically inherited from a person's parents, with 10% of cases due to a new mutation. The disease is caused by an autosomal dominant mutation in either of an individual's two copies of a gene called Huntingtin. This means a child of an affected person typically has a 50% chance of inheriting the disease. The Huntingtin gene provides the genetic information for a protein that is also called "huntingtin" Expansion of CAG (cytosine-adenine-guanine) triplet repeats in the gene coding for the Huntingtin protein results in an abnormal protein, which gradually damages cells in the brain, through mechanisms that are not fully understood. Diagnosis is by genetic testing, which can occur at any point in time, regardless of whether or not symptoms are present. This fact raises several ethical debates: the age at which an individual is considered mature enough to choose testing; whether parents have the right to have their children tested; and managing confidentiality and disclosure of test results.

There is no cure for HD. Full-time care is required in the later stages of the disease. Treatments can relieve some symptoms and in some improve quality of life. The best evidence for treatment of the movement problems is with tetrabenazine. HD affects about 4 to 15 in 100,000 people of European descent. It is rare among Japanese and occurs at an unknown rate in Africa. The disease affects men and women equally. Complications such as pneumonia, heart disease, and physical injury from falls reduce life expectancy. Suicide is the cause of death in about 9% of cases. Death typically occurs fifteen to twenty years from when the disease was first detected.

References

1. **Jump up**^ WGBH Educational Foundation
2. **Jump up**^ Keane MG; Pyeritz RE (May 2008). "Medical management of Marfan syndrome". *Circulation*. **117** (21): 2802–13. doi:10.1161/CIRCULATIONAHA.107.693523. PMID 18506019.
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8. **Jump up**^ Griffiths, Anthony J.F.; Wessler, Susan R.; Carroll, Sean B.; Doebley, John (2012). *Introduction to Genetic Analysis (10th ed.)*. New York: W.H. Freeman and Company. p. 58. ISBN 978-1-4292-2943-2.
9. **Jump up**^ Wade, Nicholas (January 29, 2006). "Japanese Scientists Identify Ear Wax Gene". *New York Times*.
10. **Jump up**^ Yoshiura K; Kinoshita A; Ishida T; et al. (March 2006). "A SNP in the ABCC11 gene is the determinant of human earwax type". *Nat. Genet.* **38** (3): 324–30. doi:10.1038/ng1733. PMID 16444273.

NAAC CRITERION - I



PROJECT WORK

CHEMISTRY





SANG GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI
Pravin Khodke Memorial Trust's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati

Date: 17th January 2022

Department of Chemistry

Notice

All the faculty members of Department of Chemistry are hereby informed that as per the curriculum of Sang Gadge Baba Amravati University, Amravati, we need to give "Project Topics" to the students of **BSc Part II Semester III**. This project will be a part of internal assessment of the students. To discuss this point there will be meeting in the department of Chemistry on **18th January 2022 at 4 PM**.

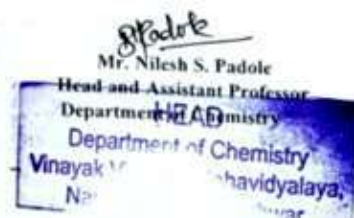
Agenda of the meeting

1. To discuss about the Project topics for the class BSc Part II semester III.
2. To prepare and provide guidelines to the students regarding project writing.
3. To prepare the front page for project submission.
4. To decide submission date for the project.
5. To circulate the message among the students of BSc Part II Semester III.

All are requested to consider this notice and be there in the department of chemistry on **18th January 2022 at 4 PM**.

1. Dr. Vinod M. Sherekar

2. Dr. Kavita P. Kakade





SATYU NAGAR, NANDGAON KHANDESHWAR UNIVERSITY, AMRAVATI (AFFILIATED)

Pravin Khodke Memorial Trust's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati

Date 18th January 2022

Department of Chemistry

The meeting was held in the department of chemistry on 18th January 2022 from 4 PM onwards where following points were discussed and finalized

Minutes of Meeting:

1. There was thorough discussion on Project topics for the class **BSc Part II Semester III** with all faculty members where following topics were finalized
 - a) **Food Adulteration**
 - b) **Chemical Composition of Medicine used in heart disease**
 - c) **Chemical Composition of Medicine used in Cancer disease**
2. **Dr. Kavita P. Kakade** had taken the responsibility to prepare the guidelines for the students which will help them to write the project.
3. **Mr. Nilesh S. Padole** had taken the responsibility to prepare the front page for project submission.
4. In thorough discussion with all faculty members, **22nd January 2022** was decided for project submission.
5. **Dr. Vinod M. Sherekar** had taken the responsibility to circulate the message among the students of BSc Part II semester III.

The meeting was attended by following faculty members

1. **Dr. Vinod M. Sherekar**

2. **Dr. Kavita P. Kakade**

Padole
Mr. Nilesh S. Padole
Head and Assistant Professor
Department of Chemistry
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khandeshwar



SANT GADGE BABA AMBABAI UNIVERSITY, AMBAPUR, AMBAPUR
Pravin Khodke Memorial Trust's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati

Department of Chemistry

NOTICE

All the students of B.Sc. Part II Semester III (CHEMISTRY) of the session 2021-2022 are hereby inform that, you need to submit Project for the subject chemistry on 22nd January 2022 in Chemistry Laboratory. This Project submission is a part of internal assessment which carries 04 Marks.

The topics for the project are

- d) Food Adulteration
- e) Chemical Composition of Medicine used in heart disease
- f) Chemical Composition of Medicine used in Cancer disease

All the details regarding project will be shared separately on chemistry What's app group on **18th January 2022 till evening 6PM.**

If you have any difficulties or queries regarding project submission you can contact with below mentioned teacher.

1. Dr. Kavita P. Kakade

2. Dr. Vinod M. Sherekar

Date: 18th January 2022

Mr. Nilesh S. Padole
Head and Assistant Professor
Department of Chemistry
Department of Chemistry
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khandeshwar



Pravin Khodke Memorial Trust's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati


Department of Chemistry

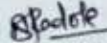
Class: B.Sc. Part II Semester III

Date: 18th January 2022

STUDENT LIST WITH TOPIC

Sr. No.	Name of Student	Topic	In-Charge Teacher
1	AACHAL R. HAMBARDE	FOOD ADULTERATION	Dr. Kavita P. Kakade
2	ACHAL DILIP DESHMUKH		
3	ACHAL N. CHARDE		
4	AKSHADA D. DHANDARE		
5	AMAN ASHPAK MAKWANI		
6	AMRUTA SOPAN KALE		
7	ARPITA P. THAKARE		
8	ASHUTOSH DILIP INGOLE		
9	DIVYA PRAMOD SALVE		
10	KARTIK RAVINDRA MAHURE		
11	KIRAN RAJU BANARASE		
12	KIRTI DILIP POPHALE		
13	KOMAL D. PUND		
14	KOMAL JITENDRA SEN		
15	MAYURI PRAVIN KAPADE		
16	MAYURI R. DEOTALE		
17	MOHD A. M. M. MAKWANI		


Dr. Kavita P. Kakade
In-Charge Teacher


Mr. Nilesh S. Padole
Head of Department

HEAD
Department of Chemistry
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khandeshwar



SAHYADRI BANSKARAN UNIVERSITY, AMRAVATI APPELLATE
Pravin Khodke Memorial Trust's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati

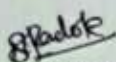
Department of Chemistry

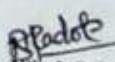
Class: B.Sc. Part II Semester III

Date: 18th January 2022

STUDENT LIST WITH TOPIC

Sr. No.	Name of Student	Topic	In-Charge Teacher
18	NIKHIL NANDU PRAGHANE	CHEMICAL COMPOSITION OF MEDICINE USED IN HEART DISEASE	Mr. Nilesh S. Padole
19	PRANAY SANJAY MARAPE		
20	PRATIK K. INZALKAR		
21	PRATIKSHA ANAND INGALE		
22	PRIYANKA R. GAJBHIYE		
23	RAKHI RUPRAO SONONE		
24	RAVINA SANDIP NAVNAGE		
25	RINA PRAVIN POPHALE		
26	ROHAN RAMRAO JADHAO		
27	SAKSHI R. GULHANE		
28	SAKSHI SANTOSH INZALKAR		
29	SAMIKSHA P. DAKARE		
30	SEJAL G. CHANDURKAR		
31	SHARAYU P. CHAUDHARI		
32	SHITAL S. LONARE		
33	SHITAL VIJAY GADHAVE		
34	SHIVANI J. CHAVHAN		


Mr. Nilesh S. Padole
In-Charge Teacher


Mr. Nilesh S. Padole
Head of Department
HEAD
Department of Chemistry
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khandeshwar



Pravin Khodke Memorial Trust's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati


Department of Chemistry

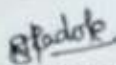
Class: B.Sc. Part II Semester III

Date: 18th January 2022

STUDENT LIST WITH TOPIC

Sr. No.	Name of Student	Topic	In-Charge Teacher
35	SHRADDHA ANIL BANKAR	CHEMICAL COMPOSITION OF MEDICINE USED IN CANCER DISEASE	Dr. Vinod M. Sherekar
36	SHREYA GAJANAN DHOKE		
37	SHREYASWI R. DEVTALE		
38	SNEHAL BALU KAWARE		
39	VAISHNAVI D. RUMNE		
40	VAISHNAVI R. KHOBRAGADE		
41	VAISHNAVI R. ZATALE		
42	ACHAL RAMDAS BIJAVE		
43	ADIBA SAMAN A. KHAN		
44	KALYANI NARIHARI WAKODE		
45	RUTIK T. JAWALKAR		
46	SAHIL VIKAS RAUT		
47	SAKSHI MAHENDRA DUKARE		
48	SAKSHI VILAS DHAWALE		
49	SAYALI PRAMOD GAWANDE		
50	SHARDHA VIJAY RAUT		
51	VEVEKANAND ANIL PAWAR		


Dr. Vinod M. Sherekar
In-Charge Teacher


Mr. Nilesh S. Padole
Head of Department

Department of Chemistry
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khandeshwar



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Vinayak Vidnyan Mahavidyalaya
 Tq. Nandgaon Khandeshwar, Dist. Amravati

Department of Chemistry

Class: B.Sc. Part II Semester III

Date: 22nd January 2022

PROJECT SUBMISSION LIST

Sr. No.	Name of Student	Topic	Signature of Student	In-Charge Teacher Sign
1	AACHAL R. HAMBARDE	FOOD ADULTERATION	R Hambarde	Kakade
2	ACHAL DILIP DESHMUKH		A Deshmukh	
3	ACHAL N. CHARDE		A N Charde	
4	AKSHADA D. DHANDARE		A Dhandare	
5	AMAN ASHPAK MAKWANI		A Makwani	
6	AMRUTA SOPAN KALE		A Skale	
7	ARPITA P. THAKARE		A Thakare	
8	ASHUTOSH DILIP INGOLE		A Ingole	
9	DIVYA PRAMOD SALVE		D Salve	
10	KARTIK RAVINDRA MAHURE		K Mahure	
11	KIRAN RAJU BANARASE		K Banarase	
12	KIRTI DILIP POPHALE		K Pophale	
13	KOMAL D. PUND		K D Pund	
14	KOMAL JITENDRA SEN		K Sen	
15	MAYURI PRAVIN KAPADE		M Kapade	
16	MAYURI R. DEOTALE		M Deotale	
17	MOHD A. M. M. MAKWANI		M Makwani	

Kakade
 Dr. Kavita P. Kakade
 In-Charge Teacher

Remark:

Padole
 Mr. Nilesh S. Padole
 Head of Department

HEAD
 Department of Chemistry
 Vinayak Vidnyan Mahavidyalaya,
 Nandgaon Khandeshwar



PRVIN KHODKE MEMORIAL TRUST'S
Vinayak Vidnyan Mahavidyalaya
 Tq. Nandgaon Khandeshwar, Dist. Amravati

Department of Chemistry

Class: B.Sc. Part II Semester III

Date: 22nd January 2022

PROJECT SUBMISSION LIST

Sr. No.	Name of Student	Topic	Signature of Student	In-Charge Teacher Sign
18	NIKHIL NANDU PRAGHANE	CHEMICAL COMPOSITION OF MEDICINE USED IN HEART DISEASE.	<i>N. Praghane</i>	<i>S. Padole</i>
19	PRANAY SANJAY MARAPE		<i>P. Marape</i>	
20	PRATIK K. INZALKAR		<i>P. K. Inzalkar</i>	
21	PRATIKSHA ANAND INGALE		<i>P. Ingale</i>	
22	PRIYANKA R. GAJBHIYE		<i>P. Gajbiye</i>	
23	RAKHI RUPRAO SONONE		<i>R. Sonone</i>	
24	RAVINA SANDIP NAVNAGE		<i>R. Navnage</i>	
25	RINA PRAVIN POPHALE		<i>R. Pophale</i>	
26	ROHAN RAMRAO JADHAO		<i>R. Jadhao</i>	
27	SAKSHI R. GULHANE		<i>S. R. Gulhane</i>	
28	SAKSHI SANTOSH INZALKAR		<i>S. S. Inzalkar</i>	
29	SAMIKSHA P. DAKARE		<i>S. Dakare</i>	
30	SEJAL G. CHANDURKAR		<i>S. Chandurkar</i>	
31	SHARAYU P. CHAUDHARI		<i>S. Chaudhari</i>	
32	SHITAL S. LONARE		<i>S. Lonare</i>	
33	SHITAL VIJAY GADHAVE		<i>S. Gadhave</i>	
34	SHIVANI J. CHAVHAN	<i>S. Chavhan</i>		

S. Padole
 Mr. Nilesh S. Padole
 In-Charge Teacher

Remark:

S. Padole
 Mr. Nilesh S. Padole
 Head of Department
 HEAD
 Department of Chemistry
 Vinayak Vidnyan Mahavidyalaya,
 Nandgaon Khandeshwar



SANT GAUGE BABA AMBAKARJI UNIVERSITY, AMBAKARJI AFFILIATED
Pravin Khodke Memorial Trust's
Vinayak Vidnyan Mahavidyalaya
 Tq. Nandgaon Khandeshwar, Dist. Amravati


Department of Chemistry

Class: B.Sc. Part II Semester III

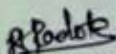
Date: 22nd January 2022

PROJECT SUBMISSION LIST

Sr. No.	Name of Student	Topic	Signature of Student	In-Charge Teacher Sign
35	SHRADDHA ANIL BANKAR	CHEMICAL COMPOSITION OF MEDICINE USED IN CANCER DISEASE.	S Bankar	A. Sherekar
36	SHREYA GAJANAN DHOKE		S. G. Dhoke	
37	SHREYASWI R. DEVTALE		S. R. Devtale	
38	SNEHAL BALU KAWARE		S. B. Kaware	
39	VAISHNAVI D. RUMNE		V. D. Rumne	
40	VAISHNAVI R. KHOBRAGADE		V. R. Khobragade	
41	VAISHNAVI R. ZATALE		V. R. Zatale	
42	ACHAL RAMDAS BIJAVE		A. R. Bijave	
43	ADIBA SAMAN A. KHAN		A. S. Khan	
44	KALYANI NARHARI WAKODE		K. N. Wakode	
45	RUTIK T. JAWALKAR		R. T. Jawalkar	
46	SAHIL VIKAS RAUT		S. V. Raut	
47	SAKSHI MAHENDRA DUKARE		S. M. Dukare	
48	SAKSHI VILAS DHAWALE		S. V. Dhawale	
49	SAYALI PRAMOD GAWANDE		S. P. Gawande	
50	SHARDDHA VIJAY RAUT		S. V. Raut	
51	VEVEKANAND ANIL PAWAR	V. A. Pawar		


 Dr. Vinod M. Sherekar
 In-Charge Teacher

Remark:


 Mr. Nilesh S. Padole
 Head of Department
HEAD
 Department of Chemistry
 Vinayak Vidnyan Mahavidyalaya,
 Nandgaon Khandeshwar



PRAVIN KHODKE MEMORIAL TRUST'S
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati

Date 17th January 2022

Department of Chemistry

Notice

All the faculty members of Department of Chemistry are hereby informed that as per the curriculum of Sang Gadge Baba Amravati University, Amravati, we need to give "Project Topics" to the students of **Bsc Part III Semester V**. This project will be a part of internal assessment of the students. To discuss this point there will be meeting in the department of Chemistry on **18th January 2022 at 4 PM**.

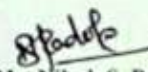
Agenda of the meeting

1. To discuss about the Project topics for the class BSc Part III semester V.
2. To prepare and provide guidelines to the students regarding project writing.
3. To prepare the front page for project submission.
4. To decide submission date for the project.
5. To circulate the message among the students of BSc Part III Semester V.

All are requested to consider this notice and be there in the department of chemistry on **18th January 2022 at 4 PM**.

1. Dr. Vinod M. Sherekar

2. Dr. Kavita P. Kakade


Mr. Nilesh S. Padole

Head and Assistant Professor
Department of Chemistry
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khandeshwar



Pravin Khodke Memorial Trust's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati

Date 18th January 2022

Department of Chemistry

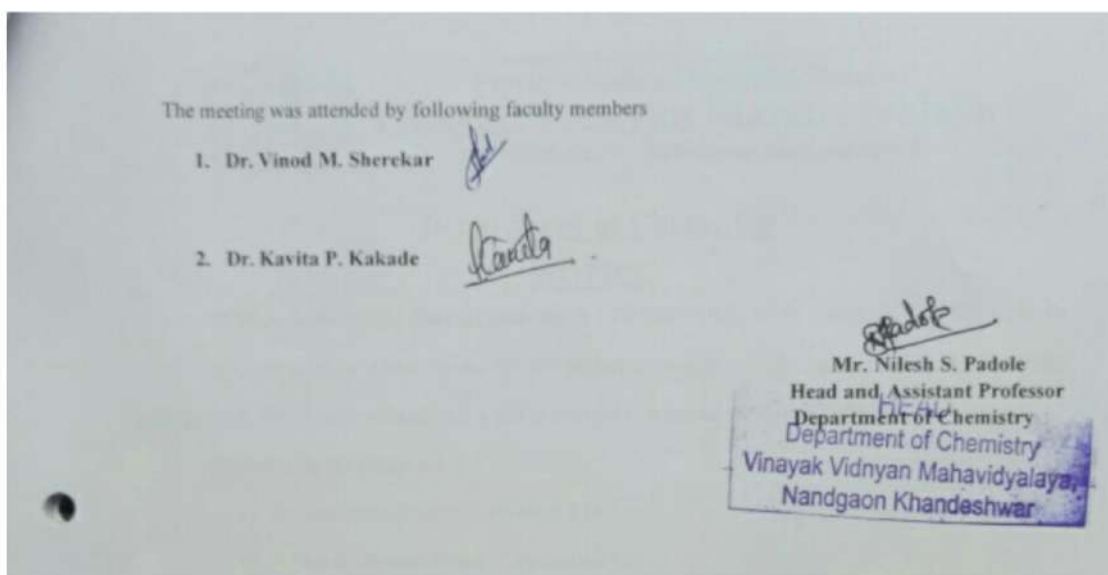
The meeting was held in the department of chemistry on 18th January 2022 from 4 PM onwards where following points were discussed and finalized

Minutes of Meeting:

1. There was thorough discussion on Project topics for the class **BSc Part III Semester V** with all faculty members, where following topics were finalized
 - a) Oil and Natural Gas Corporation Ltd.
 - b) National Thermal Power Corporation Ltd
 - c) Indian Oil Corporation Ltd
 - d) Bhabha Atomic Research Center
 - e) Defense Research Development Organization
 - f) Department of Atomic Energy.

These topics were selected by keeping the thing in mind that students must know about the government organization/ semi government organization/ Public Sector Undertaking organization who demand BSc with chemistry subject for their future perspective

2. Mr. Nilesh S. Padole had taken the responsibility to prepare the guidelines for the students which will help them to write the project.
3. Mr. Nilesh S. Padole had taken the responsibility to prepare the front page for project submission.
4. In thorough discussion with all faculty members, 22nd January 2022 was decided for project submission.
5. Dr. Vinod M. Sherekar had taken the responsibility to circulate the message among the students of BSc Part II semester III.





SANT GANESH BABA GURU OF AN UNIVERSITY, AMRAVATI AFFILIATED
Pravin Khodke Memorial Trust's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati

Department of Chemistry

NOTICE

All the students of B.Sc. Part III Semester V (CHEMISTRY) of the session 2021-2022 are hereby inform that, you need to submit Project for the subject chemistry on 22nd January 2022 in Chemistry Laboratory. This Project submission is a part of internal assessment which carries 04 Marks.

The topics for the project are

- a) Oil and Natural Gas Corporation Ltd.
- b) National Thermal Power Corporation Ltd
- c) Indian Oil Corporation Ltd
- d) Bhabha Atomic Research Center
- e) Defense Research Development Organization
- f) Department of Atomic Energy.

All the details regarding project will be shared separately on chemistry What's app group on **18th January 2022 till evening 6PM.**

If you have any difficulties or queries regarding project submission you can contact with below mentioned teacher.

1. Dr. Kavita P. Kakade
2. Dr. Vinod M. Sherekar

Date: 18th January 2022

Mr. Nilesh S. Padole
Head and Assistant Professor
Department of Chemistry
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khandeshwar



SANJIV DADGE BARRA AMRAVATI UNIVERSITY, AMRAVATI (PUNJAB)
Pravin Khodke Memorial Trust's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati

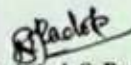
Department of Chemistry

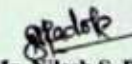
Class: B.Sc. Part III Semester V

Date: 18th January 2022

STUDENT LIST WITH TOPIC

Sr. No.	Name of Student	Topic	In-Charge Teacher
1	ABHISHEK P. CHAURAGADE	ONGC NTPC	Mr. Nilesh S. Padole
2	ACHAL ARUN BANSOD		
3	ACHAL GAJANAN MASRAM		
4	ACHAL RAJESH SATRE		
5	AMRAPALI B. WAHANE		
6	ANKITA S. MANDAVGADE		
7	ANUSHKA SURESHRAO IZATE		
8	ASMITA GOPAL SABLE		
9	BHAGYASHRI J. SHELKE		
10	DIMPAL VIJAYRAO JAGTAP		
11	DIVYA MURLIDHAR KAKADE		
12	GAURI UDDHAVRAO DHAWAS		
13	HARSHAD GUNVANTRAO DOFE		
14	JAYASHREE R. TANKAR		
15	KAJAL VITTHALRAO SHINDE		
16	KRUNAL MUKUNDRAO BARDE		
17	KUNAL RAJENDRA BITALE		
18	MANISHA MADHUKAR PONGLE		
19	MD ATIQUE AB RAHIM		


Mr. Nilesh S. Padole
In-Charge Teacher


Mr. Nilesh S. Padole
Head of Department
HEAD
Department of Chemistry
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khandeshwar



SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI AFFILIATED
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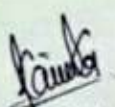
Department of Chemistry

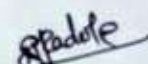
Class: B.Sc. Part III Semester V

Date: 18th January 2022

STUDENT LIST WITH TOPIC

Sr. No.	Name of Student	Topic	In-Charge Teacher Sign
20	PALLAVI PRABHAKAR GULHANE	IOCL BARC	Dr. Kavita P. Kakade
21	PALLAVI RAMRAO TANGALE		
22	POOJA WASUDEV MORE		
23	PRAJWALSING P. DESHMUKH		
24	PRANALI GAJANANRAO AGASHE		
25	PRATIKSHA VILASRAO SHAHADE		
26	PRIYANKA PRAMODRAO GULHANE		
27	PUNAM SHALIKRAM BANARASE		
28	RAJANI ASHOKRAO CHAVHAN		
29	RUPALI VASUDEO MAHATO		
30	RUSHALI GANESH VAIRAGADE		
31	RUTUJA SUBHASHRAO ZANZAT		
32	SACHIN VILASRAO BHAGAT		
33	SANIKA MOHAN DARWHATKAR		
34	SARTHAK UTTAMRAO RAUT		
35	SATISH BHUJANGRAO MORE		
36	SAURABH RAMESH KALEKAR		
37	SHAMAL DIVAKAR INGOLE		
38	SHRUTI SANJAY RAVEKAR		


Dr. Kavita P. Kakade
In-Charge Teacher


Mr. Nilesh S. Padole
Head of Department
HEAD

Department of Chemistry
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khandeshwar



SAHYADRA GANGE BARRI AMLANAND UNIVERSITY, AMRAVATI (SI) AFFILIATED
Pravin Khodke Memorial Trust's
Vinayak Vidnyan Mahavidyalaya
 Tq. Nandgaon Khandeshwar, Dist. Amravati

Department of Chemistry

Class: B.Sc. Part III Semester V

Date: 18th January 2022

STUDENT LIST WITH TOPIC

Sr. No.	Name of Student	Topic	In-Charge Teacher
39	SHUBHAM BANDU SANAP	DRDO DAE	Dr. Vinod M. Sherekar
40	SNEHAL DATTATRAY DHURTE		
41	SUMIT MADHUKAR JADHAO		
42	TEJASWINI BALU DEOTALE		
43	VAIBHAV DIPAKRAO DHANDE		
44	VAISHNAVI GAJANANRAO GAWNER		
45	VAISHNAVI SANJAY KHOPE		
46	ARPITA ANILRAO BHOYAR		
47	HITESH VIJAY RAGHUTE		
48	NANDINI RAVINDRA KANSE		
49	OM PRAMODRAO INGOLE		
50	PUJA SUBHASHRAO DUKARE		
51	RUTUJA BHARAT DEVTALE		
52	SAKSHI KIRANRAO GULHANE		
53	SNEHA GAJANAN SAGALE		
54	SWARA NARENDRA DESHMUKH		
55	TEJASWINI S. GADHEKAR		
56	VAIBHAV SHRIKRUSHNA GULHANE		
57	VAISHNAVI SANTOSH RAUT		
58	VRUSHBH VISHNU MADAVI		

Dr. Vinod M. Sherekar
 In-Charge Teacher

Mr. Nilesh S. Padole
 Head of Department

HEAD

Department of Chemistry
 Vinayak Vidnyan Mahavidyalaya,
 Nandgaon Khandeshwar



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 Tq. Nandgaon Khandeshwar, Dist. Amravati

Department of Chemistry

Class: B.Sc. Part III Semester V

Date: 22nd January 2022

PROJECT SUBMISSION LIST

Sr. No.	Name of Student	Topic	Signature of Student	In-Charge Teacher Sign
1	ABHISHEK P. CHAURAGADE	ONGC NTPC	<i>Abhishek P. Chauragade</i>	<i>SPadole</i>
2	ACHAL ARUN BANSOD		<i>Achal Arun Bansod</i>	
3	ACHAL GAJANAN MASRAM		<i>Achal Gajanan Masram</i>	
4	ACHAL RAJESH SATRE		<i>Achal Rajesh Satre</i>	
5	AMRAPALI B. WAHANE		<i>Amrapali B. Wahane</i>	
6	ANKITA S. MANDAVGADE		<i>Ankita S. MandavgaDE</i>	
7	ANUSHKA SURESHRAO IZATE		<i>Anushka Sureshrao Izate</i>	
8	ASMITA GOPAL SABLE		<i>Asmita Gopal Sable</i>	
9	BHAGYASHRI J. SHELKE		<i>Bhagyashri J. Shelke</i>	
10	DIMPAL VIJAYRAO JAGTAP		<i>Dimpal Vijayrao Jagtap</i>	
11	DIVYA MURLIDHAR KAKADE		<i>Divya Murlidhar Kakade</i>	
12	GAURI UDDHAVRAO DHAWAS		<i>Gauri Uddhavrao Dhawas</i>	
13	HARSHAD GUNVANTRAO DOFE		<i>Harshad Gunvantrao Dofe</i>	
14	JAYASHREE R. TANKAR		<i>Jayashree R. Tankar</i>	
15	KAJAL VITTHALRAO SHINDE		<i>Kajal Vitthalrao Shinde</i>	
16	KRUNAL MUKUNDRAO BARDE		<i>Krunal Mukundrao Barde</i>	
17	KUNAL RAJENDRA BITALE		<i>Kunal Rajendra Bitale</i>	
18	MANISHA MADHUKAR PONGLE		<i>Manisha Madhukar Pongle</i>	
19	MD ATIQUE AB RAHIM		<i>Atique</i>	

SPadole
 Mr. Nilesh S. Padole
 In-Charge Teacher

Remark:

SPadole
 Mr. Nilesh S. Padole
 Head of Department
HEAD
 Department of Chemistry
 Vinayak Vidnyan Mahavidyalaya,
 Nandgaon Khandeshwar



SAHYADRAJI K. M. T. R. TRUST
 Pravin Khodke Memorial Trust's
Vinayak Vidnyan Mahavidyalaya
 Tq. Nandgaon Khandeshwar, Dist. Amravati

Department of Chemistry

Class: B.Sc. Part III Semester V

Date: 22nd January 2022

PROJECT SUBMISSION LIST

Sr. No.	Name of Student	Topic	Signature of Student	In-Charge Teacher Sign
20	PALLAVI PRABHAKAR GULHANE	IOCL BARC	<i>[Signature]</i>	<i>[Signature]</i>
21	PALLAVI RAMRAO TANGALE		<i>[Signature]</i>	
22	POOJA WASUDEV MORE		<i>[Signature]</i>	
23	PRAJWALSING P. DESHMUKH		<i>[Signature]</i>	
24	PRANALI GAJANANRAO AGASHE		<i>[Signature]</i>	
25	PRATIKSHA VILASRAO SHAHADE		<i>[Signature]</i>	
26	PRIYANKA PRAMODRAO GULHANE		<i>[Signature]</i>	
27	PUNAM SHALIKRAM BANARASE		<i>[Signature]</i>	
28	RAJANI ASHOKRAO CHAVHAN		<i>[Signature]</i>	
29	RUPALI VASUDEO MAHATO		<i>[Signature]</i>	
30	RUSHALI GANESH VAIRAGADE		<i>[Signature]</i>	
31	RUTUJA SUBHASHRAO ZANZAT		<i>[Signature]</i>	
32	SACHIN VILASRAO BHAGAT		<i>[Signature]</i>	
33	SANIKA MOHAN DARWHATKAR		<i>[Signature]</i>	
34	SARTHAK UTTAMRAO RAUT		<i>[Signature]</i>	
35	SATISH BHUJANGRAO MORE		<i>[Signature]</i>	
36	SAURABH RAMESH KALEKAR		<i>[Signature]</i>	
37	SHAMAL DIVAKAR INGOLE		<i>[Signature]</i>	
38	SHRUTI SANJAY RAVEKAR	<i>[Signature]</i>		

[Signature]
 Dr. Kavita P. Kakade
 In-Charge Teacher

Remark:

[Signature]
 Mr. Nilesh S. Padole
 Head of Department

HEAD
 Department of Chemistry
 Vinayak Vidnyan Mahavidyalaya,
 Nandgaon Khandeshwar



Pravin Khodke Memorial Trust's
Vinayak Vidnyan Mahavidyalaya
 Tq. Nandgaon Khandeshwar, Dist. Amravati

Department of Chemistry

Class: B.Sc. Part III Semester V

Date: 22nd January 2022

PROJECT SUBMISSION LIST

Sr. No.	Name of Student	Topic	Signature of Student	In-Charge Teacher Sign
39	SHUBHAM BANDU SANAP	DRDO DAE	<i>Shubham</i>	<i>[Signature]</i>
40	SNEHAL DATTATRAY DHURTE		<i>Snehal</i>	
41	SUMIT MADHUKAR JADHAO		<i>Sumit</i>	
42	TEJASWINI BALU DEOTALE		<i>Tejatala</i>	
43	VAIBHAV DIPAKRAO DHANDE		<i>V.Dhande</i>	
44	VAISHNAVI GAJANANRAO GAWNER		<i>V.Gawner</i>	
45	VAISHNAVI SANJAY KHOPE		<i>V.Khobe</i>	
46	ARPITA ANILRAO BHOYAR		<i>A.Bhojar</i>	
47	HITESH VIJAY RAGHUTE		<i>H.Raghu</i>	
48	NANDINI RAVINDRA KANSE		<i>N.Kanse</i>	
49	OM PRAMODRAO INGOLE		<i>O.Ingole</i>	
50	PUJA SUBHASHRAO DUKARE		<i>P.Subhakar</i>	
51	RUTUJA BHARAT DEVTALE		<i>R.Devtale</i>	
52	SAKSHI KIRANRAO GULHANE		<i>S.Gulhane</i>	
53	SNEHA GAJANAN SAGALE		<i>S.Sagale</i>	
54	SWARA NARENDRA DESHMUKH		<i>S.Deshmukh</i>	
55	TEJASWINI S. GADHEKAR		<i>T.Gadhekar</i>	
56	VAIBHAV SHRIKRUSHNA GULHANE		<i>V.S.Gulhane</i>	
57	VAISHNAVI SANTOSH RAUT		<i>V.Santosh</i>	
58	VRUSHBH VISHNU MADAVI		<i>V.Madavi</i>	

Dr. Vinod M. Sherekar
 In-Charge Teacher

Remark:

Mr. Nilesh S. Padole
 Head of Department

HEAD

Department of Chemistry
 Vinayak Vidnyan Mahavidyalaya



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Tq. Nandgaon Khandeshwar, Dist. Amravati

Date 6th May 2022

Department of Chemistry

Notice

All the faculty members of Department of Chemistry are hereby informed that as per the curriculum of Sang Gadge Baba Amravati University, Amravati, we need to give "Project Topics" to the students of Bsc Part II Semester IV. This project will be a part of internal assessment of the students. To discuss this point there will be meeting in the department of Chemistry on 7th May 2022 at 12PM.

Agenda of the meeting

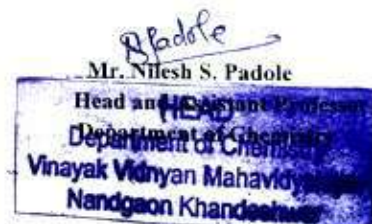
1. To discuss about the Project topics for the class B.Sc. Part II semester IV.
2. To provide guidelines to the students regarding project report writing.
3. To prepare the front page for project submission.
4. To decide submission date for the project.
5. To circulate the message among the students of B.Sc. Part II Semester IV.

All are requested to consider this notice and be there in the department of chemistry on 7th May 2022 at

12PM.

1. Dr. Vinod M. Sherekar

2. Dr. Kavita P. Kakade





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Tq. Nandgaon Khandeshwar, Dist. Amravati

Date 7th May 2022

Department of Chemistry

The meeting was held in the department of chemistry on 7th May 2022 from 12PM onwards where following points were discussed and finalized for the project allotment to students of BSc Part II Semester IV.

Minutes of Meeting:

1. There was thorough discussion on Project topics allotment for the students of class BSc, Part II Semester IV with all faculty members, where following topics were finalized
 - a) Isolation of Flavonoids from color flower.
 - b) Chemical constituents present in energy drinks.
 - c) Isolation of calcium from Chees, butter and other dairy products.
 - d) Chemical constituent present in Jatropha Gossipifolia.
 - e) Extraction of oil from castor oil seed, its application.
2. Dr. Kavita P. Kakade had given the responsibility to prepare the guidelines for the students which will help them to write the project.
3. Mr. Nilesh S. Padole had given the responsibility to prepare the front page for project submission.
4. In thorough discussion with all faculty members, 28th May 2022 was decided for project submission.
5. Dr. Vinod M. Sherekar had given the responsibility to circulate the message among the students of BSc Part II semester IV.

The meeting was attended by following faculty members

1. Dr. Vinod M. Sherekar

2. Dr. Kavita P. Kakade

Mr. Nilesh S. Padole
Head and Assistant Professor
Department of Chemistry
Department of Chemistry
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khandeshwar

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Department of Chemistry

NOTICE

All the students of B.Sc. Part II Semester IV (CHEMISTRY) of the session 2021-2022 are hereby inform that, you need to submit Project for the subject chemistry on 28th May 2022 in Chemistry Laboratory till 1:00 PM. This Project submission is a part of internal assessment which carries 04 Marks:

The topics for the project are

- a) Isolation of Flavonoids from color flower.
- b) Chemical constituents present in energy drinks.
- c) Isolation of calcium from Cheese, Butter and other dairy products.
- d) Chemical constituent present in Jatropha Gossipifolia.
- e) Extraction of oil from castor oil from castor seed, its application.

All the details regarding project will be shared separately on chemistry What's app group on 10th May 2022. List of projects with In-charge teacher is attached with the notice.

If you have any difficulties or queries regarding project submission you can contact with below mentioned teacher:

1. Dr. Kavita P. Kakade

2. Dr. Vinod M. Sherekar

Mr. Nilesh S. Padole
Head and Assistant Professor
Department of Chemistry
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khandeshwar



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Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati

Department Of Chemistry

Class: B.Sc. Part II Sem IV

Date -7th May 2022

Project Topic List

Sr. No.	Name of Student	Topic	Signature of Student	In Charge Teacher Signature
1	AACHAL R. HAMBARDE	ISOLATION OF FLAVONOIDS FROM COLOUR FLOWER	A Hambarde	
2	ACHAL DILIP DESHMUKH		A Deshmukh	
3	ACHAL N. CHARDE		A Charde	
4	AKSHADA D. DHANDARE		A Dhandare	
5	AMAN ASHPAK MAKWANI		A Makwani	
6	AMRUTA SOPAN KALE		A Kale	
7	ARPITA P. THAKARE		A Thakare	
8	ASHUTOSH DILIP INGOLE		A Ingole	
9	DIVYA PRAMOD SALVE		A Salve	

Dr. Kavita P. Kakade
In-Charge Teacher

Mr. Nilesh S. Padole
Head of Department
Department of Chemistry
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khandeshwar

Remark



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Tq. Nandgaon Khandeshwar, Dist. Amravati

Department Of Chemistry

Class: B.Sc. Part II Sem IV

Date - 7th May 2022

Project Topic List

Sr. No	Name Of Student	Topic	Signature of Student	In Charge Teacher Signature
10	KARTIK RAVINDRA MAHURE	CHEMICAL CONSTITUENTS PRESENT IN ENERGY DRINKS	<i>K. Mahure</i>	<i>Kakade</i>
11	KIRAN RAJU BANARASE		<i>K. Banarase</i>	
12	KIRTI DILIP POPHALE		<i>K. Pophale</i>	
13	KOMAL D. PUND		<i>K. D. Pund</i>	
14	KOMAL JITENDRA SEN		<i>K. Sen</i>	
15	MAYURI PRAVIN KAPADE		<i>M. Kapade</i>	
16	MAYURI R. DEOTALE		<i>M. Deotale</i>	
17	MOHD A. M. M. MAKWANI		<i>M. Makwani</i>	
18	NIKHIL NANDU PRAGHANE		<i>N. Praghane</i>	

Kakade
Dr. Kavita P. Kakade
In-Charge Teacher

Padole
Mr. Nilesh S. Padole
Head of Department

Remark



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Vinayak Vidnyan Mahavidyalaya
 Tq. Nandgaon Khandeshwar, Dist. Amravati

Department Of Chemistry

Class: B.Sc. Part II Sem IV

Date - 7th May 2022

Project Topic List

Sr. No.	Name of Student	Topic	Signature of Student	In Charge Teacher Signature
19	PRANAY SANJAY MARAPE	ISOLATION OF CALCIUM FROM CHEES, BUTTER AND OTHER DAIRY PRODUCTS	<i>Marape</i>	<i>Padole</i>
20	PRATIK K. INZALKAR		<i>P.K. Inzalkar</i>	
21	PRATIKSHA ANAND INGALE		<i>Ingaile</i>	
22	PRIYANKA R. GAJBHIYE		<i>Gajbhiye</i>	
23	RAKHI RUPRAO SONONE		<i>Sonone</i>	
24	RAVINA SANDIP NAVNAGE		<i>Navnage</i>	
25	RINA PRAVIN POPHALE		<i>Pophale</i>	
26	ROHAN RAMRAO JADHAO		<i>Jadhao</i>	
27	SAKSHI R. GULHANE		<i>Gulhane</i>	

Padole
 Mr. Nilesh S. Padole
 In-Charge Teacher

Department of Chemistry
 Vinayak Vidnyan Mahavidyalaya,
 Nandgaon Khandeshwar

Remark



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 Tq. Nandgaon Khandeshwar, Dist. Amravati

Department Of Chemistry

Class: B.Sc. Part II Sem IV

Date: -7th May 2022

Project Topic List

Sr. No	Name of Student	Topic	Signature of Student	In Charge Teacher Signature
28	SAKSHI SANTOSH INZALKAR	CHEMICAL CONSTITUENT PRESENT IN JATROPA GOSSIPIFOLIA.	S.S. Inzalkar	N. Padole
29	SAMIKSHA P. DAKARE		Dakare	
30	SEJAL G. CHANDURKAR		Chandurkar	
31	SHARAYU P. CHAUDHARI		Chaudhari	
32	SHITAL S. LONARE		Lonare	
33	SHITAL VIJAY GADHAVE		Gadhavle	
34	SHIVANI J. CHAVHAN		Chavhan	
35	SHRADDHA ANIL BANKAR		Bankar	
36	SHREYA GAJANAN DHOKE		Dhoke	

N. Padole
 Mr. Nilesh S. Padole
 In-Charge Teacher
 Department of Chemistry
 Vinayak Vidnyan Mahavidyalaya,
 Nandgaon Khandeshwar

Remark



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Vinayak Vidnyan Mahavidyalaya
 Tq. Nandgaon Khandeshwar, Dist. Amravati

Department Of Chemistry

Class: B.Sc. Part II Sem IV

Date -7th May 2022

Project Topic List

Sr. No	Name Of Student	Topic	Signature of Student	In Charge Teacher Signature
37	SHREYASWIR, DEVTALE	Extraction of oil from castor oil from castor seed, its application	<i>Devtales</i>	<i>Sherekar</i>
38	SNEHAL BALU KAWARE		<i>S. B. Kaware</i>	
39	VAISHNAVI D. RUMNE		<i>Rumne</i>	
40	VAISHNAVI R. KHOBRAJADE		<i>Khobrajade</i>	
41	VAISHNAVI R. ZATALE		<i>Zatale</i>	
42	ACHAL RAMDAS BIJAVE		<i>Bijave</i>	
43	ADIBA SAMAN A. KHAN		<i>Adiba</i>	
44	KALYANI NARHARI WAKODE		<i>Wakode</i>	
45	RUTIK T. JAWALKAR		<i>Rjawalkar</i>	

Sherekar
 Dr. Vinod M. Sherekar
 In-Charge Teacher

Padole
 Mr. Nilesh S. Padole
 Head of Department
 Department of Chemistry
 Vinayak Vidnyan Mahavidyalaya,
 Nandgaon Khandeshwar

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Department Of Chemistry


Class: B.Sc. Part II Sem IV

Date -7th May 2022

Project Topic List

Sr. No	Name of Student	Topic	Signature of Student	In Charge Teacher Signature
46	Sahil Vikas Raut	Extraction of oil from castor oil from castor seed, its application	Sahil Raut	Sherekar
47	Sakshi Mahendra Dukare		Sakshi Dukare	
48	Sakshi Vilas Dhawale		Sakshi Dhawale	
49	Sayali Pramod Gawande		Sayali Gawande	
50	Shraddha Vijay Raut		Shraddha Raut	
51	Vivekanand Anil Pawar		Vivekanand Pawar	


Dr. Vinod M. Sherekar
In-Charge Teacher


Mr. Nilesh S. Padole
Head of Department

Department of Chemistry
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khandeshwar

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Tq. Nandgaon Khandeshwar, Dist. Amravati

Department Of Chemistry

Class: B.Sc. Part II Sem IV

Date -28th May 2022

Project Submission List

Sr. No.	Name of Student	Topic	Signature of Student	In Charge Teacher Signature
1	AACHAL R. HAMBARDE	ISOLATION OF FLAVONOIDS FROM COLOUR FLOWER	A.R. Hambarde	
2	ACHAL DILIP DESHMUKH		A.D. Deshmukh	
3	ACHAL N. CHARDE		A.N. Charde	
4	AKSHADA D. DHANDARE		A.D. Dhandare	
5	AMAN ASHPAK MAKWANI		A.M. Makwani	
6	AMRUTA SOPAN KALE		A.S. Kale	
7	ARPITA P. THAKARE		A.P. Thakare	
8	ASHUTOSH DILIP INGOLE		A.D. Ingole	
9	DIVYA PRAMOD SALVE		D.P. Salve	

Dr. Kavita P. Kakade
In-Charge Teacher

Mr. Nilesh S. Padole
Head of Department
Department of Chemistry
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khandeshwar.

Remark



SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI-AFFILIATED
Pravin Khodke Memorial Trust's
Vinayak Vidnyan Mahavidyalaya
 Tq. Nandgaon Khandeshwar, Dist. Amravati

Department Of Chemistry

Class: B.Sc. Part II Sem IV

Date -28th May 2022

Project Submission List

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10	KARTIK RAVINDRA MAHURE	CHEMICAL CONSTITUENTS PRESENT IN ENERGY DRINKS	<i>[Signature]</i>	<i>[Signature]</i>
11	KIRAN RAJU BANARASE		<i>[Signature]</i>	
12	KIRTI DILIP POPHALE		R. Pophale	
13	KOMAL D. PUND		K. D. Pund	
14	KOMAL JITENDRA SEN		<i>[Signature]</i>	
15	MAYURI PRAVIN KAPADE		<i>[Signature]</i>	
16	MAYURI R. DEOTALE		<i>[Signature]</i>	
17	MOHD A. M. M. MAKWANI		<i>[Signature]</i>	
18	NIKHIL NANDU PRAGHANE		<i>[Signature]</i>	

[Signature]
 Dr. Kavita P. Kakade
 In-Charge Teacher

[Signature]
 Mr. Nilesh S. Padole
 Head of Department
 Department of Chemistry
 Vinayak Vidnyan Mahavidyalaya,
 Nandgaon Khandeshwar

Remark



SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI AFFILIATED
Pravin Khodke Memorial Trust's
Vinayak Vidnyan Mahavidyalaya
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Department Of Chemistry

Class: B.Sc. Part II Sem IV

Date -28th May 2022

Project Submission List

Sr. No.	Name of Student	Topic	Signature of Student	In Charge Teacher Signature
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20	PRATIK K. INZALKAR		<i>P. K. Inzalkar</i>	
21	PRATIKSHA ANAND INGALE		<i>Ingaile</i>	
22	PRIYANKA R. GAJBHIYE		<i>Gajbhaye</i>	
23	RAKHI RUPRAO SONONE		<i>Sonone</i>	
24	RAVINA SANDIP NAVNAGE		<i>Navnage</i>	
25	RINA PRAVIN POPHALE		<i>Pophale</i>	
26	ROHAN RAMRAO JADHAO		<i>Jadhao</i>	
27	SAKSHI R. GULHANE		<i>Gulhane</i>	

Padole
Mr. Nilesh S. Padole
In-Charge Teacher

HEAD
Department of Chemistry
Head of Department
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khandeshwar

Remark



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 Tq. Nandgaon Khandeshwar, Dist. Amravati

Department Of Chemistry

Class: B.Sc. Part II Sem IV

Date -28th May 2022

Project Submission List

Sr. No	Name of Student	Topic	Signature of Student	In Charge Teacher Signature
28	SAKSHI SANTOSH INZALKAR	CHEMICAL CONSTITUENT PRESENT IN JATROPA GOSSIPIFOLIA.	S.S. Inzalkar	N. Padole
29	SAMIKSHA P. DAKARE		Dakare	
30	SEJAL G. CHANDURKAR		Chandurkar	
31	SHARAYU P. CHAUDHARI		Chaudhari	
32	SHITAL S. LONARE		Lonare	
33	SHITAL VIJAY GADHAVE		Gadhare.	
34	SHIVANI J. CHAVHAN		Chavhan	
35	SHRADDHA ANIL BANKAR		SBankar	
36	SHREYA GAJANAN DHOKE		Dhoke	

N. Padole
Mr. Nilesh S. Padole
In-Charge Teacher
 Department of Chemistry
 Vinayak Vidnyan Mahavidyalaya,
 Nandgaon Khandeshwar.

Remark



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 Tq. Nandgaon Khandeshwar, Dist. Amravati

Department Of Chemistry

Class: B.Sc. Part II Sem IV

Date -28th May 2022

Project Submission List

Sr. No	Name of Student	Topic	Signature of Student	In Charge Teacher Signature
37	SHREYASWI R. DEVTALE	Extraction of oil from castor oil from castor seed, its application	<i>Shreyaswi</i>	<i>Sherekar</i>
38	SNEHAL BALU KAWARE		<i>S B Kaware</i>	
39	VAISHNAVI D. RUMNE		<i>Vaishnavi</i>	
40	VAISHNAVI R. KHOBRAJADE		<i>Khobrajade</i>	
41	VAISHNAVI R. ZATALE		<i>V Zatale</i>	
42	ACHAL RAMDAS BIJAVE		<i>Achal</i>	
43	ADIBA SAMAN A. KHAN		<i>Adiba</i>	
44	KALYANI NARHARI WAKODE		<i>Kalyani</i>	
45	RUTIK T. JAWALKAR		<i>Ritik</i>	

Sherekar
 Dr. Vinod M. Sherekar
 In-Charge Teacher

Padole
 Mr. Nilesh S. Padole
 Head of Department
 Department of Chemistry
 Vinayak Vidnyan Mahavidyalaya,
 Nandgaon Khandeshwar

Remark



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Tq. Nandgaon Khandeshwar, Dist. Amravati

Department Of Chemistry

Class: B.Sc. Part II Sem IV

Date -28th May 2022

Project Submission List

Sr. No	Name of Student	Topic	Signature of Student	In Charge Teacher Signature
46	Sahil Vikas Raut	Extraction of oil from castor oil from castor seed, its application	<i>Sahil Raut</i>	<i>Vinod M. Sherekar</i>
47	Sakshi Mahendra Dukare		<i>Sakshi Dukare</i>	
48	Sakshi Vilas Dhawale		<i>Sakshi Dhawale</i>	
49	Sayali Pramod Gawande		<i>S.P. Gawande</i>	
50	Shraddha Vijay Raut		<i>Shraddha Raut</i>	
51	Vivekanand Anil Pawar		<i>V.A. Pawar</i>	

Vinod M. Sherekar
Dr. Vinod M. Sherekar
In-Charge Teacher

Nitesh S. Padole
Mr. Nitesh S. Padole
Head of Department
Department of Chemistry
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khandeshwar

Remark



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Tq. Nandgaon Khandeshwar, Dist. Amravati

Date 6th May 2022

Department of Chemistry

Notice

All the faculty members of Department of Chemistry are hereby informed that as per the curriculum of Sant Gadge Baba Amravati University, Amravati, we need to give "Project Topics" to the students of BSc Part III Semester VI. This project will be a part of internal assessment of the students. To discuss this point there will be meeting in the department of Chemistry on 7th May 2022 at 1PM.

Agenda of the meeting

1. To discuss about the Project topics for the class BSc Part III semester VI.
2. To prepare and provide guidelines to the students regarding project writing.
3. To prepare the front page for project submission.
4. To decide submission date for the project.
5. To circulate the message among the students of BSc Part III Semester VI.

All are requested to consider this notice and be there in the department of chemistry on 7th May 2022 at 1PM.

1. Dr. Vinod M. Sherekar

2. Dr. Kavita P. Kakade

R. Padole
Mr. Nilesh S. Padole
Head and Assistant Professor
Department of Chemistry
Department of Chemistry
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khandeshwar



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Tq. Nandgaon Khandeshwar, Dist. Amravati

Date 7th May 2022

Department of Chemistry

The meeting was held in the department of chemistry on 7th May 2022 from 10:30 AM onwards where following points were discussed and finalized

Minutes of Meeting:

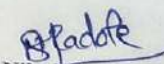
1. There was thorough discussion on Project topics for the class **BSc Part III Semester VI** with all faculty members, where following topics were finalized
 - a) Application of Inorganic polymer in Field of medicine and aerospace.
 - b) NMR spectroscopy used for interpretation of structure of organic compound.
 - c) Chemistry of metal complexes present in leaving being

These topics were selected by keeping the thing in mind that students must know about the government organization/ semi government organization/ Public Sector Undertaking organization who demand BSc with chemistry subject for their future perspective

2. Mr. Nilesh S. Padole had given the responsibility to prepare the guidelines for the students which will help them to write the project.
3. Mr. Nilesh S. Padole had given the responsibility to prepare the front page for project submission.
4. In thorough discussion with all faculty members, 28th May 2022 was decided for project submission.
5. Dr. Vinod M. Sherekar had given the responsibility to circulate the message among the students of BSc Part II semester IV.

The meeting was attended by following faculty members

1. Dr. Vinod M. Sherekar
2. Dr. Kavita P. Kakade


Mr. Nilesh S. Padole
Head and Assistant Professor
Department of Chemistry
Department of Chemistry
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khandeshwar

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Tq. Nandgaon Khandeshwar, Dist. Amravati

Date 7th May 2022

Department of Chemistry

Notice

All the students of B.Sc. Part III Semester VI (CHEMISTRY) of the session 2021-2022 are hereby inform that, you need to submit Project for the subject chemistry on 28th May 2022 in Chemistry Laboratory.

This Project submission is a part of internal assessment which carries 04 Marks.

The topics for the project are

- a) Application of Inorganic polymer in Field of medicine and aerospace
- b) NMR spectroscopy used for interpretation of structure of organic compound
- c) Chemistry of metal complexes present in leaving being

All the details regarding project will be shared separately on chemistry What's app group on 10th May 2022. List of projects with In-charge teacher is attached with the notice

If you have any difficulties or queries regarding project submission you can contact with below mentioned teacher.

1. Dr. Kavita P. Kakade
2. Dr. Vinod M. Sherekar

Mr. Nilesh S. Padole
Head and Assistant Professor
HEAD
Department of Chemistry
Department of Chemistry
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khandeshwar



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Tq. Nandgaon Khandeshwar, Dist. Amravati

Date 7th May 2022

Department of Chemistry

Notice

All the students of **B.Sc. Part III Semester VI (CHEMISTRY)** of the session 2021-2022 are hereby inform that, those students who had become a part of educational tour at **Shri Shivaji Science College, Amravati**, on **6th April 2022** need to submit the tour diary. All students are hereby directed to contact with **Dr.**

Vinod M. Sherekar sir regarding preparation of Tour Diary.

The last date for the submission of tour diary will be **28th May 2022**.

NPadole
Mr. Nilesh S. Padole

Head and Assistant Professor
Department of Chemistry.

Department of Chemistry
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khandeshwar

Vinayak Vidnyan Mahavidyalaya, Nandgaon Kh.



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 Tq. Nandgaon Khandeshwar, Dist. Amravati

Department Of Chemistry

Class: B.Sc. Part III Sem VI

Date -7th May 2022

Project Topic List

Sr. No	Name Of Student	Topic	Signature of Student	In Charge Teacher Signature
1	ABHISHEK P. CHAURAGADE	APPLICATION OF INORGANIC POLYMER IN FIELD OF MEDICINE AND AEROSPACE	<i>Chauragade</i>	<i>Kakade</i>
2	ACHAL GAJANAN MASRAM		<i>Masram</i>	
3	ACHAL RAJESH SATRE		<i>Satre</i>	
4	DIMPAL VIJAYRAO JAGTAP		<i>Jagtap</i>	
5	DIVYA MURLIDHAR KAKADE		<i>D.M. Kakade</i>	
6	GAURI UDDHAVRAO DHAWAS		<i>Dhawas</i>	
7	HARSHAD GUNVANTRAO DOFE		<i>Harshad</i>	
8	KAJAL VITTHALRAO SHINDE		<i>Shinde</i>	
9	KRUNAL MUKUNDRAO BARDE		<i>Barde</i>	
10	ACHAL BANSOD		<i>Bansod</i>	
11	AMRAPALI WAHANE		<i>Wahane</i>	
12	ANKITA MANDAVAGADE		<i>Mandavagade</i>	
13	ANUSHKA IZATE		<i>Izate</i>	
14	ASMITA SABLE		<i>Sable</i>	
15	BHAGYASHREE SHELKE		<i>Shelke</i>	
16	HITESH RAGHUTE		<i>Raghute</i>	
17	JAYSHREE TANKAR		<i>Tankar</i>	
18	NANDINI KANSE		<i>Kanse</i>	
19	SUMIT JADHAO		<i>Jadhao</i>	

Kakade
Dr. Kavita P. Kakade
 In-Charge Teacher

Padole
Mr. Nilesh S. Padole

Head of Department
HEAD
 Department of Chemistry
 Vinayak Vidnyan Mahavidyalaya,
 Nandgaon Khandeshwar.

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Department Of Chemistry

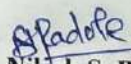
Class: B.Sc. Part III Sem VI

Date -7th May 2022

Project Topic List

Sr. No	Name Of Student	Topic	Signature of Student	In Charge Teacher Signature
1	KUNAL RAJENDRA BITALE	NMR SPECTROSCOPY USED FOR INTERPRETATION OF STRUCTURE OF ORGANIC COMPOUND	K.R. Bitale	
2	MANISHA MADHUKAR PONGLE		M. Pongle	
3	MD ATIQUE AB RAHIM		Abirah	
4	POOJA WASUDEV MORE		P. More	
5	PRAJWALSING P. DESHMUKH		P. Deshmukh	
6	PRANALI GAJANANRAO AGASHE		Agashe	
7	PUNAM SHALIKRAM BANARASE		P.S. Banarase	
8	SACHIN VILASRAO BHAGAT		S.V. Bhagat	
9	SAURABH RAMESH KALEKAR		S. Kalekar	
10	PALLAVI GULHANE		P. Gulhane	
11	PALLAVI TANGALE		P. Tangale	
12	PRATIKSHA SHAHADE		P. Shahade	
13	PRIYANKA GULHANE		P. Gulhane	
14	PUJA DUKARE		P. Dukare	
15	RAJNI CHAVHAN		R. Chavhan	
16	RUATUJA ZANZAT		R. Zanzat	
17	RUPALI MAHATO		R. Mahato	
18	RUSHALI VAIRAGADE		R. Vairagade	
19	SWARA DESHMUKH		S. Deshmukh	


 Dr. Vinod M. Sherekar
 In-Charge Teacher


 Mr. Nilesh S. Padole
 Head of Department
 Department of Chemistry
 Vinayak Vidnyan Mahavidyalaya,
 Nandgaon Khandeshwar

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 Tq. Nandgaon Khandeshwar, Dist. Amravati

Department Of Chemistry

Class: B.Sc. Part III Sem VI

Date -7th May 2022

Project Topic List

Sr. No	Name Of Student	Topic	Signature of Student	In Charge Teacher Signature
1	SHRUTI SANJAY RAVEKAR	CHEMISTRY OF METAL COMPLEXES PRESENT IN LEAVING BEING	<i>Ravekar</i>	<i>Padole</i>
2	TEJASWINI BALU DEOTALE		<i>Deotale</i>	
3	VAIBHAV DIPAKRAO DHANDE		<i>Dhande</i>	
4	VAISHNAVI GAJANANRAO GAWNER		<i>Gawner</i>	
5	VAISHNAVI SANJAY KHOPE		<i>Khophe</i>	
6	ARPITA ANILRAO BHOYAR		<i>Bhoysar</i>	
7	OM PRAMODRAO INGOLE		<i>Ingole</i>	
8	SAKSHI KIRANRAO GULHANE		<i>Gulhane</i>	
9	SNEHA GAJANAN SAGALE		<i>Sagale</i>	
10	TEJASWINI S. GADHEKAR		<i>Gadhekar</i>	
11	VAISHNAVI SANTOSH RAUT		<i>Raut</i>	
12	RUTUJA DEVATALE		<i>Devatale</i>	
13	SANIKA DHARWATKAR		<i>Dharwatar</i>	
14	SARTHAK RAUT		<i>Raut</i>	
15	SATISH MORE		<i>More</i>	
16	SHAMAL INGOLE		<i>Ingole</i>	
17	SHUBHAM SANAP		<i>Sanap</i>	
18	SNEHAL DHURTE		<i>Dhurte</i>	
19	VAIBHAV GULHANE		<i>Gulhane</i>	
20	VRUSHABH MADAVI		<i>Madavi</i>	

Padole
 Mr. Nilesh S. Padole
 In-Charge Teacher

Padole
 Mr. Nilesh S. Padole
 Head of department
 HEAD

Department of Chemistry
 Vinayak Vidnyan Mahavidyalaya,
 Nandgaon Khandeshwar



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 Tq. Nandgaon Khandeshwar, Dist. Amravati

Department Of Chemistry

Class: B.Sc. Part III Sem VI

Date -28th May 2022

Project Submission List

Sr. No	Name of Student	Topic	Signature of Student	In Charge Teacher Signature
1	ABHISHEK P. CHAURAGADE	APPLICATION OF INORGANIC POLYMER IN FIELD OF MEDICINE AND AEROSPACE	<i>Chauragade</i>	<i>Kakade</i>
2	ACHAL GAJANAN MASRAM		<i>Masram</i>	
3	ACHAL RAJESH SATRE		<i>Satre</i>	
4	DIMPAL VIJAYRAO JAGTAP		<i>Jagtap</i>	
5	DIVYA MURLIDHAR KAKADE		<i>D.M.Kakade</i>	
6	GAURI UDDHAVRAO DHAWAS		<i>Dhawas</i>	
7	HARSHAD GUNVANTRAO DOFE		<i>Hyde</i>	
8	KAJAL VIITHALRAO SHINDE		<i>B.Shinde</i>	
9	KRUNAL MUKUNDRAO BARDE		<i>Barde</i>	
10	ACHAL BANSOD		<i>Bansod</i>	
11	AMRAPALI WAHANE		<i>Wahane</i>	
12	ANKITA MANDAVAGADE		<i>A.Mandavagade</i>	
13	ANUSHKA IZATE		<i>A.izate</i>	
14	ASMITA SABLE		<i>A.Sable</i>	
15	BHAGYASHREE SHELKE		<i>B.Shelke</i>	
16	HITESH RAGHUTE		<i>H.Raghute</i>	
17	JAYSHREE TANKAR		<i>J.Tankar</i>	
18	NANDINI KANSE		<i>N.Kanse</i>	
19	SUMIT JADHAO		<i>Jadhao</i>	

Kakade
Dr. Kavita P. Kakade
 In-Charge Teacher

Padole
Mr. Nilesh S. Padole
 Head of Department
 Department of Chemistry
 Vinayak Vidnyan Mahavidyalaya,
 Nandgaon Khandeshwar

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Department Of Chemistry

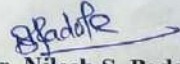
Class: B.Sc. Part III Sem VI

Date -28th May 2022

Project Submission List

Sr. No	Name Of Student	Topic	Signature of Student	In Charge Teacher Signature
1	KUNAL RAJENDRA BITALE	NMR SPECTROSCOPY USED FOR INTERPRETATION OF STRUCTURE OF ORGANIC COMPOUND	K.R. Bitale	
2	MANISHA MADHUKAR PONGLE		Manisha Pongle	
3	MD ATIQUE AB RAHIM		Atique	
4	POOJA WASUDEV MORE		Pooja More	
5	PRAJWALSING P. DESHMUKH		Prajwal Deshmukh	
6	PRANALI GAJANANRAO AGASHE		Pranali Agashe	
7	PUNAM SHALIKRAM BANARASE		P.S. Banarase	
8	SACHIN VILASRAO BHAGAT		S.V. Bhagat	
9	SAURABH RAMESH KALEKAR		S.R. Kalekar	
10	PALLAVI GULHANE		Pallavi Gulhane	
11	PALLAVI TANGALE		Pallavi Tangale	
12	PRATIKSHA SHAHADE		Pratiksha Shahade	
13	PRIYANKA GULHANE		Priyanka Gulhane	
14	PUJA DUKARE		Puja Dukare	
15	RAJNI CHAVHAN		Rajni Chavhan	
16	RUATUJA ZANZAT		Ruatuja Zanzat	
17	RUPALI MAHATO		R.P. Mahato	
18	RUSHALI VAIRAGADE		Rushali Vairagade	
19	SWARA DESHMUKH		Swara Deshmukh	


Dr. Vinod M. Sherekar
 In-Charge Teacher


Mr. Nilesh S. Padole
 Head of Department
HEAD
 Department of Chemistry
 Vinayak Vidnyan Mahavidyalaya,
 Nandgaon Khandeshwar

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Department Of Chemistry

Class: B.Sc. Part III Sem VI

Date -28th May 2022

Project Submission List

Sr. No	Name Of Student	Topic	Signature of Student	In Charge Teacher Signature
1	SHRUTI SANJAY RAVEKAR	CHEMISTRY OF METAL COMPLEXES PRESENT IN LEAVING BEING	<i>Shrivale</i>	<i>Spadole</i>
2	TEJASWINI BALU DEOTALE		<i>Tejale</i>	
3	VAIBHAV DIPAKRAO DHANDE		<i>Dhande</i>	
4	VAISHNAVI GAJANANRAO GAWNER		<i>Gawner</i>	
5	VAISHNAVI SANJAY KHOPE		<i>Khope</i>	
6	ARPITA ANILRAO BHOYAR		<i>Abhojar</i>	
7	OM PRAMODRAO INGOLE		<i>Om</i>	
8	SAKSHI KIRANRAO GULHANE		<i>Sulhane</i>	
9	SNEHA GAJANAN SAGALE		<i>Sagale</i>	
10	TEJASWINI S. GADHEKAR		<i>T Gadhekar</i>	
11	VAISHNAVI SANTOSH RAUT		<i>Raut</i>	
12	RUTUJA DEVATALE		<i>Rautare</i>	
13	SANIKA DHARWATKAR		<i>Dharwatkare</i>	
14	SARTHAK RAUT		<i>Sarthak</i>	
15	SATISH MORE		<i>Satish</i>	
16	SHAMAL INGOLE		<i>Singole</i>	
17	SHUBHAM SANAP		<i>Shubham</i>	
18	SNEHAL DHURTE		<i>Shurte</i>	
19	VAIBHAV GULHANE		<i>V Gulhane</i>	
20	VRUSHABH MADAVI		<i>Vrushabh</i>	

Spadole
 Mr. Nilesh S. Padole
 In-Charge Teacher

Spadole
 Mr. Nilesh S. Padole
 Head of department
HEAD
 Department of Chemistry
 Vinayak Vidnyan Mahavidyalaya,
 Nandgaon, Khandeshwar



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Date 28th May 2022

Department of Chemistry

Tour Diary Submission List

Sr. No.	Name of Student	Sign
1	ACHAL BANSOD	Bansod
2	AMRAPALI WAHANE	
3	ANKITA MANDAVAGADE	Amandavagade
4	ANUSHKA IZATE	Aizate
5	ASMITA SABLE	Asable
6	BHAGYASHREE SHELKE	Bshelke
7	HITESH RAGHUTE	Hraghute
8	JAYSHREE TANKAR	Jtankar
9	NANDINI KANSE	Nkanse
10	PALLAVI GULHANE	Pgulhane
11	PALLAVI TANGALE	Ptangale
12	PRATIKSHA SHAHADE	PS. V
13	PRIYANKA GULHANE	Pgulhane
14	PUJA DUKARE	P. S. Dukare
15	RAJNI CHAVHAN	R. Chavhan
16	RUATUJA ZANZAT	R. Zanzat
17	RUPALI MAHATO	R. Mahato
18	RUSHALI VAIRAGADE	R. Vairagade
19	RUTUJA DEVATALE	R. Devatale
20	SANIKA DHARWATKAR	S. Dhawatkar
21	SARTHAK RAUT	S. Raut
22	SATISH MORE	
23	SHAMAL INGOLE	S. Ingole
24	SHUBHAM SANAP	S. Sanap
25	SNEHAL DHURTE	S. Dhurte
26	SUMIT JADHAO	S. Jadhao
27	SWARA DESHMUKH	S. Deshmukh
28	VAIBHAV GULHANE	V. Gulhane
29	VRUSHABH MADAVI	V. Madavi

Mr. Nilesh S. Padole

Head and Assistant Professor
 Department of Chemistry
 Department of Chemistry
 Vinayak Vidnyan Mahavidyalaya
 Nandgaon, Khandeshwar

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Tq. Nandgaon Khandeshwar, Dist. Amravati

Date 10th May 2022

Department of Chemistry

List of Students need to submit the tour diary (Tour report) on or before 28th May 2022.

Sr. No.	Name of Student	In-Charge
1	ACHAL BANSOD	Dr. Vinod M. Sherekar
2	AMRAPALI WAHANE	
3	ANKITA MANDAVAGADE	
4	ANUSHKA IZATE	
5	ASMITA SABLE	
6	BHAGYASHREE SHELKE	
7	HITESH RAGHUTE	
8	JAYSHREE TANKAR	
9	NANDINI KANSE	
10	PALLAVI GULHANE	
11	PALLAVI TANGALE	
12	PRATIKSHA SHAHADE	
13	PRIYANKA GULHANE	
14	PUJA DUKARE	
15	RAJNI CHAVHAN	
16	RUATUJA ZANZAT	
17	RUPALI MAHATO	
18	RUSHALI VAIRAGADE	
19	RUTUJA DEVATALE	
20	SANIKA DHARWATKAR	
21	SARTHAK RAUT	
22	SATISH MORE	
23	SHAMAL INGOLE	
24	SHUBHAM SANAM	
25	SNEHAL DHURTE	
26	SUMIT JADHAO	
27	SWARA DESHMUKH	
28	VAIBHAV GULHANE	
29	VRUSHABH MADAVI	

Padole
Mr. Nilesh S. Padole

Head and Assistant Professor
Department of Chemistry
Department of Chemistry
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khandeshwar

Scanned with CamScanner



PRAVIN KHODKE MEMORIAL TRUST'S,
VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON KHANDESHWAR.

DEPARTMENT OF CHEMISTRY

ACADEMIC SESSION

2021-2022 (Winter)

Project Submission

Name of the Student: Ku. Punam Shalikeam Banarse

Class: Bsc III^{ed} year (CBZ)

Project Topic: IOCL BARC

**Supervisor remark
with sign and date:**

Kavita
22/01/22

Name of the supervisor: Dr. Kavita P. Kakade.

Date of submission of Project: 22nd January 2022

Kakade
Head of Department
Mr. Nilesh S. Radole
Vinayak Vidnyan Mahavidyalaya,
Nandgaon, Khandeshwar

IOCL BARC

A) Indian Oil Corporation Limited [IOCL]

Bhabha Atomic Research Centre [BARC]

भाभा परणामु अनुसंधान केंद्र

B) Establishment Information of Companies.

The Bhabha Atomic Research Centre [BARC] is India's premier nuclear research facility, headquartered in Trombay, Mumbai, Maharashtra. It was founded by Homi Jehangir Bhabha Atomic Energy Establishment, Trombay (AEET) in January 1954 as a multidisciplinary research program essential for India's nuclear program. It operates under the Department of Atomic Energy (DAE), the prime minister of India. In 1966, after the death of Mr. Bhabha, AEET was renamed as Bhabha Atomic Research Centre [BARC].

—founded by Homi Jehangir Bhabha Atomic Energy Establishment, Trombay (AEET) in January 1954 as a multidisciplinary research program essential for India's nuclear program.

Bhabha Atomic Research Centre

formerly called :- Atomic Energy Establishment,
Bombay

C) Working Area of Companies

BARC's core mandate is to sustain peaceful application of nuclear energy. It manages all the facets of nuclear power generation, from the theoretical design of reactors to computer modeling and the simulation, risk analysis, development and testing of new reactor fuel, materials etc.

Industries.

- 1) Nuclear Fuel Complex (NFC)
- 2) Heavy Water Board (HWB)
- 3) Uranium Corporation of India Limited (UCIL)
- 4) Indian Rare Earths Limited (IREL)
- 5) Electronics Corporation of India Limited (ECIL)
- 6) Board of Radiation and Isotope Technology (BRIT)

D) Governing Agencies

Research Centres

- Bhabha Atomic Research Centre (BARC)
- Indira Gandhi Centre for Atomic Research (IGCAR)
- Raja Ramanna Centre for Advanced Technology (RRCAT)
- Variable Energy Cyclotron Centre (VECC)
- Atomic Minerals Directorate for Exploration and Research (AMD)
- Global Centre for Nuclear Energy Partnership (GCNEP)

E) Annual Turnover (Profit) of Companies

Turnover is the net sales generated by a business while profit is the residual earnings of a business. The Turnover is your total business income during a set period time. In other words, the net sale figure profit on the other hand refers to your earnings. Annual turnover is the percentage rate of which something changes ownership over the course of a year. For the rate could be related to is yearly turnover in inventories, receivable, payable.

F) Vacancy of Post for Chemistry Subject

M.S.C. All Candidates (other than those applying with a 5-year integrated M.S.C degree). must additionally have a minimum of 60% aggregate marks in B.S.C. Applicants opting to be considered on the basic Gate Score should have a valid Gate-2021 or Gate-2022 score in the chemistry subject. B.S.C. pass candidates are not eligible for BARC (Bhabha Atomic Research Centre) Exam. If you pass M.S.C and qualify Gate then you will be eligible for the Bhabha Research Centre.



IndianOil

Indian Oil Corporation Limited

G) Recruitment process for chemistry post.

Recruitment of Scientific / Technical officers (Scientists and Engineers) in BARC is either through training schools programme of OCES / DGFS and Direct Recruitment either through a bachelor's degree in chemistry, chemical engineering or a related field is required to get entry level job as a process of chemist for higher position. Some Companies also prefer a post-graduation or doctoral degree in a chemistry.

H) Salary Structure of chemistry post.

BARC OCES Salary

pay Level	Pay Matrix - 7 (Rs. 56,100)
Basic pay	RS. 56,100
Dearness Allowance, House Rent Allowance, and Transport Allowance, etc.	RS. 39,000/- (approx.)
Total monthly Emolument (Expected)	RS. 95,000

Ⓘ Syllabus for Junior post (If available)

The Bhabha Atomic Research Centre (BARC) has released the BARC Syllabus 2021 for the candidates who appeared for the post of the driver and sub-officers. Candidates can get their BARC Syllabus form from the website given below. The BARC Syllabus 2021 for the examination has been released on the website mentioned.

⓵ Recruitment Month (If any)

The qualified candidates will receive a one-year training programme at BARC Training School. Moreover, after being employed, the respective candidate will be awarded INR 67,700 - 56,100/- per month which may vary.

(K) Website of Organization/Companies

Bhabha Atomic Research Centre (BARC)

- Website (<http://www.wbarc.gov.in>)
- webmaster@barc.gov.in
- <http://www.baeeceecelit.gov.in>
- <https://www.baecinlia.co.in>
- <https://i-register.co.in/oeeg>decl>
- <https://www.nab.pocmplix.com>
- <http://barc.gov.in> > bmg



PRAVIN KHODKE MEMORIAL TRUST'S,
VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON KHANDESHWAR.

DEPARTMENT OF CHEMISTRY

ACADEMIC SESSION

2021-2022 (Winter)

Project Submission

Name of the Student: Vrushabh Vishnu Madavi

Class: Bsc. Part IIIrd (PCM)

Project Topic: DRDO & DAE (Defence research & Development organisation.)
(Department of atomic energy)

Name of the supervisor: Dr. Nilesh S. Padole
Dr. Vinod M. Sherekar

Supervisor remark
with sign and date:

Sp
19/01/2022

Date of submission of Project: 22nd January 2022

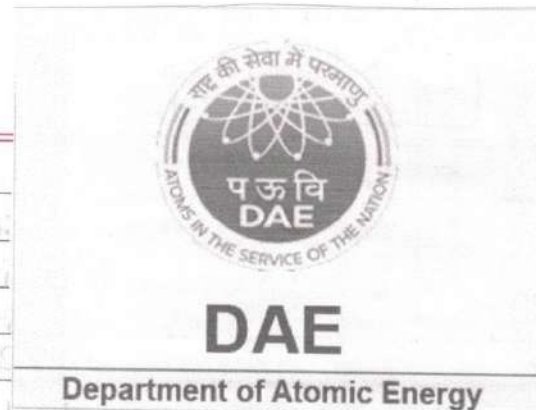
Spadole
Head of Department
Mr. Nilesh S. Padole
Department of Chemistry
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khandeshwar

Page No.	
Date	

DAE

Full form of Company:

DAE - Department of Atomic Energy.



Establishment information of company:-

[IAST: Paramany unya Vibhaya] is a department with headquarters in Mumbai, Maharashtra India. DAE was established in 1954 by a Presidential order. DAE has been engaged in the development of nuclear power technology applications of radiation technology in the field of agriculture, medicine, industry and basic research. DAE comprises five research centres, three industrial organisations, three public sector undertakings and three service organisations. It has under its wings two boards for promoting and funding external research in nuclear and allied fields, mathematics and a national institute (deemed university).

It also supports eight institutes of international repute engaged in research in basic sciences, astronomy, astrophysics, cancer research and education. [The correct answer is Homi Bhabha about Atomic Energy Commission of India.]

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Date	

* Working area of Company :-

DAE is a department with headquarters in Mumbai, Maharashtra, India. DAE comprises five research centers, three industrial organizations, five Public Sector undertakings and mathematics with Industrial Experience for the post of Assistant of Picegs.

The requirement cell is vested with the responsibility of making requirement of Group 'A' scientific and technical posts as requirement to these posts is example from the Perview of UPSC. The requirement to these posts is made by the method of direct requirement or deputation or absorption as per the requirement rules for the relevant posts.

* Salary structure for chemistry Post :-

The average salary for a chemical is ₹. 2.5 lakhs per year in India, which is 8% more than the average salary of chemist at JSW steel which receive as ₹. 2.7 lakhs per year.

Generally someone who has earned an MSc chemistry degree will look for field job is pharmaceutical firms, hospitals, medical schools, private clinics, research centers, etc. on average the salary

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received by postgraduated in chemistry *
 ranges from INR 3 to 6 lakhs, The highest
 salary for a MSG Analytical chemistry in
 India is ₹ 53,270 per month.

* Syllabus for your Posts :-

Department of atomic energy
 (DAE) officials has released the notifications
 to officials recruit the eligible conditions
 for various DPS DAS posts many
 condirate for various DPS DAS posts
 Exam syllabus for group B non-Gratted.
 (Stenographer Grade II), Group C non-Gratted
 (Stenographer III) upper Division clerk,
 junior Purchase Assistant (JPA/Junior
 stenographer posts.) there service organisation

* Governing Agencies :-

WDA Jr. Purches Asst. Jr. store
 Keeper New Delhi Scientific officers
 DAE, Delhi,
 Jr. Purches Asst. Jr. store Keeper,
 Department of atomic energy steno and
 purchase Assistant.

* Annual turnover (Profit) of company :-

The average DAE being autolabs Salary range from approximately ₹ 0.7 lakhs Per year for a trainee to ₹ 2.2 lakhs Per year for a quality controller.

The average Department of Atomic Energy salary range from approximately ₹ 2.3 lakhs Per year for a upper Division clerk to ₹ 16.5 lakhs Per year for a scientific officer.

* Vacancy of Post for chemistry subject :-

1) Research Associated Trains - Discovery chemistry [Hyderabad]

2) Assistant Professor - Department of chemistry ₹ 2,00,000 - 5,00,000.

3) Forensic expert :-

Chemical engineer Toxicologist, waste management Professional, quality control chemist, pharmacologist, food safety Professional.

* Recruitment Process for chemistry Post :-
Recruitment of Post Graduates in physics chemistry.

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Requieirtment month :-

Department of Atomic energy has announced a job, notification for the post of stenographer, clerk and other. These are 74 vacancies are to be filled for these posts. Interseted Candidates who are all eligible for this post can apply on or before 27 December 2020 the age limit of the condidated should be is to 27 years.

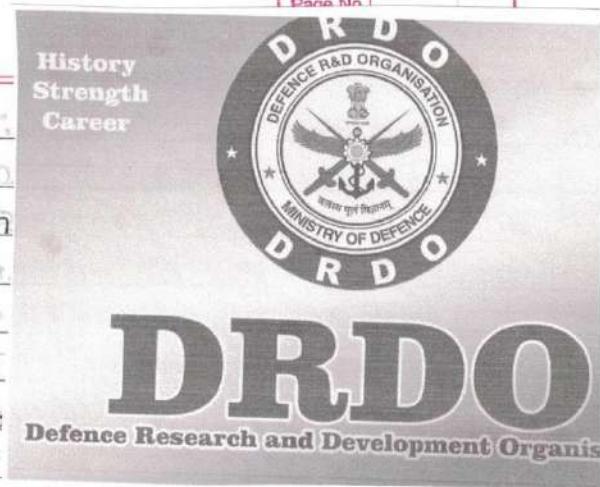
DAE :- Variable Energy cyclotron centre Department of atomic Energy is the Premier R & D unit and it is one of the institutions of Homi Bhabha National Institute. the main Process of this institute is to development end research in the fields of technology nuclear Science and Accelerate sciences.

* Website of organisation /company :-

- 1) <https://dae.gov.in>
- 2) <https://www.bore.gov.in>
- 3) <https://www.nfc.gov.in>
- 4) <https://www.zaibacorp.com>.

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Date No.



DRDO

Full form of Company
DRDO - Defence Research
and Development
organisation.

Establishment information
of company :-

The DRDO was established in 1958 by amalgamating the technical development organisation and some of the. A separate Department of Defence Research and Development formed in 1980 which later on administered DRDO and its 50 laboratories establishments.

Parent agency: ministry of Defence.

Headquarters: DRDO Bhavan New Delhi

Agency executive: Dr. G. Satheish Reddy *

* Working area of Company:

DRDO is India's largest research organisation. It has a network of laboratories engaged in developing defence technologies covering various fields like aeronautics, armament, electronics, land combat, engineering, life science, materials, missiles, naval systems, information systems and agriculture.

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* Vacancy of Post for chemistry Subject:-

- 1) Associate Defence ministry jobs vacancy in DRDO [Jodhpur Rajasthan]
- 2) Recruitment in DRDO Project defence, Laboratory Jodhpur for DRDO [Rajasthan]
- 3) DRDO recruitment 2021 for JRE in Jodhpur DRDO [Jodhpur Rajasthan]
- 4) Scientist 'B' DRDO [Delhi]

* Recruitment Process for chemistry Post:-

Govt. DRDO RAC chemistry Recruitment RAC initiates online application from graduate, engineer & post graduates in science including students who are appearing or have appeared in their final year examination through RAC website <https://rac.gov.in> for recruitment to the post of Scientist 'B'.

* Salary Structure for chemistry Post:-

DRDO in level 10 [7th (Pc)] of Pay matrix (RS. 56100/-) in specified disciplines & categories. Total emoluments, inclusive of HRA & all other allowances at the time of joining with the approximately (RS 80,000/-) pm at the present metro city rate.

The DRDO salary is INR 2,25,000 per month. The recruitment and Assessment centre (RAC) of DRDO oversees the recruitments of DRDO employees.

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* Syllabus for your Post :-

Carbon and its compounds fuels
Atomic structure chemical bonding Behaviour
of Gases metals and non-metals chemical
reactions Radioactivity Acids Base & Salts catalyst
Hydro carbon concepts of pH scale metallurgy
DRDO Syllabus AS A post is divided into
quantitative ability aptitude general intelligence
& general awareness general science
arithmetic ability Hindi or English language.

* Recruitment Month :- January of February
are two of the best months to look for long
from full time jobs since these are the months
most companies receive update budgets & sales
forecasts Executives have a better idea of
the they need & whether they another they
can afford to hire new team member
which leads career advisors to consider
these the top months for hiring.

* website of organisations/ Company.

1) <https://www.drdo.gov.in>

2) <https://in.linkedin.com>

3) www.drdo.gov.in/recruitment

4) <https://drdo.org>



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VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON KHANDESHWAR.**

DEPARTMENT OF CHEMISTRY

ACADEMIC SESSION

2021-2022 (Summer)

Project Submission

Name of the Student : Ku. Vaishnavi S. Khope

Class : B.Sc. IIIrd (Sem- VIth)

**Project Topic : Chemistry of Metal Complexes Present In
Leaving Being.**

Name of the supervisor :

**Supervisor remark
with sign and date:**

Padole
19/02/22

Date of submission of Project : 22nd January 2022

Head of Department

MR. NILESH S. PADOLE

Department of Chemistry
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Kh.

metal complexes are important in the catalysis, materials synthesis, photochemistry and biological system. medicinal inorganic chemistry can exploit the unique properties of metal ions for the design of the new drug.

The use of metals and their salt of medicinal purposes has been the present throughout history. metal complexes are also known as the coordination complexes are molecules that contain groups arranged around a central metal ion. In a way, these are like a 'lego' molecule, easily assembled from smaller parts and sometimes they are easily transformed into new molecules by switching out old for new ones.

Therapy in the treatment of metal intoxication presents a practical guide to use of chelation therapy. from its basic chemistry to available chelating agents.

Several metals have long been known to be toxic to humans, and continue to pose great difficulty to treat.

These challenges pose particular problem in industrial setting with lead smelting known to be associated with homoprotic alterations and paralysis and the inhalation of mercury

Environmental implications of metal mobility in marine sediments receiving input from a torrent affected by mine discharge.

As the most abundant transition metal in the human body iron performs many important functions. It is primarily involved in the transfer of oxygen from lungs to tissue by forming

Application of metal complexes are important in catalysis, materials synthesis, photochemistry, and biological systems.

Medicinal inorganic chemistry can exploit the unique properties of metal ions. Transition metal complexes or the co-ordination complexes are molecular chain molecules that contain groups arranged around a central metal ion.

In a way these are like molecules. The transition metal are useful in the industrial application.

- ① They are good conductors of heat and electricity
- ② They can be hammered or bent into shape easily
- ③ They have high melting point
- ④ They are usually hard and tough

In other words, thermodynamic stability of complexes is the measure of tendency of a metal ion to the selectively form a specific metal complex and is directly related to metal-ligand bond energies. The thermodynamic stability of complexes is represented by formation constant.

many coordinating complexes have been used in medicine containing metal such as platinum (Cisplatin as the anticancer chemotherapy drug) gold as Au-Auranofin used for rheumatoid arthritis. Technetium, rhenium as radiotherapy. Ruthenium (as anticancer drug) Gadolinium, cobalt metal are essential cellular components selected by nature to the function in several indispensable biochemical process for living organisms. Used in biological systems.

Tc (Tc) complexes are used in the heart imaging process.

A metal complexes consist of a central metal ions that is bonded to one or more ligand which ions or molecules that contain one or more pair of electrons that can be share with the metal.

dimetal ions it can be Neutral, positively charged or negatively charged.
 Example lot of metals used in treatment include platinum. platinum based compounds have been shown to have specifically effect on head and neck tumors. These co-ordination complexes are thought to act to cross-link DNA in tumor cells.

The polymetallic complexes consist of two or more metal atoms combine with organic molecules into a larger complicated molecular structure.

Types of coordination complexes

- Cationic complexes In the co-ordination sphere is a cation.
- Anionic complexes In this co-ordination sphere is neither cation or anion.
- Homoleptic complex In this co-ordination the complex consists of a similar type of ligands.
- Neutral complexes In this co-ordination sphere is neither cation or anion.

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In other words, thermodynamics stability of complexes in the measure of tendency of a metal ions to selectively form the metal ions, and directly related to the metal-ligand bond energies.

metal complexes have become an emerging tool in drug discovery being widely used in therapeutic compounds to treat several human disease such as carcinomas, lymphomas, infection control diabetes anti-inflammatory and neurological disorder.

Six coordinate complexes. They have been particularly important in the history of the development of coordination chemistry complexes can be divided broadly into three classes depending the types of acceptor substance

- ① metal ions complexes
- ② Organic molecular complexes
- ③ Inclusion complexes

A complex is a molecular entity formed by loose association involving two or more component molecular chemical species. The bonding between the complexes

Component is normally weaker than that in covalent bond.

The normally the complex ions stability is directly related to the metal-ligand bond.

- Name the ligands first in alphabetical order, then the metal atom or ion.
- The name of some common ligands are as listed below to treat such as carbonyl, phosphine etc.
- Greek prefixes are used to designate the number of each type of ligands.

Kinetic stability is related to reactivity of metal complexes in solutions and deals with the rate of their reactions. Its activation energy etc.

Kinetic stability is also related to how fast a compound reacts rather than how stable it is.

Chelate complexes are more stable than the analogous complexes with monodentate ligands.

A complex ion is formed from a metal ion and a ligand because of a Lewis acid and the ligand with one or more lone pair of electrons.

A complex compound can be described as a class of substance with a chemical structure where the central atom is a metal and it is surrounded by non-metal ions or group of atoms.

Example of complex compound include potassium ferrocyanid $K_4[Fe(CN)_6]$ and potassium ferricyanida.

Structure of Binding
metal-ligand complexes span a range of co-ordination geometries that give them unique shapes compared to organic molecule. The bond length bond angles and Number of ordingings site can vary dependings. on the metal ions its oxidation states.

Kinetic Aspects of Metal Complexes.

> Thermodynamic and kinetic stability of the complexes :

Stability is a term which is often used rather loosely and is open to a variety of interpretations. When the term stability is used without the qualifications, it means that the complexes exist and under suitable conditions it may be stored for a long time. This term cannot be generalized for complexes.

The stability of complexes in solutions can be explained by two stability terms. These are

- (1) Thermodynamic stability
- (2) Kinetic stability

> Thermodynamic stability

It is a measure of the extent of formation a transformation of a complex ion into another under a given set of conditions at equilibrium. It depends upon the strength of the linkage between the metal and ligands in the complex.

Stronger the $M-L$ bond, higher will be the thermodynamic stability of a complex. It can also be interpreted as the amount of association between metal 'M' and ligand 'L'.

In the formation of a coordination compound, $M + nL \rightleftharpoons ML_n$ where 'n' is the number of ligands coordinating with the metal atom or ion. Qualitatively the greater the degree of association, more stable the resultant compound.

The stability of a co-ordination compound is usually characterized by the equilibrium constants for the association reaction. It is a measure of the stability of the complex and is usually referred to as the stability constant. Similarly, the equilibrium constant for the dissociation reaction is known as the instability constant and is related to the stability constant as its reciprocal. Upon the strength of the bond between the metal and ligands in the complex.

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For Example

The equilibrium (K_1) for the dissociation reaction of complex ions are -

$$[\text{Cd}(\text{NH}_3)_4]^{2+} \rightleftharpoons \text{Cd}^{2+} + 4\text{NH}_3$$

$$K_1 = \frac{[\text{Cd}^{2+}][\text{NH}_3]^4}{[\text{Cd}(\text{NH}_3)_4]^{2+}} = 2.5 \times 10^{-7}$$

$$K_1 = \frac{[\text{Ag}^+][\text{NH}_3]^2}{[\text{Ag}(\text{NH}_2)]} = 6.0 \times 10^{-8}$$

The K_1 value of $[\text{Ag}(\text{NH}_2)]^+$ complex ion is smaller than $[\text{Cd}(\text{NH}_3)_4]^{2+}$ complex ions. So, that is more stable than that the former one.

Since the stability and the in stability constant are conveniently related to the change in enthalpy (ΔH) and change in entropy (ΔS) the very ideal of stability of coordination compound is essential a thermodynamic one.

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KINETIC Stability :-

- It refers to the rate or speed at which the formation of the dissociation of complex species leading to the attainment of the equilibrium will take place.

When we are interested in studying kinetic stability of complex ions in the solution we deal with the rates and mechanism of a chemical reactions such as substitution, isomerization, variable recombination and the electron or group transfer reactions.

as well as the thermodynamic variables involved in the formation of intermediate species or activated complexes in the kinetic sense it is more proper to call the complex stable or unstable rather than stable or unstable complexes.

Transfer of reactions as well as the thermodynamic variables.

Factors affecting stability of a complex.

Due to wide range of value of stability constant for different complex no. single factor is expected to account for the relative stabilities of coordination compound they are affected by many physical and chemical factors.

NAAC CRITERION - I



PROJECT WORK

PHYSICS





SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI AFFILIATED

Pravin Khodke Memorial Trust Amravati's Vinayak Vidnyan Mahavidyalaya

Tq. Nandgaon Khandeshwar, Dist. Amravati

DEPARTMENT OF PHYSICS

PROJECT SUBMISSION SHEET

(Academic Year 2021-2022)

List of B.Sc. Physics IInd year IIIrd semester

Sr. No.	Student Name	Topic	Signature	Remark
1	Achal Ramdas Bijave	Design & fabrication of 5V DC power supply using wave Bridge Rectifier	<i>[Signature]</i>	Submitted
2	Adarsha Nivrutti Gavner	Demonstrate newton second law	<i>[Signature]</i>	"
3	Adiba Saman Anees Khan	Design and fabrication of 5V DC power supply using full wave Bridge rectifier	<i>[Signature]</i>	"
4	Aditya Anil Deshmukh	Design & fabrication of 5V DC power supply	<i>[Signature]</i>	"
5	Akansha Kashinath Raut	Properties of step down transformer	<i>[Signature]</i>	"
6	Aman Murlidhar Gawaner	To study the viscosity of water	<i>[Signature]</i>	"
7	Aman Pradiprao Kakade	To study the viscosity of water	<i>[Signature]</i>	"
8	Ambika Narhari Chavhan	Demonstrate newton second law	<i>[Signature]</i>	"
9	Anuja Ajay Tayade	Demonstrate newton second law	<i>[Signature]</i>	"
10	Chaitali Sanjay Dok	Demonstrate newton's second law	<i>[Signature]</i>	"
11	Chanchal Kishor Gajbhiye	To construct a model to demonstrate Newton's second law	<i>[Signature]</i>	"
12	Damini Vilasrao Dhage	To construct a model to demonstrate Newton's second law	<i>[Signature]</i>	"
13	Dattatrya Onkar Giri	Developing the model to study Newton's second law	<i>[Signature]</i>	"
14	Durgesh Dhanjay Mendhe	Developing the model to study Newton's second law	<i>[Signature]</i>	"
15	Gayatri Avinash Solanke	Developing the model to study Newton's second law	<i>[Signature]</i>	"
16	Jay Shamrao Gawande	To construct a model to demonstrate Newton's second law	<i>[Signature]</i>	"
17	Kalyani Narhari Wakode	To show unidirectional flow	<i>[Signature]</i>	"
18	Kiran Arun Kambale	To show unidirectional flow	<i>[Signature]</i>	"
19	Mamta Sanjay Meshram	To show unidirectional flow	<i>[Signature]</i>	"
20	Manish Kishor Tarhekar	Developing the model to study Newton's second law	<i>[Signature]</i>	"
21	Mayur Manish Tayade	Developing the model to study Newton's second law	<i>[Signature]</i>	"
22	Mo Abuzar Mo Iliyas Shaikh	To make not gate with the Com.	<i>[Signature]</i>	"
23	Mo Sajid Hamid Makrani	Demonstrate newton second law	<i>[Signature]</i>	"
24	Parivartan Arun Tayade	To calculate the surface tension	<i>[Signature]</i>	"
25	Poornima Ganesh Raut	Design and fabrication of 5V DC power supply using full wave bridge rectifier	<i>[Signature]</i>	"
26	Pranav Kishorroa Shelke	Design and fabrication of 5V DC power supply	<i>[Signature]</i>	"
27	Prathmesh Dadarao Hambarde	To study the resistance of various resistors	<i>[Signature]</i>	"
28	Prathmesh Suresh Inzalkar	To calculate the surface tension	<i>[Signature]</i>	"
29	Reshma Arunrao Margade	To study the Resistance of various resistors	<i>[Signature]</i>	"
30	Ritesh Motiram Ghoddeswar	To make norgate combination	<i>[Signature]</i>	"

31	Ritu Devnarayan Chaudhari	To study the Resistance of various	Ritu Chaudhari	Submitted
32	Rohit Madan Bodhankar	To construct an amplifier using an	Rohit Bodhankar	"
33	Roshan Ashok Bharaskar	To study the Resistance of various	Roshan	"
34	Roshan Rameshwar Kalalkar	To make nor gate with the lamb	Roshan	"
35	Rutik Tryambakrao Jawalkar	To construct an amplifier using an	Rutik	"
36	Rutuja Sudhirrao Gulhane	To construct a water level	Rutuja	"
37	Sahil Vikas Raut	To construct water level controller	Sahil	"
38	Sakshi Mahendra Dukare	To study concept of Reflection	Sakshi	"
39	Sakshi Subhashrao Herode	To study concept of Refr. of Refr. of	Sakshi	"
40	Sakshi Vilas Dhawale	To calculate the specific heat capacity	Sakshi	"
41	Sarvesh Dharmendra Virulkar	To study the resistance of various water	Sarvesh	"
42	Sayali Pramod Gawande	To study of Resistance of materials	Sayali	"
43	Sharaddha Vijay Raut	to study of Resistance of materials	Sharaddha	"
44	Shoeb Ahmad Noor	To study the properties of step down	Shoeb	"
45	Shreya Pramodrao Chore	The effect on pressure of water	Shreya	"
46	Shreyash Ramesh Kapse	To make nor gate with the co.	Shreyash	"
47	Talib Farooq Ramlani	To make nor gate combination	Talib	"
48	Vaishnavi Gajanan Deulkar	The effect on pressure of water	Vaishnavi	"
49	Vaishnavi Ravindra Gatule	The effect on pressure of water	Vaishnavi	"
50	Vevekanand Anil Pawar	To study properties of step down	Vevekanand	"
51	Yash Pramod More	Design & fabrication of 12V De power	Yash	"
52	Yash Shyamkant Pawar	To study properties of step down	Yash	"


List of B.Sc. Physics IIIrd year Vth semester

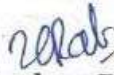
Sr. No.	Student Name	Topic	Signature	Remark
1	Abhijeet Gajanan Rithe	Analyse the different heat treat	Abhijeet	Submitted
2	Akash Shivshankarji Bhavare	Analyse the different heat treat	Akash	"
3	Anand Bhaurao Nanhe	Analyse the different heat	Anand	"
4	Arpita Anilrao Bhojar	Comparing the strength of solid	Arpita	"
5	Atul Parshram Bhosale	cyclotron	Atul	"
6	Bhushan Gajanan Ombase	convection: How does the temperature	Bhushan	"
7	Harshad Homdev Ghate	wind mill	Harshad	"
8	Hitesh Vijay Raghute	wind mill	Hitesh	"
9	Leena Shankar Gondane	Cyclotron	Leena	"
10	Lokesh Dipak Marotkar	Effect of temperature on magnet	Lokesh	"
11	Mohammad Anwar Mohd Asrar	effect of temp on magnetic	Mohammad	"
12	Namrata Mulchand Raut	Effect of temperature on magnet	Namrata	"
13	Nandini Ravindra Kanse	To assemble a household circuit	Nandini	"
14	Om Pramodrao Ingole	Laser	Om	"
15	Payal Vyankatesh Bhasme	Laser	Payal	"
16	Pranav Dinkar Gulhane	To construct logic gate NAND	Pranav	"
17	Prathmesh Ganesh Gawner	Plotting graph to potential differe	Prathmesh	"
18	Pratik Nandkishor Kaje	To construct logic gates using	Pratik	"
19	Prayas Shankar Dubey	To determine the viscosity of castor oil	Prayas	"
20	Puja Subhashrao Dukare	Diffraction of light	Puja	"


12	Namrata Mulchand Raut	Effect of temperature on magnet	Dr. A.S. Wadatkar
13	Nandini Ravindra Kanse	Laser	Dr. P.B. Kharat
14	Om Pramodrao Ingole	Laser	Dr. P.B. Kharat
15	Payal Vyankatesh Bhasme	Laser	Dr. P.B. Kharat
16	Pranav Dinkar Gulhane	To construct logic gates NAND gate	P. B. Kharat
17	Prathmesh Ganesh Gawner	To determine the distance per cm plotting graph to potentiometer	Dr. P.B. Kharat
18	Pratik Nandkishor Kaje	To construct logic gates using NAND gate	Dr. P.B. Kharat
19	Prayas Shankar Dubey	To determine the viscosity of water, oil & Squalan oil by capillary rise method	Dr. P.B. Kharat
20	Puja Subhashrao Dukare	To determine the viscosity of water, oil and squalan oil by capillary rise method	Dr. P.B. Kharat
21	Roshan Namdeo Rathod	To determine the viscosity of water, oil and squalan oil by capillary rise method	Dr. P.B. Kharat
22	Rutuja Bharat Devtale	Laser	Dr. P.B. Kharat
23	Rutuja Mangesh Gulhane	Laser	Dr. P.B. Kharat
24	Sakshi Devidas Ambulkar	Laser	Dr. P.B. Kharat
25	Sakshi Kiranrao Gulhane	To find focal length of convex mirror using conjugate foci	Dr. P.B. Kharat
26	Saurabh Govindrao Bhadke	To find the focal length of convex mirror using conjugate foci	Dr. P.B. Kharat
27	Saurabh Laxmanrao Satpaise	Convex mirrors using conjugate foci	Dr. P.B. Kharat
28	Shraddha Rajendra Raut	The verification of the Archimedes principle	Mr. A.V. Ambhore
29	Shubham Arjun Rathod	The verification of the Archimedes principle	Mr. A.V. Ambhore
30	Shubham Ramesrao Gulhane	The verification of the Archimedes principle	Mr. A.V. Ambhore
31	Shweta Pandurang Charpe	To construct an Amplifier using an IC-741 with gain 3	Mr. A.V. Ambhore
32	Sneha Gajanan Sagale	To construct an Amplifier using an IC-741 with gain 3	Mr. A.V. Ambhore
33	Sneha Rajkumar Vanjari	To construct an Amplifier using an IC-741 with gain 3	Mr. A.V. Ambhore
34	Swara Narendra Deshmukh	To construct a water level controller IC-555	Mr. A.V. Ambhore
35	Tejaswini Shrikrushna Gadhekar	To construct a water level controller IC-555	Mr. A.V. Ambhore
36	Vaibhav Shrikrushna Gulhane	To construct a water level controller IC-555	Mr. A.V. Ambhore
37	Vaishnavi Santosh Raut	Electronic meters	A.V. Ambhore
38	Vrushbh Vishnu Madavi	Electronic meters	A.V. Ambhore

Students must complete the project and submit the project report in the due period as per the above-assigned topics in the Department of Physics to the concerned teacher.

Faculty members


Dr. Anant S. Wadatkar
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Dr. Prashant B. Kharat
 Assistant Professor
 Department of Physics
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 Nandgaon Khandeshwar, Amravati


Mr. Ajay V. Ambhore


Head

Date: Friday, 8th October 2021

Place: Nandgaon Khandeshwar, Dist. Amravati.

Department of Physics
Dr. Anant S. Wadatkar
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DEPARTMENT OF PHYSICS

NOTICE

All the students of B.Sc. Physics IInd year IIIrd semester and IIIrd year Vth semester in the academic year 2021-2022 are hereby informed that students must complete the project, prepare a project report with the help of the concerned teacher mentioned in the table below, and submit it before Monday, 10th January 2022 on the topic assigned in the table below,

List of B.Sc. Physics IInd year IIIrd semester

Sr. No.	Student Name	Topic	Name of Guide
1	Achal Ramdas Bijave	Design & fabrication of SVDC supply using full wave Bridge Rectifier	Dr. A.S. Wadalkar
2	Adarsha Nivrutti Gavner	Demonstrate Newton second law	Dr. A.S. Wadalkar
3	Adiba Saman Anees Khan	Design & fabrication of 5V DC power supply using full wave Bridge rectifier	Dr. A.S. Wadalkar
4	Aditya Anil Deshmukh	Design & fabrication of 5V DC power	Dr. A.S. Wadalkar
5	Akansha Kashinath Raut	Properties of step down transformer	Dr. A.S. Wadalkar
6	Aman Murlidhar Gawaner	To study the viscosity of water	Dr. A.S. Wadalkar
7	Aman Pradiprao Kakade	To study the viscosity of water	Dr. A.S. Wadalkar
8	Ambika Narhari Chavhan	Demonstrate Newton second law	Dr. P.B. Khairat
9	Anuja Ajay Tayade	Demonstrate Newton second law	Dr. P.B. Khairat
10	Chaitali Sanjay Dok	Demonstrate Newton's second	Dr. P.B. Khairat
11	Chanchal Kishor Gajbhiye	To construct model to demonstrate	Mr. A.V. Ambhore
12	Damini Vilasrao Dhage	To construct a model to demonstrate	Mr. A.V. Ambhore
13	Dattatrya Onkar Giri	To develop model to	A.V. Ambhore
14	Durgesh Dhanjay Mendhe	To developing model to	A.V. Ambhore
15	Gayatri Avinash Solanke	To Developing the model to	Mr. A.V. Ambhore
16	Jay Shamrao Gawande	To construct a model to demonstrate	Mr. A.V. Ambhore
17	Kalyani Narhari Wakode	To study the viscosity of water	Dr. A.S. Wadalkar
18	Kiran Arun Kambale	To study the viscosity of water	Dr. A.S. Wadalkar
19	Mamta Sanjay Meshram	To study the viscosity of water	Dr. A.S. Wadalkar
20	Manish Kishor Tarhekar	To Developing the model to	Dr. P.B. Khairat
21	Mayur Manish Tayade	To Developing the model to	Dr. P.B. Khairat
22	Mo Abuzar Mo Iliyas Shaikh	To make note gate with the camber	Dr. P.B. Khairat
23	Mo Sajid Hamid Makrani	Demonstrate Newton second law	Dr. P.B. Khairat
24	Pariyartan Arun Tayade	To calculate the surface	Dr. P.B. Khairat
25	Poornima Ganesh Raut	Design and fabrication of SVDC power supply using full wave Bridge rectifier	Dr. P.B. Khairat

26	Pranav Kishorroao Shelke	newest supply and disbaactation of gvde	Dr. P.B. Kharat
27	Prathmesh Dadarao Hambarde	To study the resistance of various	Dr. P.B. Kharat
28	Prathmesh Suresh Inzalkar	To calculate the surface tension of water	Dr. P.B. Kharat
29	Reshma Arunrao Margade	To study the Resistance of various	Dr. P.B. Kharat
30	Ritesh Motiram Ghoddeswar	To make nor gate with the combin	Dr. P.B. Kharat
31	Ritu Devnarayan Chaudhari	To study the Resistance of various	Dr. P.B. Kharat
32	Rohit Madan Bodhankar	To construct an amplifier Using an	Mr. A.V. Ambhore
33	Roshan Ashok Bharaskar	To study the Resistance of various	Dr. P.B. Kharat
34	Roshan Rameshwar Kalalkar	to make nor gate with the combin	Dr. P.B. Kharat
35	Rutik Tryambakrao Jawalkar	To construct an amplifier using an	Dr. P.B. Kharat
36	Rutuja Sudhirrao Gulhane	To construct a water level controller using TC-SS3	Dr. A.S. Wadalkar
37	Sahil Vikas Raut	To construct water level controller using TC-SS3	Dr. A.S. Wadalkar
38	Sakshi Mahendra Dukare	To study concept of Reflection (conve)	Dr. A.S. Wadalkar
39	Sakshi Subhashrao Herode	To study concept of Reflection	Dr. A.S. Wadalkar
40	Sakshi Vilas Dhawale	To calculate the specific Heat capacity of water, oil & engine oil	Dr. P.D. Kharat
41	Sarvesh Dharmendra Virulkar	To study of resistance of various material	Dr. P.B. Kharat
42	Sayali Pramod Gawande	To study of Resistance of various material	P.B. Kharat
43	Sharddha Vijay Raut	to study of Resistance of various material	P.B. Kharat
44	Shoeb Ahmad Noor	To study properties of step down	P. B. Kharat
45	Shreya Pramodrao Chore	The effect of pressure on water	Mr. A.V. Ambhore
46	Shreyash Ramesh Kapse	To make nor gate with the combin	P.B. Kharat
47	Talib Farooq Ramlani	To make nor gate with the combin	P.B. Kharat
48	Vaishnavi Gajanan Deulkar	The effect of pressure on water	Mr. A.V. Ambhore
49	Vaishnavi Ravindra Gatule	The effect of pressure on water	Mr. A.V. Ambhore
50	Vevekanand Anil Pawar	To study properties of step down	Dr. A.S. Wadalkar
51	Yash Pramod More	Design fabrication of 12V DC power	Dr. A.S. Wadalkar
52	Yash Shyamkant Pawar	To study properties of step down	Dr. A.S. Wadalkar

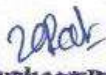
List of B.Sc. Physics IIIrd year Vth semester


Sr. No.	Student Name	Topic	Name of Guide
1	Abhijeet Gajanan Rithe	Analyse the different heat treatment	Dr. A.S. Wadalkar
2	Akash Shivshankarji Bhavare	Analyse the different heat treatment	Dr. A.S. Wadalkar
3	Anand Bhaurao Nanhe	Analyse the different heat treatment	Dr. A.S. Wadalkar
4	Arpita Anilrao Bhojar	comparing the strength of solid used with that of polymer	Dr. A.S. Wadalkar
5	Atul Parshram Bhosale	Effect of temp on magnetism	Dr. A.S. Wadalkar
6	Bhushan Gajanan Ombase	convection: How does temperature affect the movement of water	Dr. A.S. Wadalkar
7	Harshad Homdev Ghate	wind mill	Dr. A.S. Wadalkar
8	Hitesh Vijay Raghute	wind mill	Dr. A.S. Wadalkar
9	Leena Shankar Gondane	Cyclotron	Dr. A.S. Wadalkar
10	Lokesh Dipak Marotkar	Effect of temperature on magnetic	Dr. A.S. Wadalkar
11	Mohammad Anwar Mohd Asrar	Effect of the temp on magnetic	Mr. Anwar

21	Roshan Namdeo Rathod	Diffraction of light	Rathod	Submit
22	Rutuja Bharat Devtale	laser	Devtale	"
23	Rutuja Mangesh Gulhane	laser	Gulhane	"
24	Sakshi Devidas Ambulkar	laser	Ambulkar	"
25	Sakshi Kiranrao Gulhane	find focal length of convex mirror	Gulhane	"
26	Saurabh Govindrao Bhadke	to find the focal length of convex lens	Bhadke	"
27	Saurabh Laxmanrao Satpaise	to find the focal length of convex lens	Satpaise	"
28	Shraddha Rajendra Raut	verification of the Archimedes principle	Raut	"
29	Shubham Arjun Rathod	verification of the Archimedes principle	Rathod	"
30	Shubham Ramesrao Gulhane	to construct an amplifier using an operational amplifier	Gulhane	"
31	Shweta Pandurang Charpe	to construct an amplifier using an operational amplifier	Charpe	"
32	Sneha Gajanan Sagale	to construct an amplifier using an operational amplifier	Sagale	"
33	Sneha Rajkumar Vanjari	to construct an amplifier using an operational amplifier	Vanjari	"
34	Swara Narendra Deshmukh	to construct an amplifier using an operational amplifier	Deshmukh	"
35	Tejaswini Shrikrushna Gadhekar	Construct water level controller	Gadhekar	"
36	Vaibhav Shrikrushna Gulhane	Construct water level controller	Gulhane	"
37	Vaishnavi Santosh Raut	Electro motors	Raut	"
38	Vrushbh Vishnu Madavi	Electro motors	Madavi	"

Faculty members


Dr. Anant S. Wadtkar
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Dr. Prashant B. Khairat
 Assistant Professor
 Department of Physics
 Vinayak Vidnyan Mahavidyalaya,
 Nandgaon Khandeshwar, Amravati


Mr. Ajay V. Ambhore

Date: Monday, 10th January 2022

Place: Nandgaon Khandeshwar, Dist. Amravati.


 Head

Department of Physics
Dr. Anant S. Wadtkar
 Assistant Professor and Head
 Department of Physics
 Vinayak Vidnyan Mahavidyalaya
 Nandgaon (Kh.), Dist. Amravati



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DEPARTMENT OF PHYSICS

NOTICE

All the students of B.Sc. Physics IInd year IVth semester and IIIrd year VIth semester in the academic year 2021-2022 are hereby informed that students must complete the project, prepare a project report with the help of the concerned teacher mentioned in the table below, and submit it before Friday, 20th May 2022 on the topic assigned in the table below,

List of B.Sc. Physics IInd year IVth semester

Sr. No.	Student Name	Topic	Name of Guide
1	Achal Ramdas Bijave	Construct the model to study the laws of Reflection of Sound	Dr. A.S. Wadkatkar
2	Adarsha Nivrutti Gavner	The study the charge & Discharge	Dr. A.S. Wadkatkar
3	Adiba Saman Anees Khan	Construct the model to study reflection of sound	Dr. A.S. Wadkatkar
4	Aditya Anil Deshmukh	Construct the model to study the	Dr. A.S. Wadkatkar
5	Akansha Kashinath Raut	To study and construct a circuit	Dr. A.S. Wadkatkar
6	Aman Murlidhar Gawaner	To study the density of water	Dr. A.S. Wadkatkar
7	Aman Pradiprao Kakade	Design variable DC power supply	Dr. P.B. Kharat
8	Ambika Narhari Chavhan	To demonstrate the total internal reflection	Dr. P.B. Kharat
9	Anuja Ajay Tayade	To demonstrate the total internal reflection	Dr. P.B. Kharat
10	Chaitali Sanjay Dok	To demonstrate the phenomenon	Dr. P.B. Kharat
11	Chanchal Kishor Gajbihiye	To study the viscosity of water and engine oil	Dr. P.B. Kharat
12	Damini Vilasrao Dhage	To study the viscosity of oil and engine oil	Dr. P.B. Kharat
13	Dattatrya Onkar Giri	To construct an Amplifier using	Dr. P.B. Kharat
14	Durgesh Dhanjay Mendhe	To construct an Amplifier using	Dr. P.B. Kharat
15	Gayatri Avinash Solanke	To construct an Amplifier using	Dr. P.B. Kharat
16	Jay Shamrao Gawande	To study the viscosity of oil and water	Dr. P.B. Kharat
17	Kalyani Narhari Wakode	To study the viscosity of water	Dr. P.B. Kharat
18	Kiran Arun Kambale	To study the density of water	Dr. P.B. Kharat
19	Mamta Sanjay Meshram	To study the density of water, oil and engine oil	Dr. P.B. Kharat
20	Manish Kishor Tarhekar	To construct a model to	Dr. P.B. Kharat
21	Mayur Manish Tayade	To construct a model to	Dr. P.B. Kharat
22	Mo Abuzar Mo Ilyas Shaikh	Design variable DC power supply	Dr. P.B. Kharat
23	Mo Sajid Hamid Makrani	To study the characteristics of engine oil	Dr. P.B. Kharat
24	Parivartan Arun Tayade	To construct a model to	Dr. P.B. Kharat
25	Poornima Ganesh Raut	To construct logic gate using NAND gate	Dr. P.B. Kharat

26	Pranav Kishorroa Shelke	To construct logic gate using	Phelke
27	Prathmesh Dadarao Hambarde	The study of charge	Mr. A.V. Ambhore
28	Prathmesh Suresh Inzalkar	To demonstrate simple harmonics	Result.
29	Reshma Arunrao Margade	To study the verification of the	Mr. A.V. Ambhore.
30	Ritesh Motiram Ghoddeswar	Construct amplifier	Mr. A.V. Ambhore
31	Ritu Devnarayan Chaudhari	To study the verification of the	Mr. A.V. Ambhore
32	Rohit Madan Bodhankar	To determination of Density of solid	Mr. A.V. Ambhore
33	Roshan Ashok Bharaskar	To study the verification of the	Mr. A.V. Ambhore
34	Roshan Rameshwar Kalalkar	Design variable DC power Supply using	P.B. Kharat
35	Rutik Tryambakrao Jawalkar	To construct an amplifier using	P.B. Kharat
36	Rutuja Sudhirrao Gulhane	To study properties of step down	Dr. A.S. Wadatkare
37	Sahil Vikas Raut	To study properties of step down	Dr. A.S. Wadatkare
38	Sakshi Mahendra Dukare	Determine the numerical Aperture	Dr. A.S. Wadatkare
39	Sakshi Subhashrao Herode	Determine the numerical	Dr. A.S. Wadatkare
40	Sakshi Vilas Dhawale	To study Resistance of various material	Dr. P.B. Kharat
41	Sarvesh Dharmendra Virulkar	Determine of Density of solid	Dr. P.B. Kharat
42	Sayali Pramod Gawande	To calculate the specific heat of oil and	P.B. Kharat
43	Shardha Vijay Raut	To calculate specific heat of oil	P.B. Kharat
44	Shoeb Ahmad Noor	To determine the solving power of	P.B. Kharat
45	Shreya Pramodrao Chore	To study the charge & discharging	Mr. A.V. Ambhore
46	Shreyash Ramesh Kapse	Design variable DC power supply	P.B. Kharat
47	Talib Farooq Ramlani	To determine the solving power of	Dr. P.B. Kharat
48	Vaishnavi Gajanan Deulkar	To study the charge & discharging	Mr. A.V. Ambhore
49	Vaishnavi Ravindra Gatule	To study the charge & discharging	Mr. A.V. Ambhore
50	Vevekanand Anil Pawar	To study and construct a circuit	Mr. A.S. Wadatkare
51	Yash Pramod More	Construct logic gate using NOT gate	Dr. A.S. Wadatkare
52	Yash Shyamkant Pawar	To study and construct a circuit	Dr. A.S. Wadatkare

List of B.Sc. Physics IIIrd year VIth semester

Sr. No.	Student Name	Topic	Name of Guide
1	Abhijeet Gajanan Rithe	compatibility of fabric type & acute resistance	Dr. A.S. Wadatkare
2	Akash Shivshankarji Bhavare	compatibility of fabric type & acute resistance	Dr. A.S. Wadatkare
3	Anand Bhaurao Nanhe	Goodwin fabric spacer & resistor	Dr. A.S. Wadatkare
4	Arpita Anilrao Bhojar	construct a model of a magnetically levitated train	Dr. A.S. Wadatkare
5	Atul Parshram Bhosale	laser	Dr. A.S. Wadatkare
6	Bhushan Gajanan Ombase	convection: How does the temperature affect the movement of water	Dr. A.S. Wadatkare
7	Harshad Homdev Ghate	wind mill	Dr. A.S. Wadatkare
8	Hitesh Vijay Raghute	wind mill	Dr. A.S. Wadatkare
9	Leena Shankar Gondane	To construct a full-wave bridge rectifier & show that the rms alternating current	Dr. A.S. Wadatkare
10	Lokesh Dipak Marotkar	Effect of temperature on conductivity	Dr. A.S. Wadatkare
11	Mohammad Anwar Mohd Asrar	Effect of temperature on conductivity	Dr. A.S. Wadatkare

12	Namrata Mulchand Raut	Effect of temperature on conductivity and resistivity	A.S. Wadatkar
13	Nandini Ravindra Kanse	To build wind turbine generator	P.B. Kharat
14	Om Pramodrao Ingole	To build wind turbine generator	P.B. Kharat
15	Payal Vyankatesh Bhasme	To build wind turbine generator	P.B. Kharat
16	Pranav Dinkar Gulhane	To construct LM 95	P.B. Kharat
17	Prathmesh Ganesh Gawner	Plotting a graph of potential	DR. Khurdat
18	Pratik Nandkishor Kaje	To construct logic gates using NAND gate	DR. P.B. Kharat
19	Prayas Shankar Dubey	To determine the surface tension of water and organic oil by capillary rise method	DR. P.B. Kharat
20	Puja Subhashrao Dukare	To determine the surface tension of water and organic oil by capillary rise method	DR. P.B. Kharat
21	Roshan Namdeo Rathod	To determine the surface tension of water and organic oil by capillary rise method	DR. P.B. Kharat
22	Rutuja Bharat Devtale	Thin Film	P.B. Kharat
23	Rutuja Mangesh Gulhane	Thin film	R.B. Kharat
24	Sakshi Devidas Ambulkar	Thin Film	DR. P.B. Kharat
25	Sakshi Kiranrao Gulhane	Find value of ϵ_0 using capacitor	DR. P.B. Kharat
26	Saurabh Govindrao Bhadke	Find the focal length of convex lens	DR. P.B. Kharat
27	Saurabh Laxmanrao Satpaise	To find the value of ϵ_0 using capacitor	DR. P.B. Kharat
28	Shraddha Rajendra Raut	To construct a model to demonstrate the variation in potential across length of wire from a steady current	MR. A.V. Ambhore
29	Shubham Arjun Rathod	Automatic street light	MR. A.V. Ambhore
30	Shubham Ramesrao Gulhane	Automatic street light	MR. A.V. Ambhore
31	Shweta Pandurang Charpe	Automatic street light	MR. A.V. Ambhore
32	Sneha Gajanan Sagale	Automatic street light	MR. A.V. Ambhore
33	Sneha Rajkumar Vanjari	Automatic street light	MR. A.V. Ambhore
34	Swara Narendra Deshmukh	AC Generator	MR. A.V. Ambhore
35	Tejaswini Shrikrushna Gadhekar	AC Generator	MR. A.V. Ambhore
36	Vaibhav Shrikrushna Gulhane	AC Generator	MR. A.V. Ambhore
37	Vaishnavi Santosh Raut	Electromagnetic induction	MR. A.V. Ambhore
38	Vrushbh Vishnu Madavi	Electromagnetic induction	MR. A.V. Ambhore

Students must complete the project and submit the project report in the due period as per the above-assigned topics in the Department of Physics to the concerned teacher.

Faculty members

Dr. Anant S. Wadatkar
 Dr. Anant S. Wadatkar
 Department of Physics
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 Nandgaon (Kh.), Dist. Amravati

Dr. Prashant B. Kharat
 Dr. Prashant B. Kharat
 Assistant Professor
 Department of Physics
 Vinayak Vidnyan Mahavidyalaya,
 Nandgaon Khandeshwar, Amravati

Mr. Ajay V. Ambhore
 Mr. Ajay V. Ambhore
 Head

Date: Monday, 21st February 2022
 Place: Nandgaon Khandeshwar, Dist. Amravati.

Department of Physics
Dr. Anant S. Wadatkar
 Assistant Professor and Head
 Department of Physics
 Vinayak Vidnyan Mahavidyalaya
 Nandgaon (Kh.), Dist. Amravati



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Pravin Khodke Memorial Trust Amravati's Vinayak Vidnyan Mahavidyalaya Tq. Nandgaon Khandeshwar, Dist. Amravati

DEPARTMENT OF PHYSICS

PROJECT SUBMISSION SHEET

(Academic Year 2021-2022)

List of B.Sc. Physics IInd year IVth semester

Sr. No.	Student Name	Topic	Signature	Remark
1	Achal Ramdas Bijave	construct the model to study the laws of reflection of sound	Bijave	Submitted
2	Adarsha Nivrutti Gavner	construct Amplifier	Adarsha	"
3	Adiba Saman Anees Khan	Construct the model to study reflection of sound	Adiba	"
4	Aditya Anil Deshmukh	construct the model to study the	Ashmukh	"
5	Akansha Kashinath Raut	To study and construct a	AKRaut	"
6	Aman Murlidhar Gawane	Design variable DC power	Gawane	"
7	Aman Pradiprao Kakade	Design variable DC power supply	AKakade	"
8	Ambika Narhari Chavhan	Total internal reflection	AChavhan	"
9	Anuja Ajay Tayade	to demonstrate the total	ATayade	"
10	Chaitali Sanjay Dok	To demonstrate the	CDok	"
11	Chanchal Kishor Gajbhiye	to study viscosity oil engine factors	CGajbhiye	"
12	Damini Vilasrao Dhage	To study viscosity of oil engine	DVdhage	"
13	Dattatrya Onkar Giri	to construct an amplifier using	DGiri	"
14	Durgesh Dhanjay Mendhe	To construct an amplifier using	DMendhe	"
15	Gayatri Avinash Solanke	To construct an Amplifier using	GSolanke	"
16	Jay Shamrao Gawande	To study viscosity of oil engine	JGawande	"
17	Kalyani Narhari Wakode	To study the viscosity of	KWakode	"
18	Kiran Arun Kambale	To study the viscosity of water	KKambale	"
19	Mamta Sanjay Meshram	to study the density of water oil engine	MSMeshram	"
20	Manish Kishor Tarhekar	To construct a model to	MTarhekar	"
21	Mayur Manish Tayade	To construct a model to	MTayade	"
22	Mo Abuzar Mo Ilyas Shaikh	Design variable DC power supply	AJShaikh	"
23	Mo Sajid Hamid Makrani	to plot the characteristics on the surface	MSajid	"
24	Parivartan Arun Tayade	To construct a model to	PTayade	"
25	Poornima Ganesh Raut	To construct logic gate using NAND gate	PGRaut	"
26	Pranav Kishor Rao Shelke	To construct logic gate using	PShelke	"
27	Prathmesh Dadarao Hambarde	To study the viscosity	PHambarde	"
28	Prathmesh Suresh Inzalkar	to demonstrate simple harmonic motion	PSinzalkar	"


29	Reshma Arunrao Margade	To study the verification of the	Prongade	Submitted
30	Ritesh Motiram Ghoddeswar	Design variable DC power	Prongade	"
31	Ritu Devnarayan Chaudhari	To study the verification of the	Ritu Chaudhari	"
32	Rohit Madan Bodhankar	To determine Density of solid	Bodhankar	"
33	Roshan Ashok Bharaskar	To study the verification of the	Bharaskar	"
34	Roshan Rameshwar Kalalkar	Design variable DC power supply using	Kalalkar	"
35	Rutik Tryambakrao Jawalkar	To construct an amplifier using	Jawalkar	"
36	Rutuja Sudhirrao Gulhane	To study properties of step down	Gulhane	"
37	Sahil Vikas Raut	To study the property of step down	Raut	"
38	Sakshi Mahendra Dukare	Determine the numerical Aperture	Dukare	"
39	Sakshi Subhashrao Herode	Determine the numerical	Herode	"
40	Sakshi Vilas Dhawale	To study Resistance of various material	Dhawale	"
41	Sarvesh Dharmendra Virulkar	charge & Discharge.	Virulkar	"
42	Sayali Pramod Gawande	To calculate specific heat oil engine	Gawande	"
43	Shardha Vijay Raut	To calculate specific heat oil engine	Raut	"
44	Shoeb Ahmad Noor	To determine transduction parameter of	Noor	"
45	Shreya Pramodrao Chore	To study the charging and discharging	Chore	"
46	Shreyash Ramesh Kapse	Design variable DC power supply	Kapse	"
47	Talib Farooq Ramhani	Study the verification.	Ramhani	"
48	Vaishnavi Gajanan Deulkar	To study the charging & discharging	Deulkar	"
49	Vaishnavi Ravindra Gatule	To study the charging & discharging	Gatule	"
50	Vevekanand Anil Pawar	To study and construct a circuit of class	Pawar	"
51	Yash Pramod More	Construct logic gates using NOR	More	"
52	Yash Shyamkant Pawar	To study and construct a circuit of	Pawar	"


List of B.Sc. Physics IIIrd year VIth semester

Sr. No.	Student Name	Topic	Signature	Remark
1	Abhijeet Gajanan Rithe	Comparing the fabric type of water system	Rithe	Submitted
2	Akash Shivshankarji Bhavare	Comparing the fabric type of water system	Bhavare	"
3	Anand Bhaurao Nanhe	Comparing the fabric type of water system	Nanhe	"
4	Arpita Anilrao Bhoyar	Comparing the fabric type of water system	Bhoyar	"
5	Atul Parshram Bhosale	The build with turbine	Bhosale	"
6	Bhushan Gajanan Ombase	conductor flow does the temperature affect the movement of water	Ombase	"
7	Harshad Homdev Ghate	windmill	Ghate	"
8	Hitesh Vijay Raghute	windmill	Raghute	"
9	Leena Shankar Gondane	to build a full wave bridge rectifier	Gondane	"
10	Lokesh Dipak Marotkar	Effect of temperature on conduct	Marotkar	"
11	Mohammad Anwar Mohd Asrar	Effect of temperature on conduct	Asrar	"
12	Namrata Mulchand Raut	Effect of temperature on conduct	Raut	"
13	Nandini Ravindra Kanse	To build a full turbine generator	Kanse	"
14	Om Pramodrao Ingole	To build with turbine generator	Ingole	"

15	Payal Vyankatesh Bhasme	To build wind turbine generator	Bhasme	Submitted
16	Pranav Dinkar Gulhane	to construct temp ICE M35	Gulhane	"
17	Prathmesh Ganesh Gawner	Plotting a graph to Potential -	Gawner	"
18	Pratik Nandkishor Kaje	To construct logic gates using NAND gate	Kaje	"
19	Prayas Shankar Dubey	To determine the viscosity of water and Syphon oil by capillary tube method	Dubey	"
20	Puja Subhashrao Dukare	To determine the specific heat of water oil and soybean oil by capillary method	Dukare	"
21	Roshan Namdeo Rathod	To determine the surface tension of water (i) and soybean oil by capillary method	Rathod	"
22	Rutuja Bharat Devtale	Thin Film	Devtale	"
23	Rutuja Mangesh Gulhane	Thin Film	Gulhane	"
24	Sakshi Devidas Ambulke	Thin Film	Ambulke	"
25	Sakshi Kiranrao Gulhane	To find μ in case of concave	Gulhane	"
26	Saurabh Govindrao Bhadke	To find the focal of convex mirror	Bhadke	"
27	Saurabh Laxmanrao Satpaise	To find the refractive index of a transparent medium	Satpaise	"
28	Shraddha Rajendra Raut	To find the value of μ of a transparent medium	Raut	"
29	Shubham Arjun Rathod	To construct a model to demonstrate Newton's third law of motion	Rathod	"
30	Shubham Ramesrao Gulhane	The refraction in parallel rays with μ of a transparent medium	Gulhane	"
31	Shweta Pandurang Charpe	Automatic strobe light	Charpe	"
32	Sneha Gajanan Sagale	Automatic strobe light	Sagale	"
33	Sneha Rajkumar Vanjari	Automatic strobe light	Vanjari	"
34	Swara Narendra Deshmukh	AC Generator	Deshmukh	"
35	Tejaswini Shrikrushna Gadhekar	AC generator	Gadhekar	"
36	Vaibhav Shrikrushna Gulhane	AC Generator	Gulhane	"
37	Vaishnavi Santosh Raut	Electromagnetic induction	Raut	"
38	Vrushbh Vishnu Madavi	Electromagnetic induction	Madavi	"

Faculty members


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Place: Nandgaon Khandeshwar, Dist. Amravati.


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VINAYAK VIDNYAN MAHAVIDYALAYA,
NANDGAON KH.

TITLE OF THE PROJECT:

Design Variable DC power Supply
using Full Wave Bridge rectifier

NAME OF STUDENT: Aman Pradip kakade

YEAR: B.Sc. - IInd (2021-22)

SEMESTER: IV

Name of Teacher: Dr. P. B. Kharat

SUBMITTED

TO

DEPARTMENT OF PHYSICS



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Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled Design Variable DC power Supply using Full Wave Bridge Rectifier submitted by Mr./Ms. Aman Pradip kakade of B.Sc. (Physics) Part: II Semester: IV as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: / /



Teacher-In-Charge

Signature of the Teacher who taught the examinee

1.
2.

Date: / /

Place: Nandgaon Khandeshwar, Dist. Amravati.


Head
Head
Department of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.

➤ **Content**

- Introduction
- Diagram
- Working
- Principle
- Application
- Advantages
- Disadvantages
- Conclusion
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➤ Introduction

The rectifier circuit is used to convert the AC (Alternating Current) into DC (Direct Current). Rectifiers are mainly classified into three types namely half-wave, full-wave, and bridge rectifier. The main function of all these rectifiers is the same as the conversion of current but they not efficiently convert the current from AC to DC. The center tapped full wave rectifier as well as bridge rectifier converts efficiently. A bridge rectifier circuit is a common part of the electronic power supplies. Many electronic circuits require a rectified DC power supply for powering the various electronic basic components from available AC mains supply. We can find this rectifier in a wide variety of electronic AC power devices like home appliances, motor controllers, modulation process, welding applications, etc. This article discusses an overview of a bridge rectifier and its working.

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➤ What is a Bridge Rectifier?

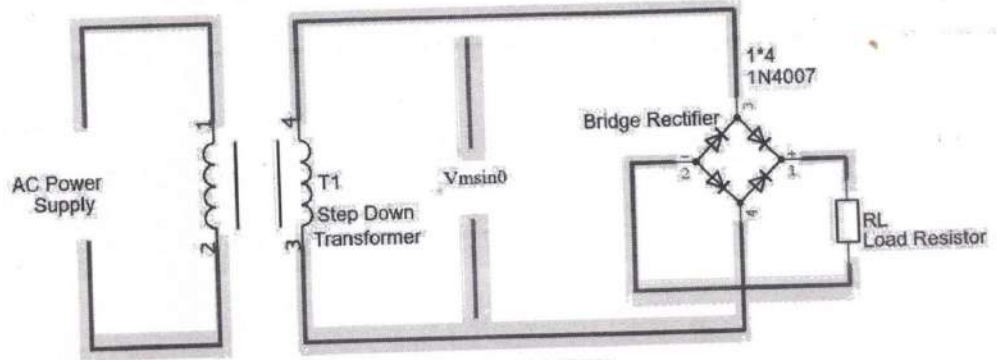
A Bridge rectifier is an Alternating Current (AC) to Direct Current (DC) converter that rectifies mains AC input to DC output. Bridge Rectifiers are widely used in power supplies that provide necessary DC voltage for the electronic components or devices. They can be constructed with four or more diodes or any other controlled solid-state switches. Depending on the load current requirements, a proper bridge rectifier is selected. Components' ratings and specifications, breakdown voltage, temperature ranges, transient current rating, forward current rating, mounting requirements, and other considerations are taken into account while selecting a rectifier power supply for an appropriate electronic circuit's application.

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➤ Diagram

Full Wave Bridge Rectifier



For Complete Details Visit : www.Circuits-DIY.com

➤ Diagram



➤ Working

This bridge rectifier circuit works on a simple mechanism.

- A step-down transformer is used in order to step down or decrease the high voltage AC into low voltage AC.
- The transformer's secondary winding is connected to the opposite points of the bridge made up diodes. The secondary output of the transformer is connected at a point where both the anode as well as the cathode of the diode lies.
- All the four diodes are connected in such a way that they form a passage which allows only one side of the AC voltage or pulse and converts the negative part of it into positive voltage or pulse.
- The DC voltage output of the bridge rectifier circuit is obtained from the points where both the diodes are connected either from anode or cathode. The anode becomes the positive part as well as cathode becomes the negative part of the DC voltage output.
- The output voltage of the bridge rectifier is not a constant/straight DC voltage but does have a pulse which is then reduced with the help of an electrolytic capacitor which acts as a filter to Pulsated DC voltage.
- The efficiency of the bridge rectifier lies in how the minimum amount of pulse it has after the filter is applied to the pulsated output.
- The full-wave Bridge Rectifier Circuit is complete as the capacitor or a filter is applied to decrease the pulse and the voltage is then used for various purposes.
- All the four diodes are connected in such a way that they form a passage which allows only one side of the AC voltage or pulse and converts the negative part of it into positive voltage or pulse.
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➤ Principle

- A very high input AC is supplied to the full wave rectifier.
- The step-down transformer in the full wave rectifier circuit converts the high voltage AC into low voltage.
- The anode of the center-tapped diodes is connected to the secondary winding of the transformer and to the load resistor.
- When there is a positive half cycle of the AC, then the top half of the secondary winding or terminal 1 will be positive while terminal two or the second half of the winding will be negative and center tap will be at zero potential.
- At the time of the positive half cycle, the diode D1 will be forward biased and diode D2 will be reverse biased. This is because it is connected to the bottom of the secondary winding.
- Hence, D1 will let the current flow, and D2 will block the flow through it.
- In case of a negative half cycle, the diode D1 is reversed biased and the diode D2 is forward biased. This is because the top half of the secondary circuit becomes negative, while the bottom half of it becomes positive.
- Therefore, in a full wave rectifier, DC voltage is obtained for both positive as well as negative half cycle.

➤ Application

- Full Wave Bridge Rectifier is used to detect the amplitude of the modulating radio signal.
- Bridge rectifier circuits are also used to supply steady and polarized Dc voltage in electric welding.
- The Bridge Rectifier circuits are widely used in power supply for various appliances, as they are capable of converting the High AC voltage into Low DC voltage.
- Full-wave rectifiers are also used for powering up the devices which work on DC voltage like motor and led.

This full-wave bridge rectifier circuit is used more than the other rectifier circuits due to its huge number of advantages over others.

➤ Advantages

The advantages of bridge rectifier include the following.

- The rectification efficiency of a full-wave rectifier is double that of a half-wave rectifier.
- The higher output voltage, higher output power, and higher Transformer Utilization Factor in case of a full-wave rectifier.
- The ripple voltage is low and of higher frequency, in case of full-wave rectifier so simple filtering circuit is required
- No center tap is required in the transformer secondary so in the case of a bridge rectifier, the transformer required is simpler. If stepping up or stepping down of voltage is not required, the transformer can be eliminated even.
- For a given power output, a power transformer of a smaller size can be used in the case of the bridge rectifier because the current in both primary and secondary windings of the supply transformer flows for the entire ac cycle.
- Rectification efficiency is double as compared with a half-wave rectifier
- It uses simple filter circuits for high frequency and low ripple voltage
- TUF is higher as compared with a center-tapped rectifier
- Center tap transformer is not necessary

➤ Disadvantages

The disadvantages of the bridge rectifier include the following.

- It requires four diodes.
- The use of two extra diodes causes an additional voltage drop thereby reducing the output voltage.
- This rectifier needs four diodes thus the rectifier's cost will be high.
- The circuit is not appropriate once a small voltage is necessary to be rectified, because, the two diodes connection can be done in series & provides a double voltage drop because of their inner resistance.
- These circuits are very complex
- As compared with the center-tapped type rectifier, the bridge rectifier has more power loss.

➤ **Conclusion**

As conclusion, we can conclude that half-wave and full-wave rectifier circuits can be built. It can measure and record their output voltages and curves systematically. Next, the influences of load resistor and capacitor on DC output voltage is investigate. Half- and full-wave rectifiers are used to convert AC into DC voltage. This is the primary function of the rectifier in industrial applications. For example, AC is used across the power grid, but to use electricity for welding, electroplating and as a DC source for motors with special speed controls, the AC must be changed to DC. Therefore, it is importance to carried out this experiment to increase the understanding on rectifier in industries.

➤ **Conclusion**

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➤ Reference

- <http://www.google.com>
- <http://www.yahoo.com>
- <http://eeepjct.com>
- <http://www.electronics-notes.com>

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VINAYAK VIDNYAN MAHAVIDYALAYA,
NANDGAON KH.

TITLE OF THE PROJECT:

To study The verification of the
Archimedes Principal Principle

NAME OF STUDENT: Ku. Ritu Devnandyan Chaudhari

YEAR: B.Sc.-2nd (2021-22)

SEMESTER: IV

Name of Teacher: Ajay Ambhaze Sir

SUBMITTED

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CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled *To study the verification of the Archimedes principle* submitted by Mr./Ms. *Ritu Deynarayan chaudhary* of B.Sc. (Physics) Part: *2nd* Semester: *I.V.* as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: *14/07/2021*

[Signature]
Teacher-In-Charge

Signature of the Teacher who taught the examinee

1. *[Signature]*

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.

[Signature]

Head

Head
Department of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.

To Study The Verification of the Archimedes Principle

Abstract

The interpretation of the equilibrium of a solid body floating on the surface of a liquid body is well known as the "Archimedes' Principle". Presently, the equilibrium of the solid body is interpreted as the result of the concurrence of two mechanical actions which are equivalent and opposite: the "weight" of the body, directed downwards, and the "Archimedes' force" having a magnitude equivalent to the weight of the volume of liquid displaced by the volume of the body immersed in the liquid, directed upwards. We show arguments proving that this interpretation is not a correct physical interpretation. The same arguments show that a new different interpretation is a correct one. The new interpretation is based on the hypothesis that the "weight" of a body immersed in a body-medium is proportional to the volume of the body immersed in the body-medium and to the difference in density between the matter of the body and the matter of the body-medium. Accordingly, if a body is completely immersed in a body-medium, there is only one mechanical action on the body. This action may be downwards or upwards, or its magnitude may be zero. In this last case, the body is in equilibrium within the body-medium.

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Content

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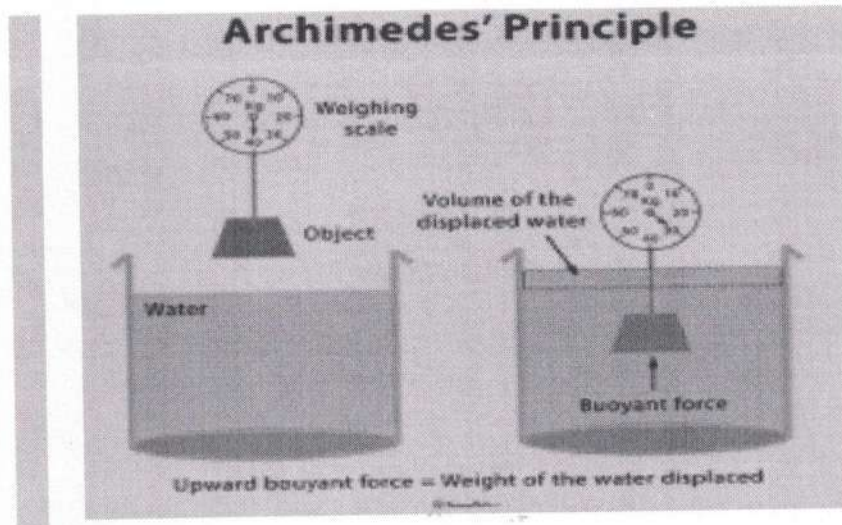
Introduction

In the last twenty years, quite regularly, papers appeared in the literature on "Archimedes' Principle" . This "Principle is undoubtedly the most fundamental law in hydrostatics, used to interpret a set of natural phenomena, for example "isostasy" of continental crust on the earth mantle, but it is somewhat curious, however, that physics teachers and scholars still debate about it approximately 2300 years after Archimedes' death The reasons for this discussion are fundamentally two.

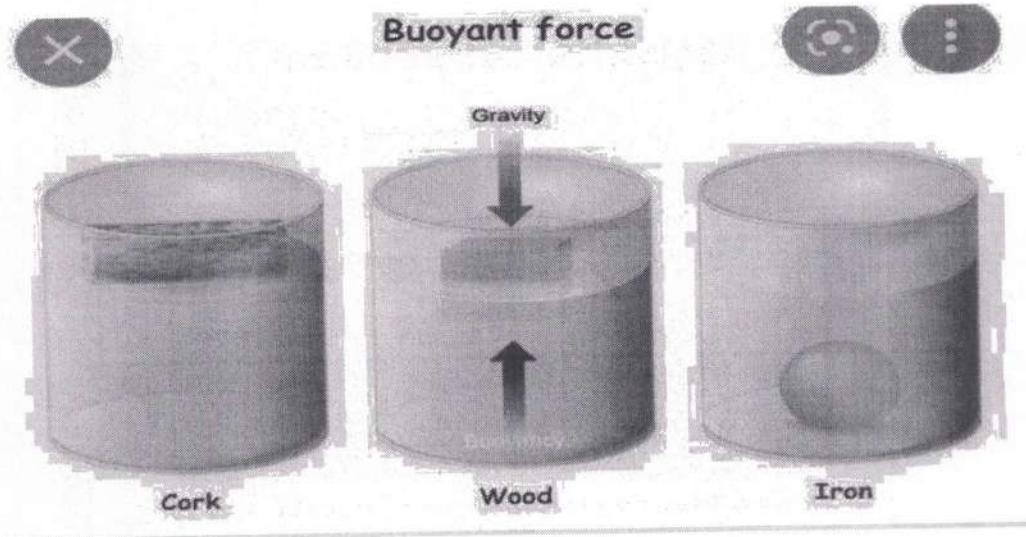
The first is that they are unsatisfied with the current interpretation in the cases of solid objects which sink in fluids and rest on the bottom of the respective fluid-containers. In these cases, it is difficult to explain the observed decrease in the weight of the solid body in terms of the difference in hydrostatic pressure between the bottom and the top of the body . The second reason is that they feel that this "Principle" is in relation with the concept of "weight" of a body . This is "inevitable", because the phenomenology studied by Archimedes introduces the concept of "density", a "property" of the matter intimately related to the "weight" of a body. Weight is one of the most important consequences of the natural process we call "gravitation", and therefore we can understand the importance of the discussion about this "Principle".

In this study, we first show the fundamental hypothesis which is at the basis of the current interpretation of the phenomenology studied by Archimedes. Then, we propose a new interpretation, which is quantitatively equivalent but not physically equivalent to the present one. Lastly, we show that the current interpretation is not a correct physical interpretation because it is in contradiction with the observations, whereas the new proposed interpretation is a correct one.

Diagram



Diagram



Archimedes' Principle

Archimedes lived in Syracuse on the island of Sicily in the third century B.C. At that time, Syracuse was one of the most influential cities of the ancient world, according to Scientific American. Trading vessels from Egypt, Greece and Phoenicia filled the city-state's harbor. It was also a hub of commerce, art and science, according to the Archimedes Palimpsest.

Archimedes Principle is named after its discoverer, the Greek mathematician, and physicist 'Archimedes.' It is based on the principle of buoyancy, which states that if a body is partially or fully submerged in the fluids (gases or liquids), then the fluid exerts an upward force called the buoyant force on the body whose magnitude is equal to the fluid weight displaced by the body. The Buoyant force acts at the center of gravity point of the displaced fluid, this point is known as the center of Buoyancy.

The Buoyant force exerted on the body by the fluid is mathematically expressed as

Write as $F_b = \rho \times g \times V$

F_b buoyant force ρ the density of the fluid

V submerged volume g acceleration due to gravity

Where $\{F\}_b$ F_b is the Buoyant force acting on the body, ρ is the density of the fluid, g is the acceleration due to gravity, V is the volume of the displaced fluid. The above expression shows that the buoyant force is directly proportional to the density of the fluid, acceleration due to gravity, and the volume of the fluid displaced by the body. If two objects of equal masses are submerged in the fluid, then the object having greater volume will experience a greater buoyant force.

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Theory

We are aware that some objects float on some fluids, submerged to differing extents: icecubes float in water almost completely submerged, while corks float almost completely on the surface. Even the objects that sink appear to weigh less when they are submerged in the fluid than when they are not. These effects are due to the existence of an upward 'buoyant force' that will act on the submerged object. This force is caused by the pressure in the fluid being increased with depth below the surface, so that the pressure near the bottom of the object is greater than the pressure near the top. The difference of these pressures results in the effective 'buoyant force', which is described by the Archimedes' principle.

According to this principle, the buoyant force F_B on an object completely or partially submerged in a fluid is equal to the weight of the fluid that the (submerged part of the) object displaces:

$$F_B = m_f g = \rho_f V g$$

where ρ_f is the density of the fluid, m_f and V are respectively mass and the volume of the displaced fluid (which is equal to the volume of the submerged part of the object) and g is the gravitational acceleration constant.

Application of Archimedes Principle

Ship

The iron nail sinks in the water because the weight of the water displaced by the nail is less than its own weight, i.e., the density of the iron nail is more than that of the water. While constructing ships, Archimedes' principle is followed, a large portion of the ships are kept hollow from inside that maintains their density less than the water density, hence the weight of the ship becomes less than the weight of the water displaced by it, and the buoyant force of magnitude equal to the displaced water exerts on the ship, and the ship floats on the surface of the water.

Beach Ball

Beach balls are filled with air only, so they have a very small weight, hence they do not displace much water. Since they displace less water, the buoyant force acting on them is also very less, but when we try to push the ball into the water, the buoyant force acting on it increases, which does not let the beach ball sink into the water, and it floats on the water surface.

Submarine

Archimedes' principle Submarines can be submerged into the water and p also float on the surface of the water by maintaining the densities of the displaced water and submarine. These densities are maintained by the two important components present in the submarine that are the compressed tank and the ballast tank. If we fill the ballast tank with water, it results in a greater density of the submarine than the density of displaced water, hence the submarine dives into the water, the average density of the submarine becomes lesser than the density of the displaced water, and the submarine floats on the water surface.

Floating

Every object displaces the water of weight equal to its own weight. If the weight of the body is greater than the upthrust force acting upon it then the object sinks, whereas if the weight of the body is equal to the upthrust force acting upon it then the body floats on the liquid. Ice and icebergs float on the surface of the water because of the balanced upward buoyant force acting on them. So, the principle of floating is that the upthrust force acting on the body should be equal to the weight of the liquid displaced by the body.

Hydrometer

A Hydrometer is an instrument that is used to measure the specific gravity or density of the liquids. It works on Archimedes' principle. It consists of a hollow glass tube with a bulb-shaped wider bottom, sealed from both ends. The . The level of hydrometer submerged in the liquid and the water displaced by it are measured to calculate the specific gravity of the liquid. If the hydrometer sinks deep in the sample liquid, it implies that the density of the liquid is less, i.e., the specific gravity of the sample liquid is less.

Swimming

Archimedes' principle also comes into play when you are swimming. While we swim, the upward force, also called the buoyant force, acts on us. The swimmer is able to float on the surface of the water as the pressure above the swimmer is greater than the pressure from beneath as the density of the water is greater than that of the air. It is commonly

seen that it is easier to swim in saltwater than freshwater because the buoyant force not only depends on the water displaced but also on the density of the fluid. the buoyant force acting on the body in saltwater will also be higher as compared to freshwater, which is why it is easier for the swimmers to swim in the saltwater.

Hot Air balloon

Archimedes' principle is also applied to the working of hot air balloons. The balloon rises in the air when the weight of the air surrounding the balloon is reater than its own weight, whereas if the weight of the balloon is greater, it will start descending. When the weight of the surrounding air and hot air balloon is equal, it becomes stationary. The density between the air and the balloon is controlled by varying the amount of hot air in the balloon.

Geology

Archimedes' principle finds its applications in geology too. The density of the solids can be measured using this principle. To measure the density of the substance, it is suspended to the spring balance, and when it is immersed in a liquid whose density is known to us, the apparent loss in the mass of the sample substance is noted down, and by using the Archimedes' principle, the density of the substance is then calculated .

Fish

Archimedes' principle also comes into play to make a fish float in the water. Most of the fishes have a swim bladder, which helps them control the buoyant force acting on them. Fishes filled their swim bladder with air to rise to the water surface as it increases their volume, and more water is replaced by them, hence buoyant force exerted on them also increases. To dive into the water, fishes release the air from the swimbladder, hence their volume decreases, and buoyant force acting upon them also reduces.

Archimedes principle Advantages

1. Archimedes' principle is also used in designing ships and submarines. The floating of a big ship is based on the Archimedes' principle. An iron nail sinks because it has more weight than the weight of the water it displaces. In other words, the density of the iron nail is greater than the density of water. In case of a ship, a large portion of it is hollow inside. This reduces the apparent density of the ship to a value less than the density of water. The weight of the water displaced by the ship is much more than its own weight. This makes the ship float on water. The most important compartments of a submarine that help in its floatation are the ballast tank, and the compressed air tank. As a result, the average density of the submarine decreases, and the submarine rises.
2. Fish float based on Archimedes' principle. Most fish have an organ known as the swim bladder. When they want to rise, fish release gas into the swim bladder and their swim bladder with air to rise to the water surface as it increases their volume, and more water is replaced by them, hence buoyant force exerted on them also increases. To dive into the water, fishes release the air from the swim bladder, hence their volume decreases, and

increase their volume. As a result, they displace more water. The force of buoyancy acting on them increases. To come down, a fish empties the bladder to the required extent, reducing the volume and the force of buoyancy acting on it.

3. A hot air balloon rises and floats due to the buoyant force (when the surrounding air is greater than its weight). It descends when the balloon's weight is higher than the buoyant force. It becomes stationary when the weight equals the buoyant force. The weight of the Hot-air balloon can be controlled by varying the quantity of hot air in the balloon .

4. A hydrometer uses Archimedes' principle to determine the density of any liquid.

Conclusions

If the buoyant force equals the object's weight, the object will remain suspended at that depth. The buoyant force is always present whether the object floats, sinks, or is suspended in a fluid. Archimedes' principle states that the buoyant force on an object equals the weight of the fluid it displaces.

The upward buoyant force experienced by an immersed body is always equal to the weight of the water displaced by that immersed body. This helps in finding the volume of the an object. As , the volume of the object submerged = volume of the fluid displaced by that object. Also, he made the conclusions that if a body's weight is less than the buoyant force, it will float. If its weight is greater than buoyant then it will sink. If its weight is equal to the buoyant force then it will remain half submerged.

Future Scope

Today CFD simulations are becoming more and more Computationally demanding. In many areas of science and Industry there is a need to guarantee short turnaround times And fast time-to-market. Such goals can be fulfilled only with huge Investments in hardware and software licenses. Graphics Processing Units provide completely new possibilities For significant cost savings because simulation time can be reduced on Hardware that is often less expensive than server-class CPUs. Almost Every PC contains a graphics card that supports either CUDA or OpenCL The computations may be done on the CPUs and GPUs Concurrently. If there are multiple GPUs in the system, independent Computing tasks can be solved simultaneously. When cases are solved On GPU the CPU resources are free and can be used for other tasks Such as pre- and post-processing. Moreover, the power efficiency per Simulation, is comparable for a dual-socket multicore CPU and a GPU.

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- Archimedes's principle gets updated". R. Mark Wilson, Physics Today 65(9), 15 (2012); doi:10.1063/PT.3.1701

NAAC CRITERION - I



PROJECT WORK

MATHEMATICS



VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON KH.

Department of Mathematics

Session- 2021-22

B.Sc.-III | Sem-VI |

Date: 02/05/2022

Paper: Graph Theory

Paper: Linear Algebra

Project Notice

All the students of B.Sc.-III Sem.-VI are hereby informed that they have to submit Project report on or before 10th May 2022 . All are informed to submit projects within the due date. The topics of projects are attached herewith.



Incharge

Department of Mathematics

Dept. of Mathematics
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Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.


Vinayak Vidnyan Mahavidyalaya, Nandgaon Kh.
B.Sc.-III SEM-VI
Year: 2021-22
PROJECT TOPICS

All Students of B.Sc.-III (Sem-VI) are hereby informed that, they are distributed in six group and following are the list of assignments assign to each group . All students have to submit the project report to the corresponding teacher.

Sr.No.	Name of Student	Name of Group	Name of Assignment	Remark
1	Arpita Anilrao Bhojar	Group-A	Veector Space Definition and Examples	Arpita Bhojar
2	Hitesh Vijay Raghute			Hitesh Raghute
3	Nandini Ravindra Kanse			Nandini Kanse
4	Om Pramodrao Ingole			Om Ingole
5	Puja Subhashrao Dukare			Puja Dukare
6	Rutuja Bharat Devtale	Group-B	Theorem on Subspaces(Test of Subspaces) with example	Rutuja Devtale
7	Sakshi Kiranrao Gulhane			Sakshi Gulhane
8	Sneha Gajanan Sagale			Sneha Sagale
9	Swara Narendra Deshmukh			Swara Deshmukh
10	Tejaswini S. Gadhekar			Tejaswini Gadhekar
11	Vaibhav Shrikrushna Gulhane	Group-C	Linear Transformation Definition with example	V. S. Gulhane
12	Vaishnavi Santosh Raut			Vaishnavi Raut
13	Vrushbh Vishnu Madavi			Vrushbh Madavi
14	Abhijeet Gajanan Rithe			Abhijeet Rithe
15	Anand Bhaurao Nanhe			A. B. Nanhe

16	Harshad Homdev Ghate	Group-D	Examples on Matrix associated with Linear Map	Harshad Ghate
17	Leena Shankar Gondane			Leena Gondane
18	Lokesh Dipak Marotkar			Lokesh Marotkar
19	Mohammad Anwar M. Asrar .			Mohammad Anwar
20	Namrata Mulchand Raut			Namrata Raut
21	Payal Vyankatesh Bhasme	Group-E	Rank-Nullity Theorem (Statement and proof) with example	Payal Bhasme
22	Pranav Dinkar Gulhane			Pranav Gulhane
23	Pratik Nandkishor Kaje			Pratik Kaje
24	Roshan Namdeo Rathod			Roshan Rathod
25	Rutuja Mangesh Gulhane			Rutuja Gulhane
26	Sakshi Devidas Ambulkar	Group- F	Theorem on Dual Spaces	Sakshi Ambulkar
27	Shraddha Rajendra Raut			S. R. Raut
28	Shubham Arjun Rathod			Shubham Rathod
29	Shubham Ramesrao Gulhane			S. R. Gulhane
30	Shweta Pandurang Charpe			Shweta Charpe
31	Sneha Rajkumar Vanjari			Sneha Vanjari


Name of Teacher: Dr. Abhijit S. Bansod


HOD: Dr. Priti B. Deshmukh
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VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON KH.

Department of Mathematics

Session- 2021-22

B.Sc.-II [Sem-IV]

Date: 02/05/2022

Paper: Modern Algebra

Paper: Classical Mechanics

Project Notice

All the students of B.Sc.-II Sem.-IV are hereby informed that they have to submit Project report on or before 10th May 2022 . All are informed to submit projects within the due date. The topics of projects are attached herewith.



Incharge

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VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON KH.

B.Sc.-II SEM-IV

Year: 2021-22

PROJECT TOPICS

All Students of B.Sc.-II (Sem-IV) are hereby informed that, they are distributed in six group and following are the list of assignments assign to each group . All students have to submit the project report to the corresponding teacher.

Sr.No.	Name of Student	Name of Group	Name of Assignment	Remark
1	Achal Ramdas Bijave	Group-A	Lagrange's Equation of Motion for Conservative System (State and Proof)	Bijave
2	Adeeba Saman Anees Khan			A. A. Khan
3	Akanksha Kashinath Raut			A. K. Raut
4	Anuja Ajay Tayade			A. J. Tayade
5	Chaitali Sanjay Dok			C. S. Dok
6	Damini Vilas Dhage	Group-B	Problems to Derive Equation of Motion (any two)	Dhage
7	Dattatray Onkar Giri			D. O. Giri
8	Durgesh Dhananjay Mendhe			D. Mendhe
9	Gayatri A. Solanke			G. A. Solanke
10	Jay Shyamrao Gawande			J. S. Gawande
11	Kalyani Narhari wakode	Group-C	Kepler's Laws of Planetary Motion(Statement of three Laws and proof of any one Law)	K. Wakode
12	Kiran Arun Kambale			K. Kambale
13	Manish kishor Tarhekar			M. K. Tarhekar
14	Mayur manish tayade			M. M. Tayade
15	Ritesh Motiram Ghodeswar			R. Ghodeswar

16	Ritu Devnarayan chaudhari	Group-D	Examples or Theorem on Central Force Motion	Ritu D. Chaudhari
17	Roshan Ashok bhaskar			R. Ashok
18	Rutik Tryambakrao Jawalkar			R. Jawalkar
19	Rutuja Sudhirrao Gulhane			R. Gulhane
20	Sahil Vikas Raut			S. Raut
21	Sakshi Mahendra Dukare	Group-E	Differential Equation of Orbit	S. Dukare
22	Sakshi S. Herode			S. S. Herode
23	Sakshi Vilas Dhawale			S. Dhawale
24	Sayali pramodrao gawande			S. P. Gawande
25	Shoebnoor			S. Noor
26	Shraddha Vijay Raut	Group-F	Problems on Calculus of Variation	S. Raut
27	Talib Ramlani			T. Ramlani
28	Vaishnavi Gajanan Deulkar			V. Deulkar
29	Vaishnavi Ravindra Gatule			V. Gatule
30	Vivekanand Anil Pawar			V. A. Pawar

Name of Teacher: Dr. Abhijit S. Bansod

HOD: Dr. Priti B. Deshmukh

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VINAYAK VIDNYAN MAHAVIDYALAYA,
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TITLE OF THE PROJECT:

Rank-Nullity Theorem (statement
and proof) with example.

NAME OF STUDENT: Roshan Namdeo Rathod

YEAR: B.Sc.-IIIrd (2021-22)

SEMESTER: VI

Name of Teacher: Bansod sir.

SUBMITTED
TO
DEPARTMENT OF MATHEMATICS

The Rank - Nullity Theorem :-

The Rank - Nullity Theorem is a Theorem in linear algebra, which asserts that the dimension of the domain of a linear map is the sum of its rank and its nullity.

We defined the null space of a real $m \times n$ matrix A to be the set of all real solutions to the associated homogeneous linear system $AX = 0$.

Thus, nullspace $(A) = \{x \in \mathbb{R}^n : Ax = 0\}$.

Theorem :- Rank - Nullity Theorem.

For any $m \times n$ matrix A , $\text{rank}(A) + \text{nullity}(A) = n$.

Proof :- If $\text{rank}(A) = n$, then by the Invertible matrix theorem, the only solution to $Ax = 0$ is the trivial solution $x = 0$. Hence in this case, nullspace $(A) = \{0\}$ so nullity $(A) = 0$ and Equation holds.

Now suppose $\text{rank}(A) = r < n$.

In this case there are $n - r > 0$ free variable in the solution to $Ax = 0$. Let t_1, t_2, \dots, t_{n-r} denote these free variable and let x_1, x_2, \dots, x_{n-r} denote the solutions, obtained by sequentially setting each free variable to 1 and the remaining free variable to zero. Note that $\{x_1, x_2, \dots, x_{n-r}\}$

is linearly independent, moreover every solution to $AX=0$ is a linear combination of x_1, x_2, \dots, x_{n-r} .

$$X = t_1 x_1 + t_2 x_2 + \dots + t_{n-r} x_{n-r},$$

which shows that $\{x_1, x_2, \dots, x_{n-r}\}$ spans nullspace (A) . Thus $\{x_1, x_2, \dots, x_{n-r}\}$ is a basis for nullspace (A) and nullity $(A) = n-r$.

Example :- If

$$A = \begin{bmatrix} 1 & 1 & 2 & 3 \\ 3 & 4 & -1 & 2 \\ -1 & -2 & 5 & 4 \end{bmatrix}$$

find a basis for nullspace (A) and verify theorem.

Solution :-

we must find all solutions to $AX=0$. Reducing the augmented matrix of this system yields.

$$A \xrightarrow{\#} \begin{bmatrix} 1 & 1 & 2 & 3 & 0 \\ 0 & 1 & -7 & -7 & 0 \\ 0 & -1 & 7 & 7 & 0 \end{bmatrix} \xrightarrow{\#} \begin{bmatrix} 1 & 1 & 2 & 3 & 0 \\ 0 & 1 & -7 & -7 & 0 \\ 0 & 0 & 0 & 0 & 0 \end{bmatrix}$$

$$\boxed{1. A_{12}(-3), A_{13}(1) \quad 2. A_{23}(1)}$$

consequently, there are two free variables

$x_3 = t_1$ and $x_4 = t_2$ so that

$$x_2 = 7t_1 + 7t_2 \quad x_1 = -9t_1 - 10t_2.$$

Hence,

$$\text{nullspace}(A) = \{(-9t_1 - 10t_2, 7t_1 + 7t_2, t_1, t_2) : t_1, t_2 \in \mathbb{R}\}$$

$$= \{t_1(-9, 7, 1, 0) + t_2(-10, 7, 0, 1) : t_1, t_2 \in \mathbb{R}\}$$

$$= \text{span}\{(-9, 7, 1, 0), (-10, 7, 0, 1)\}$$

since the two vectors in this spanning set are not proportional, they are linearly independent. Consequently, a basis for nullspace(A) is $\{(-9, 7, 1, 0), (-10, 7, 0, 1)\}$

so that nullity(A) = 2. In this problem, A is a 3x4 matrix and so, in the Rank-Nullity Theorem, $n = 4$. Further, from the foregoing row-echelon form of the augmented matrix of the system $AX = 0$, we see that $\text{rank}(A) = 2$.

Hence,

$$\text{Rank}(A) + \text{nullity}(A) = 2 + 2 = 4 = n,$$

and the Rank-Nullity theorem is verified.

Corollary :-

Let A be an $m \times n$ matrix and consider the corresponding homogeneous linear system $AX = 0$.

1. If $\text{rank}(A) = n$, then $AX = 0$ has only the trivial solution, so $\text{null space}(A) = \{0\}$
2. If $\text{Rank}(A) = r < n$, then $AX = 0$ has an infinite number of solutions. all of which can be obtained from.

$$X = C_1 X_1 + C_2 X_2 + \dots + C_{n-r} X_{n-r},$$
 where $\{X_1, X_2, \dots, X_{n-r}\}$ is any linearly independent set of $n-r$ solutions to $AX=0$.

Proof:- Note that part 1 is a restatement of previous results, and can be quickly deduced from the Rank-Nullity Theorem.

Now, for part 2, assume that $\text{rank}(A) = r < n$. By the Rank Nullity Theorem, $\text{Nullity}(A) = n-r$.

$$X = C_1 X_1 + C_2 X_2 + \dots + C_{n-r} X_{n-r},$$

For appropriate values of the constant C_1, C_2, \dots, C_{n-r} .

Remark:-

The expression is referred to as the general solution to the system $AX=0$.

VINAYAK VIDNYAN MAHAVIDYALAYA,
NANDGAON KH.

TITLE OF THE PROJECT:

Theorem on Dual spaces.

NAME OF STUDENT: Shubham Aijun Rathod

YEAR: B.Sc.-IIIrd (2021-22)

SEMESTER: VI

Name of Teacher: Bansod Sir.

SUBMITTED
TO
DEPARTMENT OF MATHEMATICS

Dual Spaces :-

Introduction :- Let V & W be vector spaces over the same field F , then, $T; V \rightarrow W$ is said to be linear map if;

$$T(u+v) = Tu + Tv$$

$$T(\alpha v) = \alpha Tv \quad \forall u, v \in V \quad \forall \alpha \in F$$

or T is said homomorphism.

Consider,

The set of all such homomorphism (or vector space homomorphism).

We denote this set by $L(V, W)$.

$$\therefore L(V, W) = \{T: V \rightarrow W \mid T \text{ is homomorphism}\}$$

We denote addition and scalar multiplication $L(V, W)$ as follows;

$$(S+T)u \pm Su + Tu$$

$$(\alpha T)u = \alpha Tu \quad \forall u, v \in V; \alpha \in F$$

$$\forall S, T \in L(V, W)$$

Under these operations $L(V, W)$ is vector space. Here identity element w.r.d. '+' is '0'.

Here '0' is zero homomorphism from V to W ,

i.e.

$0: V \rightarrow W$ is homomorphism

Theorem :- If V & W are dimensions m and n respectively. over F
 Then $L(V, W)$ is of dimension mn
 Over F .

i.e, if $\dim V = m$
 $\dim W = n$

Then, $\dim L(V, W) = mn$.

Theorem :- If V is a finite dimensional vector space over F . and $V \neq 0$ in V .
 Then $\exists f \in V$, s.t. $f(v) \neq 0$

Proof:- Let V be finite dimensional vector space over F .

Let, $\dim V = n$

Let, $B = \{v_1, v_2, \dots, v_n\}$ be basis for V .

Let $v \neq 0 \in V$.

We know that; $V = L(V, F)$
 $=$ dual space of V
 $=$ vector space of linear functional.

Let, $\hat{v}_i \in \hat{V}$ be such that ...

$$\hat{v}_i(v_j) = \begin{cases} 0 & \text{if } i \neq j \\ 1 & \text{if } i = j \end{cases} \quad \text{--- (1)}$$

$\therefore v \in V$

$\therefore v$ is expressed as l.c of basic vector of B .

$$\therefore v = d_1 v_1 + d_2 v_2 + \dots + d_i v_i + \dots + d_n v_n.$$

operate ' \hat{v}_i ' on both sides.

$$= \hat{v}_i(v) = \hat{v}_i(d_1 v_1 + d_2 v_2 + \dots + d_i v_i + \dots + d_n v_n).$$

$$= d_1 \hat{v}_i(v_1) + d_2 \hat{v}_i(v_2) + \dots + d_i \hat{v}_i(v_i) + \dots + d_n \hat{v}_i(v_n)$$

\hat{v}_i is linear.

$$= d_1 \cdot 0 + d_2 \cdot 0 + \dots + d_i(1) + \dots + d_n \cdot 0$$

- by (i)

$$\therefore \boxed{\hat{v}_i(v) = d_i} \quad i = 1, 2, \dots, n.$$

To show that the n -vectors \hat{v}_i form a basis for \hat{V} .

i.e. to show $\{\hat{v}_1, \hat{v}_2, \dots, \hat{v}_n\}$ is basis for \hat{V} .

for this we show that:

$$[\hat{v}_1, \hat{v}_2, \dots, \hat{v}_n] = \hat{V}$$

$\neq \{\hat{v}_1, \hat{v}_2, \dots, \hat{v}_n\}$ is L.I.

1st we prove that $[\hat{v}_1, \hat{v}_2, \dots, \hat{v}_n] = \hat{V}$

Let $s \in \hat{V}$

To show, s is expressed as
l.c. of $\hat{v}_1, \hat{v}_2, \dots, \hat{v}_n$.

$\therefore s \in V$

$\therefore S: V \rightarrow F$ is linear.

$\therefore S v_k \in F$ for $v_k \in V$.

$\therefore B = \{v_1, v_2, \dots, v_k, \dots, v_n\}$ is basis
for V .

Let, $v_k \in V$

$\therefore S v_k \in F$.

Let $S v_k = \alpha_k \cdot \phi$

Let,
 $c = \alpha_1 \hat{v}_1 + \alpha_2 \hat{v}_2 + \dots + \alpha_n \hat{v}_n$
= l.c. of $\hat{v}_1, \hat{v}_2, \dots, \hat{v}_n$.

To show that: $s = c$

Now,

$$c = (\alpha_1 \hat{v}_1 + \alpha_2 \hat{v}_2 + \dots + \alpha_n \hat{v}_n)$$

$$c v_k = (\alpha_1 \hat{v}_1 + \alpha_2 \hat{v}_2 + \dots + \alpha_k \hat{v}_k + \dots + \alpha_n \hat{v}_n)$$

$$= \alpha_1 \hat{v}_1(v_k) + \alpha_2 \hat{v}_2(v_k) + \dots + \alpha_k \hat{v}_k(v_k) + \dots + \alpha_n \hat{v}_n(v_k)$$

$$= \alpha_1 \cdot 0 + \alpha_2 \cdot 0 + \dots + \alpha_k \cdot 1 + \dots + \alpha_n \cdot 0$$

— by (1)

$$\therefore C v_k = \alpha_k$$

But $S v_k = \alpha_k$

$$\therefore \boxed{S v_k = C v_k} \quad \forall v_k \in V.$$

$$\therefore S = C.$$

$$\therefore S = \alpha_1 \hat{v}_1 + \alpha_2 \hat{v}_2 + \dots + \alpha_n \hat{v}_n.$$

$\therefore S$ is expressed as l.c of $\hat{v}_1, \hat{v}_2, \dots, \hat{v}_n$.

\therefore But $S \in \hat{V}$ is arbitrary.

\therefore Every member of \hat{V} is expressed as l.c. of $\hat{v}_1, \hat{v}_2, \dots, \hat{v}_n$.

$$\therefore [\hat{v}_1, \hat{v}_2, \dots, \hat{v}_n] = \hat{V}.$$

\therefore To show $\hat{v}_1, \hat{v}_2, \dots, \hat{v}_n$ is L.I.

consider,

Linear combination,

$$\beta_1 \hat{v}_1 + \beta_2 \hat{v}_2 + \dots + \beta_n \hat{v}_n = 0 \in \hat{V}$$

$$\therefore (\beta_1 \hat{v}_1 + \beta_2 \hat{v}_2 + \dots + \beta_k \hat{v}_k + \dots + \beta_n \hat{v}_n) v_k = 0 v_k$$

$$\therefore v_k \in \hat{V}.$$

$$\beta_1 \hat{v}_1(v_k) + \beta_2 \hat{v}_2(v_k) + \dots + \beta_k \hat{v}_k(v_k) + \dots + \beta_n \hat{v}_n(v_k) = 0$$

$$\therefore 0_{V_k} = 0$$

$$\beta_1 \cdot 0 + \beta_2 \cdot 0 + \dots + \beta_k \cdot 1 + \dots + \beta_n \cdot 0 = 0$$

$$\therefore \boxed{\beta_k = 0} \quad \text{--- by (1)}$$

$$\therefore k = 1, 2, \dots, n.$$

$$\therefore \beta_1 = \beta_2 = \dots = \beta_n = 0$$

\therefore In the above l.c. all scalars are zero.

$\therefore \{ \hat{v}_1, \hat{v}_2, \dots, \hat{v}_n \}$ is l.f.

$\therefore \{ \hat{v}_1, \hat{v}_2, \dots, \hat{v}_n \}$ is basis for \hat{V} .

Also $\{ v_1, v_2, \dots, v_n \}$ is basis for V ,

since,

Basis does not include zero vector \neq we've $v = 0$

\therefore Let us assume that $v = v_1$

Then

Basis of V becomes $\{ v_1, v_2, \dots, v_n \}$

$$\text{Also } \hat{v}_i(v) = \hat{v}_i(v_1) \quad \therefore v = v_1$$

$$\forall i = j$$

$$\therefore \hat{v}_i(v) = 1 \neq 0$$

\therefore there exists $\hat{v}_1 \in \hat{V}$ s.t. $\hat{v}_1(v) = 0$ where $v \neq 0$.

Let $\hat{v}_1 = f$ we've!

there exist $f \in \hat{V}$ s.t. $f(v) \neq 0$ where $v \neq 0$.

VINAYAK VIDNYAN MAHAVIDYALAYA,
NANDGAON KH.

TITLE OF THE PROJECT:

Kepler's Laws of Planetary Motion (Statement
of three laws and Proof of any one law)

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YEAR: B.Sc.-2nd (2021-22)

SEMESTER: IV

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SUBMITTED

TO

DEPARTMENT OF MATHEMATICS

• Kepler's Law of Planetary Motion :

Kepler's Laws :

The astronomer Kepler discovered three laws about the motion of planet around the sun.

• Statement of three laws :

• Kepler's First Law :

Every planet describes an ellipse having sun at one of its focus. OR

Orbit of each planet is an ellipse with sun at one focus.

• Kepler's Second Law :

The radius vector drawn from the planet to the sun sweeps out equal areas in equal time. OR

Areal velocity of the planet is constant.

• Kepler's Third Law :

Square of the periodic time of the planet is proportional to the cube of the semi-major axis of the elliptic orbit.

④

• State and prove the Kepler's First Law: •

Proof : Consider a planet is a central attractive force field with centre at point S
 The force is attractive.
 \therefore F obeys inverse square law.

$\therefore F \propto \frac{1}{r^2}$ •

r - distance of planet from centre of force. •

$\therefore F = -\frac{K}{r^2}$

Where $K > 0$ is const.

Also, $v = -\frac{K}{r}$ •

$v = -Kv \quad (\because \frac{1}{r} = v)$

We know that integral equation of central orbit is

$$\theta = \theta_0 - \int \frac{dv}{\sqrt{\frac{2mE}{h^2} - \frac{2mV}{h} - v^2}} \quad \text{|| Note ||}$$

Put $V = -Ku$

$$Q = Q_0 - \int \frac{dv}{\sqrt{\frac{2mE}{h^2} - \frac{2mV}{h^2} - v^2}}$$

Put $\frac{2mE}{h^2} = \alpha$ and $\frac{2mV}{h^2} = \beta$

$$Q = Q_0 - \int \frac{dv}{\sqrt{\alpha + \beta v - v^2}}$$

We know that,

$$\int \frac{dx}{\sqrt{ax^2 + bx + c}} = \frac{1}{\sqrt{-a}} \cos^{-1} \left[\frac{-2ax + b}{\sqrt{b^2 - 4ac}} \right]$$

Here $a = -1$, $b = \beta$, $c = \alpha$

$$Q = Q_0 - \frac{1}{-(-1)} \cos^{-1} \left[\frac{-2(-1)v - \beta}{\sqrt{\beta^2 - 4(-1)\alpha}} \right]$$

$$Q = Q_0 - \cos^{-1} \left[\frac{2v - \beta}{\sqrt{\beta^2 + 4\alpha}} \right]$$

$$\therefore \theta = \theta_0 - \cos^{-1} \left[\frac{-2V - \frac{2mK}{h^2}}{\sqrt{\left(\frac{2mK^2}{h^2}\right) + 4\left(\frac{2mE}{h^2}\right)}} \right]$$

$$\theta = \theta_0 - \cos^{-1} \left[\frac{-2V - \frac{2mK}{h^2}}{\sqrt{\frac{4m^2K^2}{h^4} + \frac{4 \cdot 2mE}{h^2}}} \right]$$

$$\theta = \theta_0 - \cos^{-1} \left[\frac{2V - \frac{2mK}{h^2}}{\sqrt{\frac{4m^2K^2}{h^4} \left(1 + \frac{4 \cdot 2mE}{h^2} \cdot \frac{h^4}{4m^2K^2}\right)}} \right]$$

$$\theta = \theta_0 - \cos^{-1} \left[\frac{2V - \frac{2mK}{h^2}}{\frac{2mK}{h^2} \sqrt{\frac{1 + 2Eh^2}{mK^2}}} \right]$$

$$\theta - \theta_0 = - \cos^{-1} \left[\frac{V - \frac{mK}{h^2}}{\frac{mK}{h^2} \sqrt{\frac{1 + 2Eh^2}{mK^2}}} \right]$$

$$\cos - (\theta - \theta_0) \cdot \frac{mK}{h^2} \sqrt{\frac{1 + 2Eh^2}{mK^2}} = V - \frac{mK}{h^2}$$

(5)

$$\therefore u = \frac{MK}{h^2} + \frac{MK}{h^2} \sqrt{1 + \frac{2Eh^2}{MK^2} \cos(\theta - \theta_0)}$$

$$\therefore u = \frac{MK}{h^2} \left[1 + \sqrt{1 + \frac{2Eh^2}{MK^2} \cos(\theta - \theta_0)} \right]$$

$$u = \frac{MK}{h^2} \left[1 + e \cos(\theta - \theta_0) \right]$$

Where, $e = \sqrt{1 + \frac{2Eh^2}{MK^2}}$

Put $u = \frac{1}{r}$

$$\frac{1}{r} = \frac{MK}{h^2} \left[1 + e \cos(\theta - \theta_0) \right]$$

$$\therefore \left(\frac{h^2}{MK} \right) = 1 + e \cos(\theta - \theta_0) \quad \text{--- (1)}$$

eqⁿ (1) represents conic section with one focus at origin with eccentricity e and latus rectum $l = \frac{h^2}{MK}$

Now, we have the following classification :

⑥

eqⁿ ① represents hyperbola if $e > 1$

ie. if $e = \sqrt{1 + \frac{2Eh^2}{MK^2}} > 1$

if $1 + \frac{2Eh^2}{MK^2} > 1$

ie. if $\frac{2Eh^2}{MK} > 0$

ie. if $E > 0$

eqⁿ ① represents parabola if $e = 1$

ie. if $1 + \frac{2Eh^2}{MK^2} = 1$

ie. if $\frac{2Eh^2}{MK^2} = 0$

ie. if $E = 0$

eqⁿ ① represents ellipse if $e < 1$

ie. if $1 + \frac{2Eh^2}{MK} < 1$

ie. if $\frac{2Eh^2}{MK} < 0$

ie. if $E < 0$

(7)

eqⁿ ① represents circle if $e = 0$

$$\text{i.e. if } 1 + \frac{2Eh^2}{MK^2} = 0$$

$$\text{i.e. if } \frac{2Eh^2}{MK^2} = -1$$

$$\text{i.e. if } E = \frac{-MK^2}{2h^2}$$

∴ Path of the planet is a conic section Here ellipse is a particular case of general conic.

∴ Kepler's first law is proved.

∴ Planet moves in an ellipse with sun at one focus which is the centre of force.

VINAYAK VIDNYAN MAHAVIDYALAYA,
NANDGAON KH.

TITLE OF THE PROJECT:

Differential Equation of Orbit

NAME OF STUDENT: Sakshi M. Dukare

YEAR: B.Sc.- IInd (2021-22)

SEMESTER: 4th

Name of Teacher: A. Bansod Sir.

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TO
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Differential Equation of Orbit

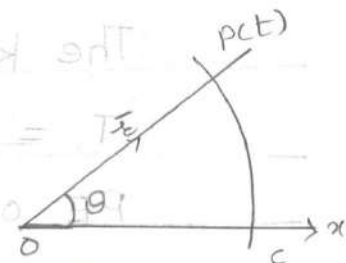
Derive the equation (differential equation) for a central orbit.

Statement:

for the central force field F , the path of a particle of mass m is given by

$$\frac{d^2u}{d\theta^2} + U = \frac{-m}{h^2 u^2} F\left(\frac{1}{u}\right) = l, \text{ where } u = \frac{1}{r}$$

Proof: Let c be the path of the particle as shown in fig



Let O be the centre of force (Let P be the position of the particle at any time t with position vector \vec{r})

Consider the particle moving in a central force field $F(r)$.

We know that central force motion is a motion in a plane.

∴ No. of quantities required to specify the position of particle is two.

∴ No. of degrees of freedom for the system is two. here we consider the polar co-ordinates r & θ

$$x = r \cos \theta$$

$$y = r \sin \theta$$

$$x^2 + y^2 = r^2 + r^2 \theta^2$$

The KE of system is

$$T = \frac{1}{2} m (r^2 + r^2 \theta^2)$$

PE of the system is

$$V = V(r)$$

Lagrangian of the system is

$$L = T - V$$

$$L = \frac{1}{2} m (r^2 + r^2 \theta^2) - V(r)$$

Lagrange's $r = r(t)$ is

$$\frac{d}{dt} \left(\frac{dL}{dr} \right) - \frac{dL}{dr} = 0$$

$$\frac{d}{dt} \left(\frac{1}{2} m \dot{\epsilon}^2 \right) - \left(\frac{1}{2} m \dot{\theta}^2 2\epsilon - \frac{\partial V}{\partial \epsilon} \right) = 0$$

$$m \ddot{\epsilon} - m \dot{\theta}^2 2\epsilon + \frac{\partial V}{\partial \epsilon} = 0$$

$$\therefore m \ddot{\epsilon} - m \dot{\theta}^2 2\epsilon = F(\epsilon) \quad \text{--- (2)} \quad \left\{ F(\epsilon) = -\frac{\partial V}{\partial \epsilon} \right\}$$

Lagrange's eqⁿ is

$$\frac{d}{dt} \left(\frac{\partial L}{\partial \dot{\theta}} \right) - \frac{\partial L}{\partial \theta} = 0$$

$$\frac{d}{dt} \left(\frac{1}{2} m \dot{\epsilon}^2 2\dot{\theta} \right) - 0 = 0$$

$$\frac{d}{dt} (m \dot{\epsilon}^2 \dot{\theta}) = 0$$

On integrating,

$$m \dot{\epsilon}^2 \dot{\theta} = h \quad \left\{ h \text{-constant} \right\}$$

$$\therefore \dot{\theta} = \frac{h}{m \dot{\epsilon}^2} \quad \text{--- (3)}$$

$$\therefore \dot{\theta}^2 = \frac{h^2}{m^2 \dot{\epsilon}^4}$$

Putting this value in (2) we get,

$$m \ddot{\epsilon} - m \dot{\epsilon} \frac{h^2}{m^2 \dot{\epsilon}^4} = F(\epsilon)$$

$$\therefore m \ddot{\epsilon} - \frac{h^2}{m \dot{\epsilon}^3} = F(\epsilon) \quad \text{--- (4)}$$

$$\text{But } \epsilon = \frac{1}{U}$$

$$\dot{\epsilon} = -\frac{1}{U^2} \frac{dU}{dt}$$

$$= -\frac{1}{U^2} \frac{dU}{d\theta} \frac{d\theta}{dt}$$

$$= -\frac{1}{U^2} \dot{\theta} \frac{dU}{d\theta}$$

$$= -\frac{1}{U^2} \frac{h}{m\epsilon^2} \frac{dU}{d\theta} \quad (\text{by 3})$$

$$= -\frac{hU^2}{U^2 m} \frac{dU}{d\theta} \quad (\because \epsilon = \frac{1}{U})$$

$$\dot{\epsilon} = -\frac{h}{m} \frac{dU}{d\theta}$$

$$\text{Now, } \ddot{\epsilon} = -\frac{h}{m} \frac{d}{dt} \left(\frac{dU}{d\theta} \right)$$

$$= -\frac{h}{m} \frac{d}{d\theta} \left(\frac{dU}{d\theta} \right) \frac{d\theta}{dt}$$

$$= -\frac{h}{m} \dot{\theta} \cdot \frac{d^2U}{d\theta^2}$$

$$= -\frac{h}{m} \cdot \frac{h}{m\epsilon^2} \frac{d^2U}{d\theta^2} \quad (\text{by 3})$$

$$\ddot{\epsilon} = -\frac{h^2 U^2}{m^2} \frac{d^2U}{d\theta^2}$$

putting this value in eqⁿ (A)

$$m \cdot \left(-\frac{h^2 U^2}{m^2} \frac{d^2 U}{d\theta^2} \right) - \frac{h^2 U^3}{m} = F\left(\frac{1}{U}\right) \quad \left\{ \because z=1 \right.$$

$$-\frac{h^2}{m} U^2 \frac{d^2 U}{d\theta^2} - \frac{h^2 U^3}{m} = F\left(\frac{1}{U}\right)$$

Multiply by $= \frac{m}{h^2 U^2}$

$$\therefore \frac{d^2 U}{d\theta^2} + U = \frac{-m}{h^2 U^2} F\left(\frac{1}{U}\right)$$

This is the required differential eqⁿ of central orbit.

Note:

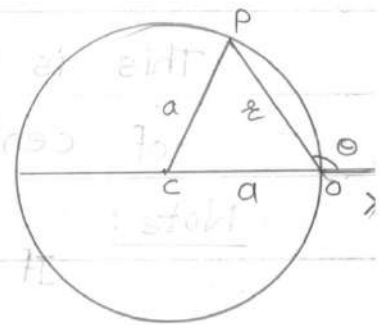
If F i.e. the force field is given, we can solve the above D.E and we get the relation between U (or r) and θ which is the equation of path of the particle.

And conversely if the path of the particle is given, we can obtain the force field F or law of force.

Examples :-

- ① show that if a particle describe a circular orbit under the influence of an attractive central force directed towards points on the circle, then the force varies as the inverse fifth power of the distance (or to find the law of force).

solⁿ :- Consider the particle describing the circular path of orbit as shown in figure.



Let c be the centre of circle

Let O be the centre of force.

Let a be the radius of circle. Also the

force is attractive, Let Ox be the initial

line. Let p be the position of the particle

at any time Let p be the position of

the particle at any time 't'.

$$\text{Let } OP = r$$

$$\angle \phi (XOP) = \theta$$

Here we use polar co-ordinates to represent position of the particle.

i.e. $P(r, \theta)$ is position of the particle at any time 't'.

We know that, polar eqⁿ of circle of radius a is

$$r = 2a \cos \theta \quad \text{--- (1)}$$

$$\text{put } r = \frac{1}{v}$$

$$\text{or } \frac{1}{v} = r$$

$$\therefore \frac{1}{v} = 2a \cos \theta$$

$$v = \frac{1 \sec \theta}{2a} \quad \text{--- (2)}$$

$$\frac{dv}{d\theta} = \frac{1}{2a} \sec \theta \cdot \tan \theta$$

Again diff w.r.t θ ,

$$\frac{du}{d\theta} = \frac{1}{2a} \sec\theta \cdot \tan\theta$$

$$\frac{d^2u}{d\theta^2} = \frac{1}{2a} [\sec\theta \cdot \sec^2\theta + \tan\theta \cdot \sec\theta \cdot \tan\theta]$$

$$\frac{d^2u}{d\theta^2} = \frac{1}{2a} (\sec^3\theta + \sec\theta \cdot \tan^2\theta)$$

We know that diff eqⁿ of central orbit is

$$\frac{d^2u}{d\theta^2} + u = \frac{-m}{h^2 u^2} F\left(\frac{1}{u}\right)$$

Putting the values

$$\frac{1}{2a} (\sec^3\theta + \sec\theta \tan^2\theta) + \frac{1}{2a} \sec\theta = \frac{-m}{h^2 u^2} F\left(\frac{1}{u}\right)$$

$$\frac{1}{2a} \sec\theta (\sec^2\theta + \tan^2\theta + 1) = \frac{-m}{h^2 u^2} F\left(\frac{1}{u}\right)$$

$$\frac{1}{2a} \sec\theta (\sec^2\theta + \sec^2\theta) = \frac{-m}{h^2 u^2} F\left(\frac{1}{u}\right)$$

$$\frac{1}{2a} 2 \sec^2\theta \cdot \sec\theta = \frac{-m}{h^2 u^2} F\left(\frac{1}{u}\right)$$

$$\frac{\sec^3\theta}{a} = \frac{-m}{h^2 u^2} F\left(\frac{1}{u}\right)$$

$$\frac{(2au)^3}{a} = \frac{-m}{h^2 u^2} F\left(\frac{1}{u}\right) \quad (\text{by } \odot)$$

$$8a^2 u^3 = \frac{-m}{h^2 u^2} F\left(\frac{1}{u}\right)$$

$$\therefore \frac{h^2 u^2}{m} \cdot 8a^2 u^3 = F\left(\frac{1}{u}\right)$$

$$\left(\frac{-8q^2h^2}{m}\right) v^5 = F\left(\frac{1}{v}\right)$$

$$\therefore F\left(\frac{1}{v}\right) \propto v^5 \quad \left(\because \frac{-8q^2h^2}{m} \text{ const.}\right)$$

$$\text{or } F(\epsilon) \propto \frac{1}{\epsilon^5} \quad \left(\because \epsilon = \frac{1}{v}\right)$$

which gives law of force,

where ϵ = distance of the particle
from the centre of force

\therefore The force varies inversely as the
fifth power of the distance.

The negative sign in the above eqⁿ
indicate that the force is attractive.

A Project Report on

Title: Involvement of Group Theory in
Physics, Chemistry and Biology

Submitted to



Department of Mathematics

Vinayak Vidnyan Mahavidyalaya, Nandgaon Kh.

Submitted by

Name of student : Ms. Vaishnavi Ravindra Gatule

Class : B.Sc.- IInd Semester: IV Project Group No.- 6th

Name of Paper:- Modern Algebra (Groups - Rings)

Under the Guidance of

Dr. Priti B. Deshmukh, Department of Mathematics, VVM

Session: 2021-22

May-2022

Signature of student : [Signature]

Signature of Supervisor: [Signature]

Signature of Head : [Signature]

11/05/2022

Contents :

- Abstract
- Introduction
- History of Group Theory
- Involvements of Group Theory in physics, Chemistry and Biology
- Conclusion
- Reference

Abstract

1. Group theory is the study of a set of elements present in a group, in Maths. A group's concept is fundamental to abstract algebra.
2. In this presentation, we will see the introduction and in short the history of Group theory :
3. Moreover, we will see the involvement of Group theory in Chemistry, Physics as well as in Biology.

Introduction

- Group theory in mathematics refers to the study of a set of different elements present in a group. A group is said to be a collection of several elements or objects which are consolidated together for performing some operation on them.
- Group theory, in modern algebra, the study of groups, which are systems consisting of a set of elements and a binary operation that can be applied to two elements of the set, which together satisfy certain axioms.

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History of Group Theory :

1. a mathematical domain studying groups in their various forms, has evolved in various parallel threads. There are three historical roots of group theory the theory of algebraic equations, number theory and geometry.
2. The French mathematician Evariste Galois has a tragic untimely death in a duel at the age of twenty but had in his all too brief life made a revolutionary contribution, namely the founding of group theory.
3. Lagrange, Abel and French mathematician Galois were early researchers in the field of group theory.

Involvement of Group theory in Physics :

Role of group theory in Spectroscopy

What is Spectroscopy :

Spectroscopy is defined as the scientific study of the many interaction between electromagnetic radiation and matter.

1. The application of group theory in spectroscopy intends to investigate of the way in which symmetry consideration influence the interaction of light with matter.

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2. Another important function of group theory is the investigation of the light that excites different vibrational modes of a polyatomic molecule.

3. Overall, group theory plays a very important role in spectroscopy, which we can see from various applications of group theory in spectroscopy such as infrared spectrum, Raman spectrum, electronic spectrum, and so on.

Involvement of Group Theory in Chemistry

Group Theory is one of the most powerful mathematical tools used in Quantum chemistry and Symmetry. It allows the user to predict, interpret, rationalize, and often simplify complex theory and data.

1) Group theory in quantum chemistry :

In quantum chemistry, group theory can be applied to be either or semi-empirical calculations to significantly reduce the computational cost. Symmetry can be used to simplify calculations. A symmetry operation is an action that leaves an object looking the same after it has been carried.

2) Group Theory in Symmetry :

1) Application of group theory in Symmetry can help to solve many of the issues encountered in chemistry, and group theory

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is the primary tool that is utilized to identify symmetry. If we know how to determine the symmetry of molecules, we can determine the symmetry of other targets.

2) Group theory is the study of symmetry. When an object appears symmetric, group theory can help us study it. We apply the label "symmetric" to anything that is invariant under some transformation.

3) In group theory, the symmetry group of a geometric object is the group of transformations under which the object is invariant, endowed with the group operation of composition.

Involvement of Group Theory in Biology

Group Theory for Cell Cycle

- Cell cycle is an example of a natural application of group theory because of the cyclic symmetry governing the process.
- The steps in the cell cycle include $G_1 \rightarrow S \rightarrow G_2 \rightarrow M$, and back to G_1 . In some cases G_2 is essentially too brief as to be noticeable, so we will ignore that state.
- To cast the cell cycle into group theory, recall the definition of a group we gave earlier. The only reasonable approach for casting the cell cycle into group theory is to use the symmetries of a square. Table 93 shows the group table for the cell cycle. It is Abelian and isomorphic to the cyclic group Z_4 .

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Group Theory applied to DNA nucleotides to describe protein behavior

- blood group behave as a mathematical group. Blood types A, B, AB and O are the elements of the group and the composition law is the way a group can be transfused to a patient. O is the neuter element of the group: it can be donated to any other group.
- the possibility that a mathematical description based on group theory can describe the universal genetic code and codon sequences behavior, and consequently protein interactions.
- Applying Group Theory to DNA/proteins structure and following precise mathematical rules it is possible to explain the mechanism that regulates binding regions.

Conclusion:

- In this presentation, we had discuss the major role of Group Theory in Abstract Algebra.
- Moreover, we had seen the Involvement of Group theory in physics, chemistry and biology but the Specially in Spectroscopy, Symmetry DNA, quantum chemistry and the cell cycle.

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A Project Report on

Title: Role of Group Theory in Infrared (IR) spectroscopy and Raman spectroscopy.

Submitted to



Department of Mathematics

Vinayak Vidnyan Mahavidyalaya, Nandgaon Kh.

Submitted by

Name of student : Adeeba Saman Anees Khan.

Class : B.Sc.-IInd yr Semester: IVth Project Group No.- 02

Name of Paper:- Modern Algebra (Group and Rings)

Under the Guidance of

Dr. Priti B. Deshmukh, Department of Mathematics, VVM

Session: 2021-22

May-2022

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▮ Abstract :-

Group theory is an important component for understanding the fundamentals of vibration spectroscopy.

Group theory is a mathematical model connecting molecular symmetry to properties such as Infrared (IR) active vibrational mode.

Application of group theory to the symmetry of molecules is powerful method.

In that this project we find the IR and Raman Active mode.

▮ Introduction :-

There are two types of vibrational spectroscopy.

① Infrared (IR) spectroscopy :-

It is the measurement of interaction of infrared radiation with matter by absorption, emission or reflection.

② Raman spectroscopy :-

It is a non-destructive chemical analysis technique which provides detailed information about chemical structure, phase and polymorphy, crystallinity and molecular interactions.

▮ Group :- If G is non-empty set under the binary operation $(*)$. The algebraic structure $(G, *)$ is said to be group iff it satisfied following properties.

① Closure :- $a, b \in G \Rightarrow a * b \in G$

② Associative :- $a, b, c \in G \Rightarrow a * (b * c) = (a * b) * c \in G$

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(iii) Identity element:- $a \in G$, there exist an element 'e' such that $a * e = a$ or $e * a = a$.
e is an identity element.

(iv) Inverse:- $a \in G$ there exist an element $a' \in G$ such that $a * a' = e$, a' is the inverse of element a.

Point Group:- Each point group is a collection of all the symmetry operations that can be carried out on a molecule belonging to that group.

(i) Identity E [found in all molecules]

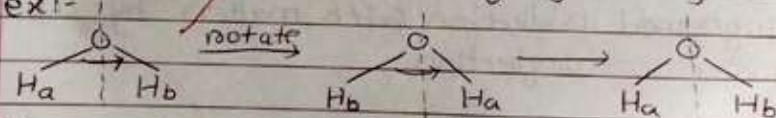
(ii) Inversion (i) \rightarrow centre of symmetry

ex:-



(iii) Rotation (C_n) \rightarrow axis of symmetry

ex:-

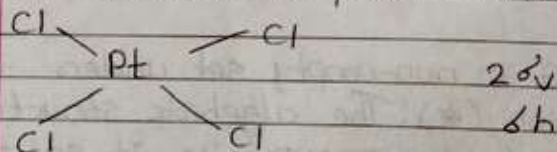


$C_2 \rightarrow$ axis of rotation is 2

(iv) Reflection (σ) \rightarrow plane of symmetry

ex:- vertical plane (σ_v)

Horizontal plane (σ_h)



Character Table:- It is a two dimensional table whose rows correspond to irreducible representation and whose columns correspond to conjugacy classes of group element.

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To find IR (infrared) and Raman Active mode.

• step 1 :- Find out reducible representation.

(i) No. of unshifted atom.

(ii) contribution of characters per unshifted atom.
Firstly we will see

(ii) contribution \rightarrow

$E=3$ $i=-3$ $d=1$ for these three operation the value is fixed

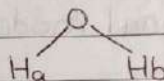
$C_n = 2\cos\theta + 1$ $S_n = 2\cos\theta - 1$

130° $C_2 = 2\cos 2x - 1 + 1 = -1$ $S_4 = -1$

120° $C_3 = 2 \times \frac{-1}{2} + 1 = 0$ $S_3 = -2$

example:-

Water molecule (H_2O)



E	C_2	σ_{xz}	σ_{yz}
3	1	1	3
3	-1	1	1
9	-1	1	3

• step 2 :- $N = \frac{1}{h} \sum_R g_R \chi_i(R) \cdot \chi_o(R)$
 \downarrow this value for G_v character table is 1

G_v	E	C_2	σ_v	σ_v'	$h=4$	
A_1	1	1	1	1	Z	x^2, y^2, z^2
A_2	1	1	-1	-1	R_z	xy
B_1	1	-1	1	-1	X, R_y	xz
B_2	1	-1	-1	1	Y, R_x	yz

$A_1 = \frac{1}{4} [(1 \times 9) + (1 \times -1) + (1 \times 1) + (3 \times 1)] = 3$

$A_2 = \frac{1}{4} [(1 \times 9) + (1 \times 1) + (-1 \times 1) + (-1 \times 3)] = 1$

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$$\Gamma_{B_1} = \frac{1}{4} [(1 \times 9) + (-1 \times -1) + (1 \times 1) + (-1 \times 3)] = 2$$

$$\Gamma_{B_2} = \frac{1}{4} [(1 \times 9) + (-1 \times -1) + (-1 \times 1) + (1 \times 3)] = 3$$

$$\Gamma_{\text{irreps}} = 3A_1 + A_2 + 2B_1 + 3B_2$$

- step 3:- To find Translational and Rotational mode then we find vibrational modes.

$$\Gamma_{\text{irreps}} = 3A_1 + A_2 + 2B_1 + 3B_2$$

depends on the axes \rightarrow Trans. mode = $A_1 + B_1 + B_2$

$$\text{Rot. mode} = A_2 + B_1 + B_2$$

$$\text{vibrational modes} = \Gamma_{\text{irreps}} - [\text{Trans. mode} + \text{Rot. mode}]$$

$$= 3A_1 + A_2 + 2B_1 + 3B_2 - [A_1 + B_1 + B_2 + A_2 + B_1 + B_2]$$

$$= 3A_1 + A_2 + 2B_1 + 3B_2 - A_1 - 2B_1 - A_2 - 2B_2$$

$$= 2A_1 + B_2$$

- step 4:- To find the IR and Raman Active modes.

$$\text{vibrational mode} = 2A_1 + B_2$$

IR Raman Active = the compound shows dipole moment mode

$$\text{IR active mode} = 2A_1 + B_2$$


$$\text{Raman active mode} = 2A_1 + B_2$$

Conclusion :-

Group Theory is useful to finding vibrational modes of molecule. Group Theory is important component for understanding the fundamentals of vibrational spectroscopy. In that project we find the IR and Raman active modes.

References :-

- ① E.B Wilson, J.C Desus and P.C cross, Molecular vibrations, Mc-Graw Hill company 1995.
- ② F.A cotton, chemical application of group theory Interscience publishers, 1963.
- ③ Dr. R.K Ameta, Application of group Theory in IR and Raman spectroscopy, 2001.


12/05/2022

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NAAC CRITERION - I



PROJECT WORK

COMPUTER SCIENCE



Vinayak Vidnyan Mahavidyalaya, Nandgaon Kh.

VinayakVidnyanMahavidyalayaNandgaonKhandeshwar				
Project submission list (S-21-22)				
Class:- B SC III Sem-VI			Subject: Computer Science	
Sr. No	Name	Project Topic	Date of Submission	Signature of Students
1	AkashShivshankarjiBhavare	Online action system	29.04.22	Bhavare
2	AtulParshramBhosale	Symbol recognition	29.04.22	A.P.Bhosale
3	BhushanGajananOmbase	Android battery system	29.04.22	B.G.ombase
4	Prathmesh Ganesh Gawner	crime rate prediction	29-04-22	Prathmesh
5	Prayas Shankar Dubey	cursor movement on	29-04-2022	Prayas
6	SaurabhGovindraoBhadke	Restaurant Booking Website	29-04-2022	Saurabh
7	SaurabhLaxmanraoSatpaise	Web Scraping Beautiful Soap	29-04-2022	Saurabh
8	AbhijeetGajananRithe	ITTheoret of thinking	29-04-22	Abhijeet
9	AnandBhauraoNanhe	Building chatbots	29-04-22	A.B.Nanhe
10	HarshadHordevGhate	Uber Data Analysis	29/4/22	Harshad
11	Leena Shankar Gondane	Electronic Book	29/4/22	Leena
12	LokeshDipakMerotkar	OpenCV Face Detection	29/4/22	Lokesh
13	Mohammad Anwar MohdAsrar	Handwritten digit CNN	29/4/22	M.A. ModAsrar
14	NamrataMulchandRaut	smart health consulting andoid system	29/4/22	Namrata
15	PayalVyankateshBhasme	Mobile wallets with purchase pay	29/4/22	Payal
16	Pranav DinkarGulhane	Common dialogue control	29/4/22	Pranav
17	Pratik Nandkishorkaje	Library management sy	29-4/22	Pratik
18	Roshan NamdeoRathod	Visual basic control	29/04/22	Roshan
19	RutujaMangeshGulhane	5G Wireless Technology	29/04/22	Rutuja
20	SakshiDevidasAmbulkar	Data mining	28/04/22	Sakshi
21	Shraddha RajendraRaut	Visual basic control	29/04/22	S.R. Raut
22	Shubham Arjun Rathod	Common dialogue control	29-04/22	Shubham
23	ShubhamRamesraoGulhane	Cor Data Set Analysis	29-04/22	Shubham
24	Shweta PandurangCharpe	online shopping system	29-4-22	Shweta
25	SnehaRajkumarVanjari	Smart farming using IoT	29-4-22	Sneha
26				
27				

(Signature)
Asstt. Prof

Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh. Dist. Amravati.

(Signature)
PRINCIPAL

Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan. Dist. Amravati

Vinayak Vidnyan Mahavidyalaya, Nandgaon Kh.

Vinayak Vidnyan Mahavidyalaya Nandgaon Khandeshwar				
Project submission list (S-21-22)				
Class:- B SC II Sem-IV			Subject: Computer Science	
Sr. No	Name	Project Topic	Date of Submission	Signature of Students
1	Adarsha Nivrutti Gavner	Face detection	26/03/2022	A. Gavner
2	Aditya Anil Deshmukh	Online auction system	26/03/2022	A. A. Deshmukh
3	Aman Murlidhar Gawaner	Evaluation of academic	26/03/2022	A. M. Gawaner
4	Aman Pradiprao Kakade	Features of PL/SQL	26/03/2022	A. P. Kakade
5	Ambika Narhari Chavhan	Data linkage deletion system	26/03/2022	A. Chavhan
6	Chanchal Kishor Gajbhiye	Software Piracy Protection	20/6/2022	C. Gajbhiye
7	Mamta Sanjay Meshram	Android local train-ticking system	26/03/22	M. Meshram
8	Mo Abuzar Mo Ilyas Shaikh	Features of PL/SQL	26/03/22	M. A. Shaikh
9	Mo Sajid Hamid Makrani	e-Authentic System	26/03/22	M. S. Makrani
10	Parivartan Arun Tayade	Android task monitoring	26/03/22	P. Tayade
11	Poornima Ganesh Raut	Symbol recognition	26/03/22	P. G. Raut
12	Pranav Kishor Rao Shelke	Android battery saver	26/03/22	P. K. Shelke
13	Prathmesh Dadarao Hambarde	Library management system	26/3/22	P. D. Hambarde
14	Prathmesh Suresh Inzalkar	Twitter sentiment analysis	26/3/22	P. S. Inzalkar
15	Reshma Arunrao Margade	Smart health prediction system	26/03/22	R. Margade
16	Rohit Madan Bodhankar	Electron Analysis	26/3/22	R. M. Bodhankar
17	Roshan Rameshwar Kalalkar	Fingerprint Authentication	26-3-22	R. Kalalkar
18	Sarvesh Dharmendra Virulkar	SMS spam filtering	26/3/22	S. D. Virulkar
19	Shreya Pramodrao Chore	Fingerprint based ATM system	26/03/2022	S. P. Chore
20	Shreyash Ramesh Kapse	Placement cell	26/3/22	S. R. Kapse
21	Talib Faooq Ramlani	Wireless sound control	26/3/22	T. F. Ramlani
22	Yash Pramod More	Data link deletion	26-03-2022	Y. More
23	Yash Shyamkant Pawar	Computer Networking using wireless network	26/03/2022	Y. Pawar
24	Akansha Kashinath Raut	Sentiment analysis for product rating	26-03-22	A. Raut
25	Anuja Ajay Tayade	Credit card fraud	26-03-22	A. Tayade
26	Chaitali Sanjay Dok	Software Privacy Protection	26-03-22	C. Dok
27	Damini Vilasrao Dhage	Face detection	26/3/22	D. V. Dhage
28	Dattatrya Onkar Giri	Stacks and queue based	26/3/2022	D. Giri
29	Durgesh Dhanjay Mendhe	Sentiment analysis for product rating	26/03/2022	D. Mendhe
30	Gayatri Avinash Solanke	Online voting system	26/3/22	G. A. Solanke
31	Jay Shamrao Gawande	Fingerprint ATM system	26/3/2022	J. S. Gawande
32	Kiran Arun Kambale	Android local train-ticking system	26/3/22	K. Kambale

VinayakVidnyanMahavidyalayaNandgaonKhandeshwar				
33	Manish KishorTarhekar	Bookmarks Keeper	26-3-2022	M.K.Tarhekar
34	Mayur Manish Tayade	Learn to create app on kubeark	26-3-22	M.M.Tayade
35	Ritesh Motiram Ghoddeswar	Two truths & a lie game skills	26-3-2022	R.M.Ghoddeswar
36	RituDevnarayanChaudhari	e-learning platform	26.3.2022	Ritu D. Chaudhari
37	Roshan Ashok Bharaskar	chatbot Song Recommender	26-3-2022	R.A.Bharaskar
38	RutujaSudhirraoGulhane	Companion App	26-3-2022	R.S.Gulhane
39	SakshiSubhashraoHerode	bug tracking	26-3-2022	S.S.Herode
40	Shoeb Ahmad Noor	Library Management system	26-3-2022	S.A.Noor
41	VaishnaviGajananDeulkar	Automated payroll system with GPS tracking.	26-3-2022	V.Deulkar
42	VaishnaviRavindraGatule	online shopping System	26-3-22	V.R.Gatule

(Signature)

Asstt. Prof
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh. Dist. Amravati.

(Signature)

PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan. Dist. Amravati

**Project
ON
"Online Shoping System"**

Project Report Submitted
In the partial fulfillment of
Bachelor In Science (B.Sc.)
Sant Gadge Baba Amravati University, Amravati

Submitted by

Name : Vaishnavi G. Deulkar
Bsc 3rd year sem (V)



Under the Guidance of

Prof. Ashivini D. Ambadakar

Submitted to

Prof. Ashivini D. Ambadakar
Department of Computer Science
Vinayak vidnyan mahavidyalya. College, Nandgaon(Kh)
(2021-22)

Declaration

I Hereby declare that the Project Assignment entitled “**Online Shoping System**”Submitted for the class is my original work Carried out by me under the guidance of “**Prof. Ashivini D. Ambadakar**” for the partial fulfillment of the award of the degree of bachelor of Science. The matter embodies in this report has of any other degree/diploma. Submitted any where else for the award.

Place:- Nandgoan (Kh)

Date:-

V. Deulkar.

Signature of student

Vaishnavi G. Deulkar

Ashivini D. Ambadakar.

Asst. Prof
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh. Dist. Amravati.

Vinayak vidnyan mahavidyalaya Nandgao (kh)

DEPARTMENT OF COMPUTER SCIENCE

Abstract :-

This project is an ecommerce based website for online shopping through the internet. The project objective which is delivered the online shopping system application into the internet. This project is an attempt to provide the advantage of online shopping to customers of a real shop. It helps buying the products in the shop anywhere through the internet by using an ecommerce website. Thus the customer will get the services of online shopping and home delivery from this favorite shop. This system could be implemented to any kind of shop in the locality or to the multinational branded shops having retail outlet chain. Since the services should be available in the internet it is easy to accessible and available always.

Introduction :-

This project is a web based shopping system for an existing shop. The project objective is to deliver the online shopping application into android platform. online shopping is the process whereby consumers directly buy goods or services from a seller in real-time, without an intermediary service, over the internet. It is a form of electronic commerce. This project is an attempt to provide the advantages of online shopping to customers of a real shop. It helps buying the products in the shop anywhere through internet by using an android device. Thus the customer will get the service of online shopping and home delivery from his favorite shop.

Project Objective :-

The objective of the project is to make an application in android platform to purchase items in an existing shop. In order to build such an application complete web support need to be provided. A complete and efficient web application which can provide the online shopping experience is the basic objective of the project. The web application can be implemented in the form of an android application with web view.

Project scope :-

This system can be implemented to any shop in the locality or to multinational branded shops having retail outlet chains. The system recommends a facility to accept the orders 24*7 and a home delivery system which can make customers happy. If shop are providing an online portal where their customers can enjoy easy shopping from anywhere, the shops won't be losing any more customers to the trading online shops such as flipkart or e-bay. Since the application is available in the smartphone it is easily accessible and always available.

Study of the system.

Modules :-

The system after careful analysis has been identified to be presented with the following modules and roles:

The modules involved are.

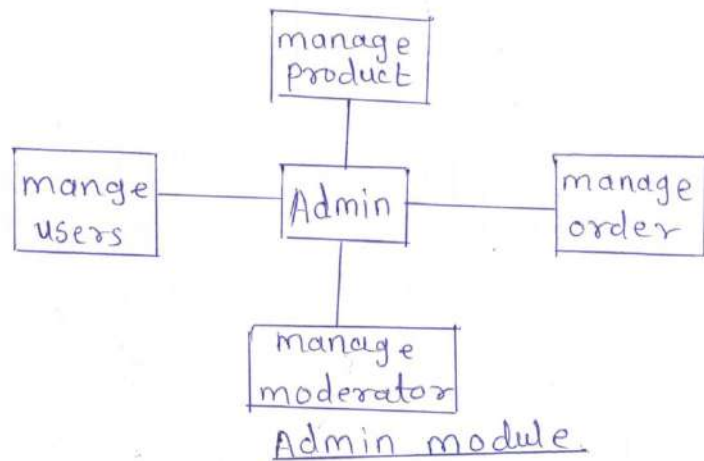
- Administrator
- moderators
- Users

• Administrator :-

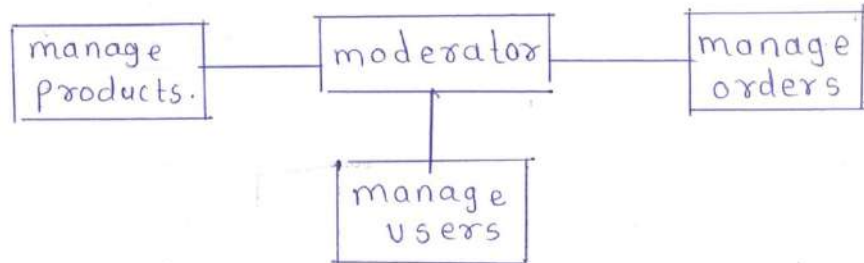
The administrator is the super user of this application. Only admin have access into this admin page. Admin may be the owner of the shop. The administrator has all the information about all the users and about all products.

This module is divided into different sub-modules.

1. manage moderators.
2. manage products
3. manage users
4. manage orders



• Moderators :-

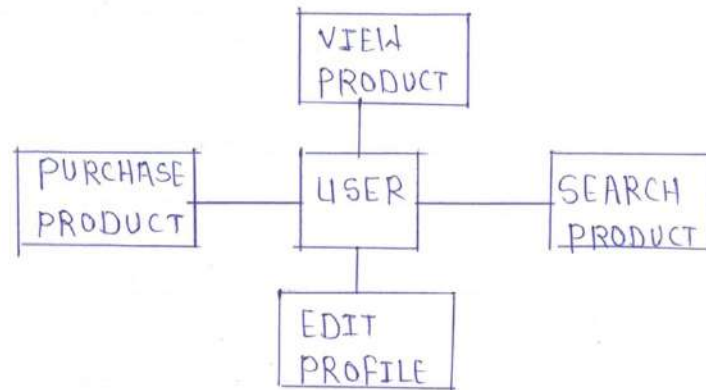


moderator module.

A moderator is considered as a staff who can manage orders for the time being. As a future update moderator may give facility to add and manage his own products. moderators can reduce the work load of admin. Now moderator has all the privilege an admin having except managing other moderators. He can add products and users. He can also check the orders and edit his profile.

- manage products
- manage users
- manage orders.

• USERS :-



User module.

- * Registration :- A new user will have to register in the system by providing essential details in order to view the products in the system.
- * Login :- A user must login with his user name and password to the system after registration.
- * View products :- User can view the list of products based on their names after successful login.
- * Search product :- users can search for a particular product in the list by name.

Conclusion :-

The project entitled online shopping system was completed successfully. The system has been developed with much care and free of errors and at the same time it is efficient and less time consuming. The purpose of this project was to develop a web application and an android application for purchasing items from a shop. This project helped us in gaining valuable information and practical knowledge on several topics like designing web pages using html & css, usage of responsive templates, designing of android applications and management of database using mysql. we learned how to test different features of a project.

References :-

- 1] complete CSS Guide, maxine sherrin and John Allsopp - O'Reilly media; september 2012.
- 2] ~~http:~~ Mc GrawHill's. Java: The complete reference 7th Edition, Herbert Schildt.
- 3] JavaScript Enlightenment, Cody Lindley - first Edition, based on JavaScript 1.5 ECMA-262, Edition.

Project

ON

“Crime rate prediction”

Project Report Submitted

In the partial fulfillment of

Bachelor In Science (B.Sc.)

Sant Gadge Baba Amravati University, Amravati

Submitted by

Name :- Reshma Arunrao Margade.

Class : 3rd year Sem (Vth)



Under the Guidance of

Submitted to

Prof. Ashivini D. Ambadakar

Department of Computer Science

Vinayak vidnyan mahavidyalya. College, Nandgaon(Kh)

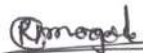
(2021-22)

Declaration

I Hereby declare that the project Assignment entitled “**Crime rate prediction**” Submitted for the class is my original work Carried out by me under the guidance of “**prof. Ashvini Ambadkar** for the partial fulfillment of the award of the degree of bachelor of Science. The matter embodies in this report has of any other degree/diploma. Submitted any where else for the award.

Place:- Nandgoan (Kh)

Date:- 15-10-22


Signature of student

Resham A. Margade

Vinayak vidnyan mahavidyalya Nandgao (kh)

DEPARTMENT OF COMPUTER SCIENCE

Certificate

This is to certify that “**Reshma Arunrao Margade**” has worked under my guidance to prepare her project entitled “**Crime rate prediction**” in partial fulfillment of the requirement for the bachelor of Computer Science (B.Sc.), affiliated to Sant Gadge Baba Amravati University, Amravati during the Academic Year 2021-22.

Ambadkar
15/10/22

Seminar Guide:- prof. Ashvini D. Ambadkar
Asst. Prof

Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh. Dist. Amravati.

Department of Computer Science
Vinayak vidnyan mahavidyalya. College, Nandgaon(Kh)

CONTENT

- 1) Abstract
- 2) Introduction
- 3) Literature Review
- 4) Design & Methodologies
- 5) Implementation
- 6) Conclusion
- 7) References

ABSTRACT

Crime analysis and prevention is a systematic approach for identifying & analyzing patterns and trends in crime. By using the concept of Data Mining, we can extract previously unknown useful information from an unstructured data. Supervised learning uses data sets to train, test and get desired results on them whereas Unsupervised learning divides an inconsistent, unstructured data into classes or clusters.

Decision trees, Naive Bayes and Regression are some of the supervised learning methods in data mining and machine learning on previously collected data and thus used for predicting. With the increasing advent of computerized systems, crime data analysts can help the law enforcement officers to speed up the process of solving crimes. Even though we cannot predict who all may be the victims of crime but can predict the place that has probability for its occurrence.

INTRODUCTION

Crime is a violation of humanity, often punishable by law. Criminology is a study of crime, interdisciplinary science that investigates and analyzes crime and criminal performance data. Criminal activity is now high and the police department is responsible for controlling and reducing criminal activity. There has been tremendous increase in machine learning algorithms that have made crime prediction feasible based on past data. The aim of this project is to perform analysis and prediction of crimes in states using machine learning models. It focuses on creating a model that can help to detect the number of crimes by its type in a particular state.

In this project various machine learning models like linear regression, boosted decision trees will be used to predict crimes. Various visualization techniques and plots are used which can help law enforcement agencies to detect and predict crimes with higher accuracy.

LITERATURE REVIEW

Crime rate prediction is different in various applications, some of the studies are given below:

C.P. Chaitanya, N. Manohar, Ajay Basil Isaac describes Text detection is the method of locating areas in a picture wherever, text is present. Text detection and classification in natural pictures is very important for several computer vision applications like optical character recognition, distinguish betⁿ human & machine inputs and spam removal. Currently the challenge in text identifying is to detect the text in natural pictures due to many factors like, low image having a lot of color stroke than the background color, blurred pictures due to some natural problems like rain, sunny, snow, etc. The main aim of this work is to identify and classify the text in natural pictures. Here system detects the text and finds the connected regions, chain them together in their relative position. Uses a text classification engine to filter chains with low classification confidence scores.

DESIGN & METHODOLOGIES

- Data collection

Data Collection is one of the most important tasks in building a machine learning model. We collect the specific dataset based on requirements from internet. The dataset contains some unwanted data also. So first we need to pre-process the data and obtain perfect data set for algorithm.

- Pre-Processing

It is the gathering of task related information based on some targeted variables to analyze and produce some valuable outcome. However, some of the data may be noisy, i.e. may contain inaccurate values, incomplete values or incorrect values. Hence, it is must to process the data before analyzing it and coming to the results. Data pre-processing can be done by data cleaning, data transformation, data selection.

- Data Mining Techniques

Data Collection is one of the most important tasks in building a machine learning model. We collect the specific dataset based on requirement from internet. The dataset contains some unwanted data also. So first we need to pre-process the data & obtain perfect data set for algorithm.

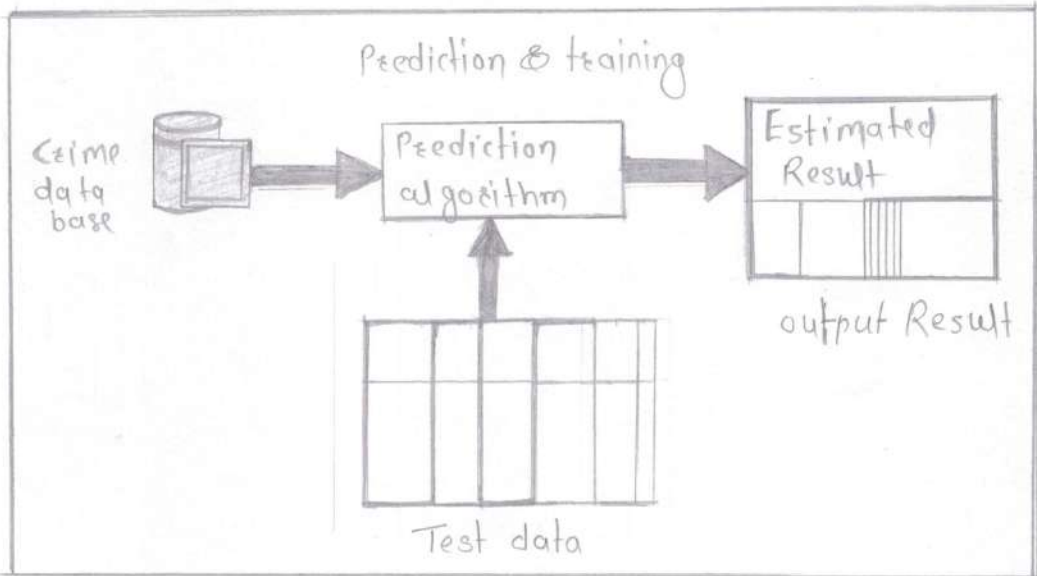
- * Linear regression :- Linear regression is one of the regression models where the variables dependent is either binary or categorical. It cannot handle continuous data.

- * Decision Trees :- The decision tree was built to predict the target column, after splitting the dataset into random training and test sets. The splitting criterion 'Entropy' was decided upon for splitting the datasets.

- * Random forest Classifier :- Random forest classifier correct the decision trees' habit of overfitting the training dataset. It constructs multiple trees at the training time and outputs a mean prediction in regression and mode prediction in classification of the data set.

IMPLEMENTATION

Architecture Diagram



CONCLUSION

In this system, we get to classify and cluster to improve the accuracy of location and pattern-based crimes. From the clustered results it is easy to identify crime prone areas and can be used to design precaution methods for future. The classification of data is mainly used to distinguish types of preventive measures to be used for each crime.

Different crimes require different treatment and it can be achieved easily using this application.

REFERENCES

* Ashish sharma, Dinesh Bhueiya, Upendra Singh
"Survey of Stock Market Prediction Using Machine Learning Approach", ICECA 2017.

⚡ <http://www.google.com/events/10/2011/index-live.html>

⚡ <http://en.wikipedia.org>.

Mohankumar
15/10/22

NAAC CRITERION - I



PROJECT WORK ELECTRONICS




VINAYAK VIDNYAN MAHAVIDYALAYA NANDGAON (KH.)
B.Sc. Part II Sem. IV Summer - 2022
Subject : Electronics
2021-22

Students Project report Submission Record

Sr. No.	Name of Student	Project and Seminar topic	Remark
1	Adarsha Nivrutti Gavner	Light activated switch circuit -	Submitted
2	Aditya Anil Deshmukh	Light activated switch circuit	Submitted
3	Aman Murlidhar Gavner	Light activated switch circuit	Submitted
4	Aman Pradip Kakade	D/D sound generator circuit	Submitted
5	Ambika Narhari Chavhan	IR Remote control circuit	Submitted
6	Chanchal Kishor Gajbhiye	Dancing Bicolor LED light circuit	Submitted
7	Mamta Sanjay Meshram	Boolean Algebra calculator	Submitted
8	Mo.Abuzar Mo. Iliyas Shaikh	Solar Battery charger circuit	Submitted
9	Mo.Sajid Hamid Makrani	Pull pin security alarm system	Submitted
10	Parivartan Arun Tayade	Pull pin security alarm system	Submitted
11	Poornima Ganesh Raut	Auto intensity control of street light	Submitted
12	Pranav Kishor Shelke	Simple FM Radio jammer circuit	Submitted
13	Prathmesh Suresh Inzalkar	TV remote jammer circuit	Submitted
14	Prathmesh Dadarao Hambarde	Mobile jammer circuit	Submitted
15	Reshma Arun Margade	Battery charger circuit using SCR	Submitted
16	Rohit Madan Bodhankar	Wailing siren circuit	Submitted
17	Roshan Rameshwar Kalalkar	Cell phone detector circuit	Submitted
18	Sarvesh Dharmendra Virulkar	Home Automated System circuit	Submitted
19	Shreya Pramod Chore	USB Mobile charger circuit	Submitted
20	Shreyash Ramesh Kapse	L.E.D.lamp dimmer circuit	Submitted
21	Yash Pramod More	Automatic wash room light switch	Submitted
22	Yash Shyamkant Pawar	Automatic door bell with object detection	Submitted


 Signature of Teacher.
 Asst. Prof.

Vinayak Vidnyan Mahavidyalaya
 Nandgaon Kh. Dist. Amravati.


 Principal
PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
 Nandgaon Khan. Dist. Amravati

VINAYAK VIDNYAN MAHAVIDYALAYA NANDGAON (KH.)

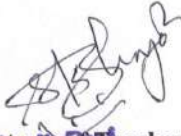
B.Sc. Part III Sem. VI Summer - 2022


Subject: Electronics

2021-22

Students Project and Seminar file Submission Record

Sr. No.	Name of Student	Project and Seminar topic	Remark
1	Akash Shivshankar Bhaware	Biometric attendance system circuit	Submitted
2	Atul parshram Bhosale	Simulating a 555Timer with PSoC	Submitted
3	Bhushan Gajanan Ombase	Wireless switch circuit using CD4027	Submitted
4	Prathmesh Ganesh Gawner	Electronic letter box circuit	Submitted
5	Prayash Shankar Dubey	Curtain opener and closer circuit	Submitted
6	Saurabh Govind Bhadke	Police light using 555 timer	Submitted
7	Saurabh Laxman Satpaise	Water level alarm using 555 timer	Submitted


Signature of Teacher.
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh. Dist. Amravati.


Principal
PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan. Dist. Amravati



**SAMPLE COPIES OF PROJECT COMPLETION
CERTIFICATES**



Certificate

This is to certify that the group of students named **Anushka S. Izate, Bhagyashree J. Shelake, Sanika M. Dharwatkar, Pooja V. More, Priyanka P. Gulhane** has worked under my guidance for completion of internal assessment work as project entitled, **Biodiversity of Birds of Nandgaon Tahasil, Dist. Amravati** for the degree course of B.Sc. III, semester V in the faculty of science, department of Zoology, Vinayak Vidnyan Mahavidyalaya, Nandgaon. (Kh), Dist. Amravati.

They have completed their project work satisfactorily and it is ready for evaluation.

Date: 28 Feb. 2022

Place: Nandgaon

P. Mahalle
Dr. Pratibha Mahalle
Head Dept. of Zoology
Head
Dept. of Zoology
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.

Subodh Bansod
Mr. Subodh Bansod
Supervisor
Asst. Prof. Dept. of Zoology



SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI AFFILIATED

Pravin Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya

Tq. Nandgaon Khandeshwar, Dist. Amravati

DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled *To study the verification of the Archimedes principle* submitted by Mr./Ms. *Ritu Deynayan chaudhazi* of B.Sc. (Physics) Part: *2nd* Semester: *IV* as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: *14/07/2021*

[Signature]
Teacher-In-Charge

Signature of the Teacher who taught the examinee

1. *[Signature]*

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.

[Signature]

Head

Head
Department of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.

Certificate

This is to certify that “**Reshma Arunrao Margade**” has worked under my guidance to prepare her project entitled “**Crime rate prediction**” in partial fulfillment of the requirement for the bachelor of Computer Science (B.Sc.), affiliated to Sant Gadge Baba Amravati University, Amravati during the Academic Year 2021-22.

Ambadkar
15/10/22

Seminar Guide:- prof. Ashvini D. Ambadkar

Asst. Prof

**Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh. Dist. Amravati.**

Department of Computer Science

Vinayak vidnyan mahavidyalaya. College, Nandgaon(Kh)



SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI AFFILIATED

Pravin Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled Design Variable DC power Supply using Full Wave Bridge Rectifier submitted by Mr./Ms. Aman Pradip Kakade of B.Sc. (Physics) Part: II Semester: IV as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: / /


Teacher-In-Charge


Signature of the Teacher who taught the examinee

1.

2.

Date: / /

Place: Nandgaon Khandeshwar, Dist. Amravati.


Head
Head
Department of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



Pravin Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled A.C Generation

..... submitted by Mr./Ms. Swarna Narendra Deshmukh
of B.Sc. (Physics) Part: IIIrd Semester: VI..... as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: 28 / May / 2022


Teacher-In-Charge

- 1) Swarna Narendra Deshmukh
- 2) Tejaswini Shrikrushna Gulhane
- 3) Vaibhava Shrikrushna Gulhane


Signature of the Teacher who taught the examinee

1. 

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.


Head
Department of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



Pravin Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitledTo construct a water level controller using IC-555..... submitted by Mr./Ms. Vaibhav Shrikrushna Gulhane of B.Sc. (Physics) Part: IIIrd Semester: VIIth as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: 20/07/2022

Teacher-In-Charge

- 1) Vaibhav S. Gulhane
- 2) Swara N. Deshmukh
- 3) Tejaswini S. Gadhekar

Signature of the Teacher who taught the examinee

1.

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.

Dept. Head
Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.
Department of Physics



Pravin Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled "Capacitor"
..... submitted by Mr./Ms. Vaibhav Shrikrushna Gulhane
of B.Sc. (Physics) Part: IIIrd Semester: VIth as prescribed by Sant Gadge Baba
Amravati University, Amravati during the Academic year 2021-2022.

Dated:/...../.....

Teacher-In-Charge

- 1) Vaibhav S. Gulhane
- 2) Swara N. Deshmukh
- 3) Tejaswini S. Gadhekar

Signature of the Teacher who taught the examinee

1.

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.

Head
Dept. of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



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Pravın Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled To Construct a water level controller using I.C. - 555 submitted by Mr./Ms. Tejaswini S. Gadhekar of B.Sc. (Physics) Part: IIIrd Semester: IV as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: 28 / may / 2022

1] Tejaswini Shrikrushna Gadhekar
2] Swara Narendra Deshm
3] Vaibhav Shrikrushna Gulhar


Teacher-In-Charge

Signature of the Teacher who taught the examinee

1. 

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.


Head

Head
Department of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI AFFILIATED
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Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled To determine the viscosity of water oil and soyabean oil by capillary rise method submitted by Mr./Ms. Puja Subhash Dukare of B.Sc. (Physics) Part: III Semester: VII as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: 30/03/2022

- 1) Puja Subhash Dukare
- 2) Roshan Namdeo Rathod
- 3) Prayog Chaitanya Dade

Prashant B. Kharat
Teacher-In-Charge

Dr. Prashant B. Kharat

Signature of the Teacher who taught the examinee

1.

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.

[Signature]
Head

Department of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Khandeshwar, Dist. Amravati




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Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitledDiffraction of Light.....
..... submitted by Mr./Ms. Puja Subhash Dukare.....
of B.Sc. (Physics) Part: IIIrd..... Semester: VI..... as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: 23/05/2022

- 1) Puja Subhash Dukare
- 2) Roshan Namdeo Rathod
- 3) Prayas Sharika Dubey


Teacher-In-Charge
Dr. Prashant B. Khosla


Signature of the Teacher who taught the examinee

1.

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.


**Head
Head
Department of Physics**
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



Pravın Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled To determine the specific surface tension of water, oil & soyabean oil by capillary method submitted by Mr./Ms. Roshan Namdeo Rathod of B.Sc. (Physics) Part: IIIrd Semester: V.F. as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: / /

- 1] Roshan Namdeo Rathod
- 2] Pwida Subhash Dukare


Teacher-In-Charge


Signature of the Teacher who taught the examinee

1. 

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.


Head
Head
Department of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



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Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled *To determine the specific heat of water, oil & glycerol by capillary method* submitted by Mr./Ms. *Roshan Namdeo Rathod* of B.Sc. (Physics) Part: *IIIrd* Semester: *VI* as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: / /

[Signature]
Teacher-In-Charge

1] *Roshan Namdeo Rathod*
2] *Puja Subhash Duka*

Signature of the Teacher who taught the examinee

1.

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.

[Signature]
Head
Department of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



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Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled To study the verification of the Archimedes principle submitted by Mr./Ms. Shubham Arjun Rathod of B.Sc. (Physics) Part: III Semester: VI as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: /..... /.....


Teacher-In-Charge

- ① Shubham A. Rathod
- ② Shubham Gulhane
- ③ Shradhha Raut


Signature of the Teacher who taught the examinee

1. 

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.


Head
Head
Department of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



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Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled To construct a model to demonstrate Newton's 1st law of motion submitted by Mr./Ms. Shubham Arjun Rathod of B.Sc. (Physics) Part: III Semester: VI as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: / /


Teacher-In-Charge

- ① Shubham A. Rathod
- ② Shubham R. Gulhane
- ③ Shradha Raut


Signature of the Teacher who taught the examinee

1. 

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.


Head
Dept. of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



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Tq. Nandgaon Khandeshwar, Dist. Amravati

DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled study characteristic structure common ammine submitted by Mr./Ms. Shradha Rajendra Culhane of B.Sc. (Physics) Part: 3rd yr Semester: VIth as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: / /


Teacher-In-Charge

1) Shradha Raut
2) Shubham Culhane
3) Shubham Rathod.


Signature of the Teacher who taught the examinee

1. 

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.


Head
Department of Physics
Dept. of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



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Tq. Nandgaon Khandeshwar, Dist. Amravati

DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled *To study of characteristics of a common emitter n-p-n transistor to find out the value of current and voltage gain* submitted by Mr./Ms. *Shubham R. Gulhane* of B.Sc. (Physics) Part: *IIIrd* Semester: *VI* as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: / /

- 1) Shubham R. Gulhane
- 2) Shubham Rathod
- 3) Shradidha Rout



Teacher-In-Charge

Signature of the Teacher who taught the examinee

1. 
2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.


Head
Dept. of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



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Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati

DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled measurement of temp with sensor LM35 submitted by Mr./Ms. Pranav Dinkar Gulhane of B.Sc. (Physics) Part: III Semester: VII as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: / /


Teacher In Charge

- 1) Pranav Dinkar Gulhane
- 2) Prathamesh Gawner
- 3) Pratik N Kaje


Signature of the Teacher who taught the examinee

1.

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.


Head
Dept. of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



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Tq. Nandgaon Khandeshwar, Dist. Amravati

DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled The phenomenon of total internal reflection of light submitted by Mr./Ms. Pranav Dinkar Gulhane of B.Sc. (Physics) Part: III Semester: VII as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: 28/05/2022


Teacher-In-Charge

- 1) Prathmesh G.
- 2) Pratik M. Kaje
- 3) Pranav D. Gulhane


Signature of the Teacher who taught the examinee

1.

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.


Head
Head
Dept. of Physics
Department of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



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Vinayak Vidyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled Design and Fabrication of 24V.D.C. power supply using Full wave Bridge submitted by Mr./Ms. Harshad Homdev Ghate of B.Sc. (Physics) Part: IIIrd Semester: VI as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: .. / .. / ..

Teacher-In-Charge

- 1) Leena gondane
- 2) Harshesh Raghute
- 3) Harshad Ghate

Signature of the Teacher who taught the examinee

1. [Signature]
2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.

[Signature]
Head
Dept. of Physics
Department of Physics
Vinayak Vidyan Mahavidyalaya
Nandgaon Kh.



Pravīn Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled comparing the strength of solid wood with that of plywood submitted by Mr./Ms. Arpita Anilrao Bhojkar of B.Sc. (Physics) Part: IIIrd Semester: VJ as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: 28 / 05 / 2022

Teacher-In-Charge

Group members.
1] Arpita Anilrao Bhojkar
2] Atul parshman Bhosale
3] Bhushan Gajanan ombare

Signature of the Teacher who taught the examinee

1. [Signature]
2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.

Head
Head
Department of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



Pravīn Khodke Memorial Trust Amravati's
Vinayak Vidyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati

DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled *To find the focal length of concave mirror* submitted by Mr./Ms. *Sakshi Kishanrao Guman* of B.Sc. (Physics) Part: *III* Semester: *VI* as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: *28/05/2022*

Prashant
Teacher-In-Charge

Dr. Prashant B. Kharat

1] Sakshi Gulhane

2] Sounabh Bhalake

3] Sounabh Satpaise

Signature of the Teacher who taught the examinee

1.

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.

Head
Head

Department of Physics
Dept. of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



Pravın Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya

Tq. Nandgaon Khandeshwar, Dist. Amravati

DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work
entitled To build a wind generator

submitted by Mr./Ms. Hitesh vijay Zaghute
of B.Sc. (Physics) Part: IIIrd Semester: VIth as prescribed by Sant Gadge Baba
Amravati University, Amravati during the Academic year 2021-2022.

Dated: / /

Teacher-In-Charge

- 1) Leena gondane
- 2) Hitesh Zaghute
- 3) Harshad ghate

Signature of the Teacher who taught the examinee

1.

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.

Head

Head

Dept. of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



Pravīn Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled construct a model of a magnetically levitated train submitted by Mr./Ms. Anpita Anilrao Bhoyar of B.Sc. (Physics) Part: IIIrd Semester: NI as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: 28 / 05 / 2022

Teacher-In-Charge

Group Members
1] Anpita Anilrao Bhoyar
2] Atul patshram Bhosale
3] Bhushan Gejanan ombas

Signature of the Teacher who taught the examinee

1.

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.

Head
Department of Physics
Dept. of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



Pravin Khodke Memorial Trust Amravati's
Vinayak Vidyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled To find the focal length of convex lens by plotting graph submitted by Mr./Ms. Sakshi Kinannoo Gulmane of B.Sc. (Physics) Part: IIIrd Semester: VI as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: 28/05/22


Teacher-In-Charge

Pr. Prashant B. Kharat

1] Sakshi Gulmane

2] Saunabh Bhalake

3] Saunabh Satpaise

Signature of the Teacher who taught the examinee

1.

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.


Head

Department of Physics
Head
Dept. of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



Pravın Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya

Tq. Nandgaon Khandeshwar, Dist. Amravati

DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled "Fiber optics" submitted by Mr./Ms. Vrushabh V. Madavi of B.Sc. (Physics) Part: IIIrd Semester: VIth as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: / /

1) Vrushabh V. Madavi
2) Vaishnavi S. Raut

Teacher-In-Charge

Signature of the Teacher who taught the examinee

1.

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.

Head

Head
Department of Physics
Dept. of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



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Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled Electromagnetic Induction submitted by Mr./Ms. Payal Vyankatesh Bhasme of B.Sc. (Physics) Part: 3rd yr Semester: VIth as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: 28 / May / 2022

28/05/2022
Teacher-In-Charge

1) Payal Vyankatesh Bhasme
2) Nandini Ravindra Kar
3) Om Pramod Ingole

Signature of the Teacher who taught the examinee

1.

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.

[Signature]
Head

Head
Department of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



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Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati

DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled Ability of water surface tension to hold weight submitted by Mr./Ms. Abhijit Gajanan Pithe of B.Sc. (Physics) Part: 1st year Semester: 1st as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: 28 / may / 22

Teacher-In-Charge

- 1) Abhijit D. Pithe
- 2) Akash Dhavce
- 3) Anand Nuhke

Signature of the Teacher who taught the examinee

1. [Signature]

2. _____

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.

[Signature]
Head
Dept. of Physics
Department of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



Pravın Khodke Memorial Trust Amravati's
Vinayak Vidyan Mahavidyalaya

Tq. Nandgaon Khandeshwar, Dist. Amravati

DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled "The effect of temperature"
..... on magnet" submitted by Mr./Ms. Nameeta Mulchand Raut
of B.Sc. (Physics) Part: IIIrd yr Semester: VI..... as prescribed by Sant Gadge Baba
Amravati University, Amravati during the Academic year 2021-2022.

Dated: 28 / /

1) Nameeta Mulchand Ra
2) Lokesh Dipak Marotke

Teacher-In-Charge

Signature of the Teacher who taught the examinee

1.

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.

Head
Head
Department of Physics
Vinayak Vidyan Mahavidyalaya
Nandgaon Kh.



Pravīn Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati

DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled To construct a model to demonstrate the simple Harmonic motion of a spring submitted by Mr./Ms. Sneha Gajanan Sagale of B.Sc. (Physics) Part: IIIrd Semester: VI as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: / /

Teacher-In-Charge

- ① sneha sagale
- ② shweta sharme
- ③ sneha vanjari

Signature of the Teacher who taught the examinee

1. [Signature]

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.

[Signature]
Head
Department of Physics
Head
Dept. of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



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Pravın Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled P-N Junction Diode submitted by Mr./Ms. Rutuja M. Gulhane of B.Sc. (Physics) Part: III Semester: VI as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated:/..../..

- 1) Rutuja M. Gulhane
- 2) Sakshi D. Ambulkar
- 3) Rutuja B. Devtale


Teacher-In-Charge

Signature of the Teacher who taught the examinee

1.

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.


Head
Dept. of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.
Department of Physics



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Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled "Total Internal Reflection"
..... submitted by Mr./Ms. Vrushabh V. Madavi.....
of B.Sc. (Physics) Part: IIIrd Semester: VIth as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: / /

Teacher-In-Charge

- 1) Vrushabh V. Madavi
- 2) Vaishnavi S. Raut.

Signature of the Teacher who taught the examinee

1.

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.

Head

Department of Physics
Dept. of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



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Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled To build wind turbine generator submitted by Mr./Ms. Pujal Vyankatesh Bhasme of B.Sc. (Physics) Part: 3rd Semester: Vth as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: 22 / May / 2022

22/05/2022
Teacher-In-Charge

- 1) Pujal Vyankatesh Bhasme
- 2) Nandini Ravindra Kanse
- 3) Omp. Ingole

Signature of the Teacher who taught the examinee

1.
2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.

[Signature]
Head
Department of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



Pravin Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati

DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled A Comparison of Thermal Insulation Property of Different Clothing submitted by Mr./Ms. Akash S. Bhaware of B.Sc. (Physics) Part: IIIrd Year Semester: VIIth as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: / /

Teacher-In-Charge

- 1) Akash S. Bhaware
- 2) Abhijit B. Rithe
- 3) Annand Nabhe

Signature of the Teacher who taught the examinee

1.

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.

Head

Department of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



Pravın Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled "Effect of extreme temperature on battery life" submitted by Mr./Ms. Nameata Mulchand Raut of B.Sc. (Physics) Part: III Semester: VI as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: / /

1) Nameata Mulchand Raut
2) Lokesh Dipak Masotkar


Teacher-In-Charge

Signature of the Teacher who taught the examinee

1. 

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.


Head
Head
Dept. of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



Pravīn Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati

DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled Automatic Solar street light submitted by Mr./Ms. sneh Rajkumar Vanjari of B.Sc. (Physics) Part: IIIrd Semester: IV as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: / /

- ① sneha Vanjari
- ② shweta charpe
- ③ sneha sagale


Teacher-In-Charge

Signature of the Teacher who taught the examinee

1. 

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.


Head

Department of Physics

Head
Dept. of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



Pravin Khodke Memorial Trust Amravati's
Vinayak Vidyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled Thin Film submitted by Mr./Ms. Rutuja Bharat Devtale of B.Sc. (Physics) Part: IIIrd Semester: VI as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: / /

- ① Rutuja Bharat Devtale
- ② Rutuja M. Gulhane
- ③ Sakshi D. Ambulkar

Prashant B. Khosla
Teacher-in-Charge

Dr. Prashant B. Khosla

Signature of the Teacher who taught the examinee

1.

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.

[Signature]
Head
Dept. of Physics
Vinayak Vidyan Mahavidyalaya
Nandgaon Kh.



Pravın Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled Electromagnetic Induction submitted by Mr./Ms. Vaishnavi Santoshrao Raut of B.Sc. (Physics) Part: IIIrd Semester: VI as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: 28 / 05 / 2022


Teacher-In-Charge


Group Members:
1] Vaishnavi Santoshrao Raut
2] Vaishbb Vishnu Madavi

Signature of the Teacher who taught the examinee

1. 
2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.


Head
Department of Physics
Vinayak Vidnyan Mahavid
Nandgaon Kh.



SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI AFFILIATED

Pravin Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati

DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work
entitled "Laser"
submitted by Mr./Ms. Om Pramod Ingole
of B.Sc. (Physics) Part: 3rd Yr. Semester: VI as prescribed by Sant Gadge Baba
Amravati University, Amravati during the Academic year 2021-2022.

Dated: 28 / May / 2022


Teacher-In-Charge
Dr. Prashant B. Khasak

1) Payal Bhasme
2) Nandini Kense
3) Om Ingole.

Signature of the Teacher who taught the examinee

1.

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.


Head

Head
Department of Physics
Vinayak Vidnyan Mahavidyalay
Nandgaon Kh.



Pravīn Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled Analyse the different Heat Retention capability of steel stand submitted by Mr./Ms. Akash S. Bhawar of B.Sc. (Physics) Part: IIIrd Semester: VIIth as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: / /

Teacher-In-Charge

- 1) Akash S. Bhawar
- 2) Abhisit B. Rithe
- 3) Anam Nahre

Signature of the Teacher who taught the examinee

1. [Signature]

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.

[Signature]
Head
Head
Department of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



Pravīn Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya

Tq. Nandgaon Khandeshwar, Dist. Amravati

DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled "Effect of temperature on conductivity & resistance" submitted by Mr./Ms. Nameeta Mulchand Raut of B.Sc. (Physics) Part: IIIrd Semester: VI as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: / /

1) Nameeta Mulchand Raut
2) Lokesh Dipak Mazorkar

Teacher-In-Charge

Signature of the Teacher who taught the examinee

- 1.
2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.

Head
Dept. of Physics
Department of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI (ESTD. 1963)
Pravin Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled To construct an Amplifier using an Ic
741 with gain of submitted by Mr./Ms. Shweta p. charpe
of B.Sc. (Physics) Part: 3rd Semester: VI as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: / /

- ① Shweta charpe
- ② Sneha Vangari
- ③ Sneha sagale


Teacher-In-Charge

Signature of the Teacher who taught the examinee

1. 

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.


Head

Department of Physics

Head
Dept. of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI AFFILIATED
Pravin Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled Traffic light control using IC 555 submitted by Mr./Ms. Sakshi D. Ambulkar of B.Sc. (Physics) Part: IIIrd Semester: VI as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: 20/05/2022

- 1) Rutuja B. Dertale
- 2) Rutuja M. Gulhane
- 3) Sakshi D. Ambulkar


Teacher-In-Charge

Signature of the Teacher who taught the examinee

1.

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.


Head
Head
Dept. of Physics
Department of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI
Pravīn Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled Electric Motor
..... submitted by Mr./Ms. Vaishnavi Santoshrao Raut
of B.Sc. (Physics) Part: IIIrd Semester: VI as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: 28 / 05 / 2022


Teacher-In-Charge

Group Member
1] Vaishnavi Santoshrao Raut
2] Vrushbh Vishnu Madav

Signature of the Teacher who taught the examinee

1. 

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.


Head
Department of Physics
Dept. of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



Pravīn Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled To assemble a household circuit comprising three bulbs, three (on/off) switches & Fuse and power source submitted by Mr./Ms. Nandini Ravindra Kanse of B.Sc. (Physics) Part: IIIrd Semester: VI as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: 28 / May / 2022

- 1) Nandini R. Kanse
- 2) Payal V. Bhasme
- 3) Om P. Ingole

Prashant
Teacher-In-Charge

Dr. Prashant B. Khavale

Signature of the Teacher who taught the examinee

1.

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.

[Signature]
Head

Head
Dept. of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



Pravın Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati

DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled Comparing the fabric the and water resistance submitted by Mr./Ms. AKASH S. BHAWAR of B.Sc. (Physics) Part: III Semester: VII as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: / /

1) Akash S. Bhawar

2) Abhijit G. Rithe

3) Anand Mahore

Teacher-In-Charge

Signature of the Teacher who taught the examinee

1. [Signature]

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.

[Signature]
Head
Dept. of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI AFFILIATED
Pravīn Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled^cTo determine colour and depth of
..... water submitted by Mr./Ms. Nameeta Mulchand Raut
of B.Sc. (Physics) Part: IIIrd Semester: VI as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: / /

1) Nameeta Mulchand Raut
2) Lokesh Dipak Masetkar

Teacher In-Charge

Signature of the Teacher who taught the examinee

1.

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.

Head

Head
Department of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI AFFILIATED
Pravīn Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled Superconductivity

..... submitted by Mr./Ms. Sneha Rajkumar Vangori
of B.Sc. (Physics) Part: 3rd Semester: VII as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: / /


Teacher In-Charge

- ① Shweta charpe
- ② Sneha sagale
- ③ Sneha Vangori

Signature of the Teacher who taught the examinee

1. 

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.


Head

Department of Physics

Head
Dept. of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI AFFILIATED

Pravīn Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati

DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled "Leser"

..... submitted by Mr./Ms. Rutuja M. Gulhane.....
of B.Sc. (Physics) Part: IIIrd Semester: VI..... as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: / /

- 1) Sakshi D. Ambulkar
- 2) Rutuja M. Gulhane
- 3) Rutuja B. Devtele

Rupat
Teacher-In-Charge

Signature of the Teacher who taught the examinee

1.

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.

[Signature]
Head
Department of Physics
Vinayak Vidnyan Mahavidya
Nandgaon Kh.
Department of Physics



VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.)

Certificate

This is to certify that, the group of students named

- 1) AACHAL R. HAMBARDE
- 2) ACHAL DILIP DESHMUKH
- 3) ACHAL N. CHARDE
- 4) AKSHADA D. DHANDARE
- 5) AMAN ASHPAK MAKWANI
- 6) AMRUTA SOPAN KALE
- 7) ARPITA P. THAKARE
- 8) ASHUTOSH DILIP INGOLE
- 9) DIVYA PRAMOD SALVE
- 10) KARTIK RAVINDRA MAHURE

of B.Sc. II Semester III, has undertaken and completed the project entitled "Food Adulteration" for the session 2021-22 as mandated by Sant Gadge Baba Amravati University, Amravati as a part of B.Sc. programme.

Head
Department of Chemistry
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khandeshwar

Principal
PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan, Dist. Amravati



VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.)

Certificate

This is to certify that, the group of students named

- 1) KIRAN RAJU BANARASE
- 2) KIRTI DILIP POPHALE
- 3) KOMAL D. PUND
- 4) KOMAL JITENDRA SEN
- 5) MAYURI PRAVIN KAPADE
- 6) MAYURI R. DEOTALE
- 7) MOHD A. M. M. MAKWANI

of B.Sc. II Semester III, has undertaken and completed the project entitled "Food Adulteration" for the session 2021-22 as mandated by Sant Gadge Baba Amravati University, Amravati as a part of B.Sc. programme.

Head
Department of Chemistry
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khandeshwar

Principal
PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan, Dist. Amravati



VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.) Certificate

This is to certify that, the group of students named

- 1) NIKHIL NANDU PRAGHANE
- 2) PRANAY SANJAY MARAPE
- 3) PRATIK K. INZALKAR
- 4) PRATIKSHA ANAND INGALE
- 5) PRIYANKA R. GAJBHIYE
- 6) RAKHI RUPRAO SONONE
- 7) RAVINA SANDIP NAVNAGE
- 8) RINA PRAVIN POPHALE
- 9) ROHAN RAMRAO JADHAO
- 10) SAKSHI R. GULHANE

of B.Sc. II Semester III, has undertaken and completed the project entitled “Chemical Composition of Medicine used in Heart Disease” for the session 2021-22 as mandated by Sant Gadge Baba Amravati University, Amravati as a part of B.Sc. programme.


HEAD
Department of Chemistry
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khandeshwar


Principal
PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan, Dist. Amravati



VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.) Certificate

This is to certify that, the group of students named

- 1) SAKSHI SANTOSH INZALKAR
- 2) SAMIKSHA P. DAKARE
- 3) SEJAL G. CHANDURKAR
- 4) SHARAYU P. CHAUDHARI
- 5) SHITAL S. LONARE
- 6) SHITAL VIJAY GADHAVE
- 7) SHIVANI J. CHAVHAN

of B.Sc. II Semester III, has undertaken and completed the project entitled “Chemical Composition of Medicine used in Heart Disease” for the session 2021-22 as mandated by Sant Gadge Baba Amravati University, Amravati as a part of B.Sc. programme.


HEAD
Department of Chemistry
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khandeshwar


Principal
PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan, Dist. Amravati



VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.) Certificate

This is to certify that, the group of students named

- 1) SHRADDHA ANIL BANKAR
- 2) SHREYA GAJANAN DHOKE
- 3) SHREYASWI R. DEVTALE
- 4) SNEHAL BALU KAWARE
- 5) VAISHNAVI D. RUMNE
- 6) VAISHNAVI R. KHOBRAGADE
- 7) VAISHNAVI R. ZATALE
- 8) ACHAL RAMDAS BIJAVE
- 9) ADIBA SAMAN A. KHAN
- 10) KALYANI NARHARI WAKODE

of B.Sc. II Semester III, has undertaken and completed the project entitled “Chemical Composition of Medicine used in Cancer Disease” for the session 2021-22 as mandated by Sant Gadge Baba Amravati University, Amravati as a part of B.Sc. programme.


Head
Department of Chemistry
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khandeshwar


Principal
PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan, Dist. Amravati



VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.) Certificate

This is to certify that, the group of students named

- 1) RUTIK T. JAWALKAR
- 2) SAHIL VIKAS RAUT
- 3) SAKSHI MAHENDRA DUKARE
- 4) SAKSHI VILAS DHAWALE
- 5) SAYALI PRAMOD GAWANDE
- 6) SHARDDHA VIJAY RAUT
- 7) VIVEKANAND ANIL PAWAR

of B.Sc. II Semester III, has undertaken and completed the project entitled “Chemical Composition of Medicine used in Cancer Disease” for the session 2021-22 as mandated by Sant Gadge Baba Amravati University, Amravati as a part of B.Sc. programme.


Head
Department of Chemistry
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khandeshwar


Principal
PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan, Dist. Amravati



VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.)

Certificate

This is to certify that, the group of students named

- 1) AACHAL R. HAMBARDE
- 2) ACHAL DILIP DESHMUKH
- 3) ACHAL N. CHARDE
- 4) AKSHADA D. DHANDARE
- 5) AMAN ASHPAK MAKWANI
- 6) AMRUTA SOPAN KALE
- 7) ARPITA P. THAKARE
- 8) ASHUTOSH DILIP INGOLE
- 9) DIVYA PRAMOD SALVE

of B.Sc. II Semester IV, has undertaken and completed the project entitled “Isolation of Flavonoids from Color Flowers” for the session 2021-22 as mandated by Sant Gadge Baba Amravati University, Amravati as a part of B.Sc. programme.

Head
Department of Chemistry
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khandeshwar

Principal
PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan, Dist. Amravati



VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.)

Certificate

This is to certify that, the group of students named

- 1) KARTIK RAVINDRA MAHURE
- 2) KIRAN RAJU BANARASE
- 3) KIRTI DILIP POPHALE
- 4) KOMAL D. PUND
- 5) KOMAL JITENDRA SEN
- 6) MAYURI PRAVIN KAPADE
- 7) MAYURI R. DEOTALE
- 8) MOHD A. M. M. MAKWANI
- 9) NIKHIL NANDU PRAGHANE

of B.Sc. II Semester IV, has undertaken and completed the project entitled “Chemical Composition Present in Energy Drinks” for the session 2021-22 as mandated by Sant Gadge Baba Amravati University, Amravati as a part of B.Sc. programme.

Head
Department of Chemistry
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khandeshwar

Principal
PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan, Dist. Amravati





VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.) Certificate

This is to certify that, the group of students named

- 1) PRANAY SANJAY MARAPE
- 2) PRATIK K. INZALKAR
- 3) PRATIKSHA ANAND INGALE
- 4) PRIYANKA R. GAJBHIYE
- 5) RAKHI RUPRAO SONONE
- 6) RAVINA SANDIP NAVNAGE
- 7) RINA PRAVIN POPHALE
- 8) ROHAN RAMRAO JADHAO
- 9) SAKSHI R. GULHANE

of B.Sc. II Semester IV, has undertaken and completed the project entitled **“Isolation of Calcium from Cheese, Butter and other Dair Products”** for the session 2021-22 as mandated by Sant Gadge Baba Amravati University, Amravati as a part of B.Sc. programme.


Head
Department of Chemistry
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khandeshwar


Principal
PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan, Dist. Amravati



VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.) Certificate

This is to certify that, the group of students named

- 1) SAKSHI SANTOSH INZALKAR
- 2) SAMIKSHA P. DAKARE
- 3) SEJAL G. CHANDURKAR
- 4) SHARAYU P. CHAUDHARI
- 5) SHITAL S. LONARE
- 6) SHITAL VIJAY GADHAVE
- 7) SHIVANI J. CHAVHAN
- 8) SHRADDHAANIL BANKAR
- 9) SHREYA GAJANAN DHOKE

of B.Sc. II Semester IV, has undertaken and completed the project entitled **“Chemical Composition Present in Jatropa Gossipifolia”** for the session 2021-22 as mandated by Sant Gadge Baba Amravati University, Amravati as a part of B.Sc. programme.


Head
Department of Chemistry
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khandeshwar


Principal
PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan, Dist. Amravati



VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.)

Certificate

This is to certify that, the group of students named

- 1) SHREYASWI R. DEVTALE
- 2) SNEHAL BALU KAWARE
- 3) VAISHNAVI D. RUMNE
- 4) VAISHNAVI R. KHOBRADE
- 5) VAISHNAVI R. ZATALE
- 6) ACHAL RAMDAS BIJAVE
- 7) ADIBA SAMAN A. KHAN
- 8) KALYANI NARHARI WAKODE
- 9) RUTIK T. JAWALKAR

of B.Sc. II Semester IV, has undertaken and completed the project entitled “Extraction of oil from Castor Seeds and its Applications” for the session 2021-22 as mandated by Sant Gadge Baba Amravati University, Amravati as a part of B.Sc. programme.

Head

Department of Chemistry
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khandeshwar

Principal

PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
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VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.)

Certificate

This is to certify that, the group of students named

- 1) Sahil Vikas Raut
- 2) Sakshi Mahendra Dukare
- 3) Sakshi Vilas Dhawale
- 4) Sayali Pramod Gawande
- 5) Shraddha Vijay Raut
- 6) Vivekanand Anil Pawar

of B.Sc. II Semester IV, has undertaken and completed the project entitled “Extraction of oil from Castor Seeds and its Applications” for the session 2021-22 as mandated by Sant Gadge Baba Amravati University, Amravati as a part of B.Sc. programme.

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This is to certify that, the group of students named

- 1) ABHISHEK P. CHAURAGADE
- 2) ACHALARUN BANSOD
- 3) ACHAL GAJANAN MASRAM
- 4) ACHAL RAJESH SATRE
- 5) AMRAPALI B. WAHANE
- 6) ANKITA S. MANDAVGADE
- 7) ANUSHKA SURESHRAO IZATE
- 8) ASMITA GOPAL SABLE
- 9) BHAGYASHRI J. SHELKE
- 10) DIMPAL VIJAYRAO JAGTAP

of B.Sc. III Semester V, has undertaken and completed the project entitled “Information of ONGC and NTPC” for the session 2021-22 as mandated by Sant Gadge Baba Amravati University, Amravati as a part of B.Sc. programme.


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Certificate

This is to certify that, the group of students named

- 1) DIVYA MURLIDHAR KAKADE
- 2) GAURI UDDHAVRAO DHAWAS
- 3) HARSHAD GUNVANTRAO DOFE
- 4) JAYASHREE R. TANKAR
- 5) KAJAL VITTHALRAO SHINDE
- 6) KRUNAL MUKUNDRAO BARDE
- 7) KUNAL RAJENDRA BITALE
- 8) MANISHA MADHUKAR PONGLE
- 9) MD ATIQUE AB RAHIM

of B.Sc. III Semester V, has undertaken and completed the project entitled “Information of ONGC and NTPC” for the session 2021-22 as mandated by Sant Gadge Baba Amravati University, Amravati as a part of B.Sc. programme.


Head

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VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.) Certificate

This is to certify that, the group of students named

- 1) PALLAVI PRABHAKAR GULHANE
- 2) PALLAVI RAMRAO TANGALE
- 3) POOJA WASUDEV MORE
- 4) PRAJWALSING P. DESHMUKH
- 5) PRANALI GAJANANRAO AGASHE
- 6) PRATIKSHA VILASRAO SHAHADE
- 7) PRIYANKA PRAMODRAO GULHANE
- 8) PUNAM SHALIKRAM BANARASE
- 9) RAJANI ASHOKRAO CHAVHAN
- 10) RUPALI VASUDEO MAHATO

of B.Sc. III Semester V, has undertaken and completed the project entitled
“Information of IOCL and BARC” for the session 2021-22 as mandated by Sant
Gadge Baba Amravati University, Amravati as a part of B.Sc. programme.


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VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.) Certificate

This is to certify that, the group of students named

- 1) RUSHALI GANESH VAIRAGADE
- 2) RUTUJA SUBHASHRAO ZANZAT
- 3) SACHIN VILASRAO BHAGAT
- 4) SANIKA MOHAN DARWHATKAR
- 5) SARTHAK UTTAMRAO RAUT
- 6) SATISH BHUJANGRAO MORE
- 7) SAURABH RAMESH KALEKAR
- 8) SHAMAL DIVAKAR INGOLE
- 9) SHRUTI SANJAY RAVEKAR

of B.Sc. III Semester V, has undertaken and completed the project entitled
“Information of IOCL and BARC” for the session 2021-22 as mandated by
Sant Gadge Baba Amravati University, Amravati as a part of B.Sc. programme.


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VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.)

Certificate

This is to certify that, the group of students named

- 1) SHUBHAM BANDU SANAP
- 2) SNEHAL DATTATRAY DHURTE
- 3) SUMIT MADHUKAR JADHAO
- 4) TEJASWINI BALU DEOTALE
- 5) VAIBHAV DIPAKRAO DHANDE
- 6) VAISHNAVI GAJANANRAO GAWNER
- 7) VAISHNAVI SANJAY KHOPE
- 8) ARPITAANILRAO BHOYAR
- 9) HITESH VIJAY RAGHUTE
- 10) NANDINI RAVINDRA KANSE

of B.Sc. III Semester V, has undertaken and completed the project entitled “Information of DRDO and DAE” for the session 2021-22 as mandated by Sant Gadge Baba Amravati University, Amravati as a part of B.Sc. programme.


Head

Department of Chemistry
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Principal

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VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.)

Certificate

This is to certify that, the group of students named

- 1) OM PRAMODRAO INGOLE
- 2) PUJA SUBHASHRAO DUKARE
- 3) RUTUJA BHARAT DEVTALE
- 4) SAKSHI KIRANRAO GULHANE
- 5) SNEHA GAJANAN SAGALE
- 6) SWARA NARENDRA DESHMUKH
- 7) TEJASWINI S. GADHEKAR
- 8) VAIBHAV SHRIKRUSHNA GULHANE
- 9) VAISHNAVI SANTOSH RAUT
- 10) VRUSHBHI VISHNU MADAVI

of B.Sc. III Semester V, has undertaken and completed the project entitled “Information of DRDO and DAE” for the session 2021-22 as mandated by Sant Gadge Baba Amravati University, Amravati as a part of B.Sc. programme.


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VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.)

Certificate

This is to certify that, the group of students named

- 1) Aman Ashpak Makwani
- 2) Achal Rajendra Hambarde
- 3) Achal Diliprao Deshmukh
- 4) Achal Nandkishor Charde
- 5) Akshada Dnyaneshwar Dhandare

of B.Sc. II semester III, has undertaken and completed the project entitled **Beak Modification in Birds** for the session 2021-22 as prescribed by Sant Gadge Baba Amravati University, Amravati as a part of B.Sc. programme

Pamohalle
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VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.)

Certificate

This is to certify that, the group of students named

- 1) Amruta Sopan Kale
- 2) Arpita Pradiprao Thakare
- 3) Ashutosh Dilip Ingole
- 4) Deep Chaudhary
- 5) Divya Pramod Salve

of B.Sc. II semester III, has undertaken and completed the project entitled **Leg Modification in Birds** for the session 2021-22 as prescribed by Sant Gadge Baba Amravati University, Amravati as a part of B.Sc. programme.

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**VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.)
Certificate**

This is to certify that, the group of students named

- 1) Kiran Raju Banarase
- 2) Kirti Dilip Pophale
- 3) Komal Dnyaneshwar Pund
- 4) Komal Jitendra Sen
- 5) Mayuri Pravin Kapade

of B.Sc. II semester III, has undertaken and completed the project entitled **Life Cycle of Silkworm** for the session 2021-22 as prescribed by Sant Gadge Baba Amravati University, Amravati as a part of B.Sc. programme.

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**VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.)
Certificate**

This is to certify that, the group of students named

- 1) Mayuri Rameshwar Deotale
- 2) Mo Anas Mo Mustafa Makwani
- 3) Nikhil Nandu Praghane
- 4) Pranay Sanjay Marape
- 5) Pratik Kanteshwar Inzalkar
- 6) Vaishnavi Ravindra Zatale

of B.Sc. II semester III, has undertaken and completed the project entitled **Life Cycle of Honey bee** for the session 2021-22 as prescribed by Sant Gadge Baba Amravati University, Amravati as a part of B.Sc. programme.

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VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.)
Certificate

This is to certify that, the group of students named

- 1) Pratik Pramodrao Chaudhari
- 2) Pratiksha Anand Ingle
- 3) Priyanka Rajkumar Gajbhiye
- 4) Rakhi Ruprao Sonone
- 5) Ravina Sandip Navnage

of B.Sc. II semester III, has undertaken and completed the project entitled **Types of feathers of birds** for the session 2021-22 as prescribed by Sant Gadge Baba Amravati University, Amravati as a part of B.Sc. programme.

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Certificate

This is to certify that, the group of students named

- 1) Rina Pravin Pophale
- 2) Sakshi Rameshwar Gulhane
- 3) Sakshi Santosh Inzalkar
- 4) Samiksha Pramod Dakare
- 5) Sejal Gajananrao Chandurkar

of B.Sc. II semester III, has undertaken and completed the project entitled **Poisonous Snakes** for the session 2021-22 as prescribed by Sant Gadge Baba Amravati University, Amravati as a part of B.Sc. programme.

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Certificate

This is to certify that, the group of students named

- 1) Sharayu Purshottam Chaudhari
- 2) Shital Subhashrao Lonare
- 3) Shital Vijay Gadhave
- 4) Shivani Jaypalsingh Chavhan
- 5) Shraddha Anilrao Bankar

of B.Sc. II semester III, has undertaken and completed the project entitled **Non-poisonous Snakes** for the session 2021-22 as prescribed by Sant Gadge Baba Amravati University, Amravati as a part of B.Sc. programme.

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Certificate

This is to certify that, the group of students named

- 1) Shreya Gajanan Dhoke
- 2) Shreyaswi Ramesh Devtale
- 3) Snehal Balu Kaware
- 4) Vaishnavi Damodhar Rumne
- 5) Vaishnavi Ravindra Khobragade

of B.Sc. II semester III, has undertaken and completed the project entitled **Analogous Organs** for the session 2021-22 as prescribed by Sant Gadge Baba Amravati University, Amravati as a part of B.Sc. programme.

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VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.)

Certificate

This is to certify that, the group of students named

- 1) Achal Rajendra Hambarde
- 2) Achal Dilip Deshmukh
- 3) Achal Nandkishor Charde
- 4) Akshada Dnyaneshwar Dhandare
- 5) Aman Ashpak Makwani

of B.Sc. II semester IV, has undertaken and completed the project entitled **Types of Chromosome including Polyetene and Lampbrush** for the session 2021-22 as prescribed by Sant Gadge Baba Amravati University, Amravati as a part of B.Sc. program

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Certificate

This is to certify that, the group of students named

- 1) Amruta Sopan Kale
- 2) Arpita Pradiprao Thakare
- 3) Asutosh Ingole
- 4) Divya Salve
- 5) Kartik Ravindra Malure

of B.Sc. II semester IV, has undertaken and completed the project entitled **Seven Mendelian traits** for the session 2021-22 as prescribed by Sant Gadge Baba Amravati University, Amravati as a part of B.Sc. programme.

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VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.)

Certificate

This is to certify that, the group of students named

- 1) Kiran Raju Banarase
- 2) Kirti Dilip Pophale
- 3) Komal Dnyaneshwar Pund
- 4) Komal Jitendra Sen
- 5) Mayuri Pravin Kapade

of B.Sc. II semester IV, has undertaken and completed the project entitled **Human Karyotype** for the session 2021-22 as prescribed by Sant Gadge Baba Amravati University, Amravati as a part of B.Sc. programme.

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Certificate

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- Mohd Anas Mohd Mustafa Makwani
Nikhil Nandu Praghane
Pranay Sanjay Marape
Pratik Kanteshwar Inzalkar

of B.Sc. II semester IV, has undertaken and completed the project entitled **Aquatic Ecosystem** for the session 2021-22 as prescribed by Sant Gadge Baba Amravati University, Amravati as a part of B.Sc. programme.

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This is to certify that, the group of students named

- 1) Pratiksha Anand Ingale
- 2) Priya Gajbhiye
- 3) Rakhi Ruprao Sonone
- 4) Ravina Sandip Navnage
- 5) Rina Pravin Pophale

of B.Sc. II semester IV, has undertaken and completed the project entitled **Food Pyramid** for the session 2021-22 as prescribed by Sant Gadge Baba Amravati University, Amravati as a part of B.Sc. programme.

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Certificate

This is to certify that, the group of students named

- 1) Rohan Ramrao Jadhao
- 2) Sakshi Rameshwar Gulhane
- 3) Sakshi Santosh Inzalkar
- 4) Samiksha Pramod Dakare
- 5) Sejal Gajanan Chandurkar

of B.Sc. II semester IV, has undertaken and completed the project entitled **Pyramid of Energy** for the session 2021-22 as prescribed by Sant Gadge Baba Amravati University, Amravati as a part of B.Sc. programme.

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- 1) Sharayu Purshottam Chaudhari
- 2) Shital Subhashrao Lonare
- 3) Shital Vijay Gadhave
- 4) Shivani Jaypalsingh Chavhan
- 5) Shraddha Anil Bankar

of B.Sc. II semester IV, has undertaken and completed the project entitled **Desert Ecosystem** for the session 2021-22 as prescribed by Sant Gadge Baba Amravati University, Amravati as a part of B.Sc. programme.

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Certificate

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- 2) Shreyaswi Ramesh Devtale
- 3) Snehal Balu Kaware
- 4) Vaishnavi Damodhar Rumne
- 5) Vaishnavi Ravindra Khobragade
- 6) Vaishnavi Ravindra Zatalc

of B.Sc. II semester IV, has undertaken and completed the project entitled **Terrestrial Ecosystem** for the session 2021-22 as prescribed by Sant Gadge Baba Amravati University, Amravati as a part of B.Sc. programme.

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Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled To construct a metal to demonstrate Newton's 3rd law submitted by Mr./Ms. Jay Shamrao Gawande of B.Sc. (Physics) Part: IInd Semester: III as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated:/...../.....


Teacher-In-Charge


Signature of the Teacher who taught the examinee

1. 

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.


Head
Dept. of Physics
Department of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



Pravin Khodke Memorial Trust Amravati's
Vinayak Vidyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati

DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled To construct a model to demonstrate Newton's Second Law submitted by Mr./Ms. Chaitali Sanjay Dak of B.Sc. (Physics) Part: II Semester: III as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: / /

Teacher-In-Charge

20/04
Dr. Poashant B. Khoskar

Signature of the Teacher who taught the examinee

1.

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.

[Signature]
Head
Dept. of Physics
Vinayak Vidyan Mahavidyalaya
Nandgaon Kh.



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Pravin Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled *To Study the Unidirectional Action of diode* submitted by Mr./Ms. *Salyani N. Laksole* of B.Sc. (Physics) Part: *IInd* Semester: *IInd* as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: / /

Teacher-In-Charge

Signature of the Teacher who taught the examinee

1. *20/04/22*
2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.

Head
Department of Physics
Dept. of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI AFFILIATED
Pravin Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled Design and Fabrication of 5V DC power supply using Full wave bridge Rectifier submitted by Mr./Ms. Adeeba Saman Adees Khan of B.Sc. (Physics) Part: II Semester: IIIrd as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: / /

Teacher-In-Charge

Signature of the Teacher who taught the examinee

1. 20/04

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.

Head

Head

Department of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



Pravin Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled To construct a model to demonstrate Newton's Third law of motion submitted by Mr./Ms. Damini Nilas Dhage of B.Sc. (Physics) Part: IInd Semester: IIIrd as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: / /


Teacher-In-Charge

Signature of the Teacher who taught the examinee

1.

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.


Head
Head
Dept. of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI AFFILIATED
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Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled To study properties of step down transformer submitted by Mr./Ms. Muskanand Anil Pawar of B.Sc. (Physics) Part: IInd Semester: IIIrd as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: / /

Teacher-In-Charge

Signature of the Teacher who taught the examinee

1. 20/02/22

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.

Head
Head
Dept. of Physics
Department of Physics
Vinayak Mahavidyalaya
Nandgaon Kh.



SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI AFFILIATED
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Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled *Design & fabrication of 5V DC power supply using full wave bridge rectifier* submitted by *Mr./Ms. Achal Ramdas Bijave* of B.Sc. (Physics) Part: *II* Semester: *IV* as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated:

Teacher-In-Charge

Signature of the Teacher who taught the examinee

1. *[Signature]*

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.

[Signature]
Head
Department of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



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CamScanner



SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI AFFILIATED

Pravin Khodke Memorial Trust Amravati's

Vinayak Vidnyan Mahavidyalaya

Tq. Nandgaon Khandeshwar, Dist. Amravati

DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled *To Construct a water level controller using IC-555.* submitted by Mr./Ms. *Sahil Vikasrao Raut* of B.Sc. (Physics) Part: *II* Semester: *III* as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: / /

Teacher-In-Charge

Signature of the Teacher who taught the examinee

1. *20/01/2022*

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.

Head
Dept. of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.

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CamScanner



Pravin Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled To construct a model to demonstrate the effect of pressure on water velocity submitted by Mr./Ms. Vaishnavi Ravindra Ghatule of B.Sc. (Physics) Part: II Semester: 3rd as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: / /


Teacher-In-Charge

Signature of the Teacher who taught the examinee

1. 

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.


Head
Head
Department of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



Pravin Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled *To show unidirectional action of the*
..... *elode* submitted by *Mr./Ms. Mamta Sanjay Meshram*.....
of B.Sc. (Physics) Part: *IIIrd* Semester: *IIIrd* as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: *22/05/22*

Teacher-In-Charge

Signature of the Teacher who taught the examinee

1. *22/05/22*

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.

Head
Head
Dept. of Physics
Department of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI AFFILIATED

Pravin Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya

Tq. Nandgaon Khandeshwar, Dist. Amravati

DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled calculate the specific heat capacity of water oil engine oil submitted by Mr./Ms. Sayali P. Gawande of B.Sc. (Physics) Part: 2nd Semester: 2nd as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: 28 / 5 / 2022

20/01/22
Teacher-In-Charge

Dr Prashant B. Khoslat

Signature of the Teacher who taught the examinee

1. *[Signature]*

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.

[Signature]
Head
Dept. of Physics
Department of Physics
Vinayak Vidnyan
Nandgaon Kh.



SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI (AFFILIATED)
Pravin Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled To study properties of step down transformer submitted by Mr./Ms. Yash Shyamkant Pharye of B.Sc. (Physics) Part: IInd Semester: IVth as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: / /

Teacher-In-Charge

Signature of the Teacher who taught the examinee

1.

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.

Head
Dept. of Physics
Department of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI AFFILIATED

Pravin Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati

DEPARTMENT OF PHYSICS


CERTIFICATE

This is to certify that this Book contains the bonafide record of the ^{project} practical work of
Mr./Ms. ...Anuja...A...Tayade..... of B.Sc. (Physics) Part: IInd
Semester: IIIrd as prescribed by Sant Gadge Baba Amravati University, Amravati during
the Academic year 2021-2022.

Dated: / / 2022



Teacher-In-Charge

Signature of the Teacher who taught the examinee

1. 
2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.


Head
Department of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



Pravin Khodke Memorial Trust Amravati's
Vinayak Vidyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled To construct a metal to demonstrate Newton's 3rd law submitted by Mr./Ms. Chanchal Kishor Gawbhire of B.Sc. (Physics) Part: II Semester: III as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: / /


Teacher-In-Charge

Signature of the Teacher who taught the examinee

1. 

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.


Head
Head of Physics
Department of Physics
Vinayak Vidyan Mahavidyalaya
Nandgaon Kh.



Pravin Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled TO CONSTRUCT A MODEL TO DEMONSTRATE THE EFFECT OF PRESSURE ON WATER VELOCITY submitted by Mr./Ms. MAISHNAVI GAJANAN DEULKAR of B.Sc. (Physics) Part: III Semester: 3RD as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: / /


Teacher-In-Charge


Signature of the Teacher who taught the examinee

1. 

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.


Head
Department of Physics
Dept. of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



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Pravin Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati

DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled ..To construct a model to demonstrate Newton's..
..Second law.. submitted by Mr./Ms. Ambika Ambari Chauhan..
of B.Sc. (Physics) Part: ..II.. Semester: ..3rd.. as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: / /


Teacher-In-Charge

Signature of the Teacher who taught the examinee

1.

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.


Head

Dept. of Physics
Department of Physics
Nandgaon Kh.





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Pravin Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled to study the resistance of various materials submitted by Mr./Ms. Gayatri P. Gawande of B.Sc. (Physics) Part: 2nd Semester: 4th as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: 28/5/2022.


Teacher-In-Charge

Dr. P. B. Kharsal

Signature of the Teacher who taught the examinee

1. 

2. _____

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.


Head
Head
Department of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI AFFILIATED
Pravin Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled Resistance of various materials submitted by Mr./Ms. Shraddha Raut of B.Sc. (Physics) Part: 2nd Semester: 4 as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: 28 / 5 / 2022


Teacher-In-Charge

Signature of the Teacher who taught the examinee

- 1.
- 2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.


Head
Dept. of Physics
Department of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



Pravin Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS


CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled STUDY OF VISCOSITY OF WATER OIL AND ENGINE OIL submitted by Mr./Ms. Chanchal Kishor Gawbhilye of B.Sc. (Physics) Part: II Semester: IV as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: / /


Teacher-in-Charge

Signature of the Teacher who taught the examinee

1. 
2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.


Head
Head
Department of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



Pravin Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled To study and construct a circuit of rkp switch submitted by Mr./Ms. Yash Shyamkant Pawar of B.Sc. (Physics) Part: Ist Semester: IIth as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: ____/____/____

Teacher-In-Charge

Signature of the Teacher who taught the examinee

1.

2. _____

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.

Head
Department of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



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Vinayak Vidnyan Mahavidyalaya

Tq. Nandgaon Khandeshwar, Dist. Amravati

DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled *To study the charge and discharging of capacitor in series* submitted by Mr./Ms. *Naisnavi Gajanan Deulkar* of B.Sc. (Physics) Part: *II* Semester: *4th* as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: / /

[Signature]
Teacher-In-Charge

Signature of the Teacher who taught the examinee

1. *[Signature]*

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.

[Signature]
Head
Department of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI AFFILIATED

Pravin Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitledTo.....demonstrate.....the.....phenomena.....of.....Total Internal Reflection..... submitted by Mr./Ms. Ambika Naikhan Chauhan of B.Sc. (Physics) Part:II..... Semester:III..... as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: / /


Teacher-In-Charge

Signature of the Teacher who taught the examinee

1.

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.


Head
Dept. of Physics
Department of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI AFFILIATED

Pravin Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya

Tq. Nandgaon Khandeshwar, Dist. Amravati

DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled *To study the density of water rail & Engines* submitted by Mr./Ms. *Kalyani N. Wakode* of B.Sc. (Physics) Part: *IIIrd* Semester: *IVth* as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: / /

Teacher-In-Charge

Signature of the Teacher who taught the examinee

1. *[Signature]*

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.

[Signature]
Head
Dept. of Physics
Vinayak Vidnyan Mahavidyalaya
Department of Physics



SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI APTEH-431001
Pravin Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled To study properties of step down transformers submitted by Mr./Ms. Akanksha K. Raul of B.Sc. (Physics) Part: II Semester: IV as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: / /

Teacher-In-Charge

Signature of the Teacher who taught the examinee

1.

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.

Head
Dept. of Physics
Department of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI AFFILIATED
Pravin Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this Book contains the bonafide record of the ^{project} practical work of
Mr./Ms.Anuja...A...Tayade..... of B.Sc. (Physics) Part: IInd.....
Semester: ...IVth..... as prescribed by Sant Gadge Baba Amravati University, Amravati during
the Academic year 2021-2022.

Dated: / / 2022


Teacher-In-Charge

Signature of the Teacher who taught the examinee

1.


2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.



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CamScanner


Head
Department of Physics
Dept. of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI AFFILIATED

Pravin Khodke Memorial Trust Amravati's

Vinayak Vidnyan Mahavidyalaya

Tq. Nandgaon Khandeshwar, Dist. Amravati

DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled calculate the specific heat capacity of water... submitted by Mr./Ms. Shriaddha Vijay Raut of B.Sc. (Physics) Part: 2nd Semester: 4 as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: 28 / 5 / 2022


Teacher-In-Charge


Signature of the Teacher who taught the examinee

1. 

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.


Head
Dept. of Physics
Department of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI AFFILIATED
Pravin Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled To study properties of step down transformer submitted by Mr./Ms. Yash Shyamkant Pawar of B.Sc. (Physics) Part: IInd Semester: IVth as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: / /

Teacher-In-Charge

Signature of the Teacher who taught the examinee

1.

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.

Head
Dept. of Physics
Department of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI AFFILIATED

Pravin Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya


Tq. Nandgaon Khandeshwar, Dist. Amravati

DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled calculate the specific heat capacity of water. submitted by Mr./Ms. Shraddha Vijay Rout of B.Sc. (Physics) Part: 2nd Semester: 4 as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: 28 / 5 / 2022



Teacher-In-Charge

Signature of the Teacher who taught the examinee

1. 
2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.


Head
Head
Dept. of Physics
Department of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.





SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI AFFILIATED
Pravin Khodke Memorial Trust Amravati's
Vinayak Vidnyan Mahavidyalaya
Tq. Nandgaon Khandeshwar, Dist. Amravati
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project report contains the bonafide record of the Project work entitled Calculate the specific heat capacity of water, oil & engine oil submitted by Mr./Ms. Sakshi Vilos Dhawale of B.Sc. (Physics) Part: 2nd Semester: 2rd as prescribed by Sant Gadge Baba Amravati University, Amravati during the Academic year 2021-2022.

Dated: /...../.....

ewak
Teacher-In-Charge

Signature of the Teacher who taught the examinee

1.

2.

Date:

Place: Nandgaon Khandeshwar, Dist. Amravati.

[Signature]
Head
Department of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.)


Certificate


Department of Mathematics

This is to certify that, the group of students named

1. Adiba Saman Anees Khan .
2. Gayatri Avinash Solanke
3. Kiran Arun Kambale

of B.Sc. II semester III, has undertaken and completed the project entitled *Applications of Prime Numbers* for the session 2021-22 as a part of Internal Assessment as per curriculum of Sant Gadge Baba Amravati University, Amravati of B.Sc. programme.


Head
Dept. of Mathematics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.


PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan. Dist. Amravati



VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.)


Certificate


Department of Mathematics

This is to certify that, the group of students named

1. Achal Ramdas Bijave
2. Sakshi Mahendra Dukare
3. Sharddha Vijay Raut

of B.Sc. II semester III, has undertaken and completed the project entitled *Importance of Divisibility in real life* for the session 2021-22 as a part of Internal Assessment as per curriculum of Sant Gadge Baba Amravati University, Amravati of B.Sc. programme.


Head
Dept. of Mathematics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.


PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan. Dist. Amravati



VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.)

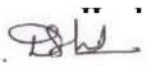
Certificate


Department of Mathematics

This is to certify that, the group of students named

1. Kalyani Narhari Wakode
2. Rutuja Sudhirrao Gulhane
3. Sakshi Subhashrao Herode

of B.Sc. II semester III, has undertaken and completed the project entitled *Any Two Applications of Divisibility* for the session 2021-22 as a part of Internal Assessment as per curriculum of Sant Gadge Baba Amravati University, Amravati of B.Sc. programme.


[Head]
Dept. of Mathematics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.


PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan, Dist. Amravati



VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.)

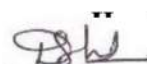
Certificate


Department of Mathematics

This is to certify that, the group of students named

1. Sakshi Vilas Dhawale
2. Sayali Pramod Gawande
3. Vaishnavi Gajanan Deulkar

of B.Sc. II semester III, has undertaken and completed the project entitled *Application of linear Diophantine equation* for the session 2021-22 as a part of Internal Assessment as per curriculum of Sant Gadge Baba Amravati University, Amravati of B.Sc. programme.


[Head]
Dept. of Mathematics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.


PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan, Dist. Amravati



VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.)


Certificate


Department of Mathematics

This is to certify that, the group of students named

1. Akansha Kashinath Raut
2. Anuja Ajay Tayade
3. Chaitali Sanjay Dok

of B.Sc. II semester III, has undertaken and completed the project entitled *Application of Fermat Number* for the session 2021-22 as a part of Internal Assessment as per curriculum of Sant Gadge Baba Amravati University, Amravati of B.Sc. programme.


[Head]
Dept. of Mathematics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.


PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan. Dist. Amravati



VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.)


Certificate


Department of Mathematics

This is to certify that, the group of students named

1. Damini Vilasrao Dhage
2. Ritu Devnarayan Chaudhari
3. Vaishnavi Ravindra Gatule

of B.Sc. II semester III, has undertaken and completed the project entitled *Application of Chinese Remainder Theorem* for the session 2021-22 as a part of Internal Assessment as per curriculum of Sant Gadge Baba Amravati University, Amravati of B.Sc. programme.


[Head]
Dept. of Mathematics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.


PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan. Dist. Amravati



VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.)

Certificate

Department of Mathematics

This is to certify that, the group of students named

1. Rutik Tryambakrao Jawalkar
2. Sahil Vikas Raut
3. Vivekanand Anil Pawar

of B.Sc. II semester III, has undertaken and completed the project entitled *History of Number Theory* for the session 2021-22 as a part of Internal Assessment as per curriculum of Sant Gadge Baba Amravati University, Amravati of B.Sc. programme.

Head
Dept. of Mathematics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.

PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan, Dist. Amravati



VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.)

Certificate

Department of Mathematics

This is to certify that, the group of students named

1. Jay Shamrao Gawande
2. Dattatrya Onkar Giri
3. Durgesh Dhanjay Mendhe

of B.Sc. II semester III, has undertaken and completed the project entitled *Application of Congruence* for the session 2021-22 as a part of Internal Assessment as per curriculum of Sant Gadge Baba Amravati University, Amravati of B.Sc. programme.

Head
Dept. of Mathematics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.

PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan, Dist. Amravati



VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.)

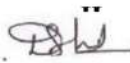
Certificate


Department of Mathematics

This is to certify that, the group of students named

1. Mayur Manish Tayade
2. Manish Kishor Tarhekar
3. Ritesh Motiram Ghoddeswar

of B.Sc. II semester III, has undertaken and completed the project entitled *Application of Number Theory* for the session 2021-22 as a part of Internal Assessment as per curriculum of Sant Gadge Baba Amravati University, Amravati of B.Sc. programme.


[Head]
Dept. of Mathematics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.


PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan, Dist. Amravati



VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.)

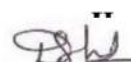
Certificate


Department of Mathematics

This is to certify that, the group of students named

1. Roshan Ashok Bharaskar
2. Shoeb Ahmad Noor
3. Talib Ramlani

of B.Sc. II semester III, has undertaken and completed the project entitled *Recent Developments in Number Theory* for the session 2021-22 as a part of Internal Assessment as per curriculum of Sant Gadge Baba Amravati University, Amravati of B.Sc. programme.


[Head]
Dept. of Mathematics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.


PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan, Dist. Amravati



VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.)

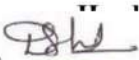
Certificate


Department of Mathematics

This is to certify that, the group of students named

1. Achal Ramdas Bijave
2. Sakshi Mahendra Dukare
3. Sharddha Vijay Raut

of B.Sc. II semester IV, has undertaken and completed the project entitled *Evolution of group theory* for the session 2021-22 as a part of Internal Assessment as per curriculum of Sant Gadge Baba Amravati University, Amravati of B.Sc. programme.


[Head]
Dept. of Mathematics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.


PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan, Dist. Amravati



VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.)


Certificate


Department of Mathematics

This is to certify that, the group of students named

1. Adiba Saman Anees Khan .
2. Gayatri Avinash Solanke
3. Kiran Arun Kambale

of B.Sc. II semester IV, has undertaken and completed the project entitled *Role of group theory in IR and raman spectroscopy* for the session 2021-22 as a part of Internal Assessment as per curriculum of Sant Gadge Baba Amravati University, Amravati of B.Sc. programme.


[Head]
Dept. of Mathematics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.


PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan, Dist. Amravati



VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.)


Certificate


Department of Mathematics

This is to certify that, the group of students named

1. Kalyani Narhari Wakode
2. Rutuja Sudhirrao Gulhane
3. Sakshi Subhashrao Herode

of B.Sc. II semester IV, has undertaken and completed the project entitled *Application of group theory in real life* for the session 2021-22 as a part of Internal Assessment as per curriculum of Sant Gadge Baba Amravati University, Amravati of B.Sc. programme.


Head
Dept. of Mathematics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.


PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan. Dist. Amravati



VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.)

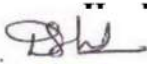
Certificate


Department of Mathematics

This is to certify that, the group of students named

1. Sakshi Vilas Dhawale
2. Sayali Pramod Gawande
3. Vaishnavi Gajanan Deulkar

of B.Sc. II semester IV, has undertaken and completed the project entitled *Role of group theory in computer science* for the session 2021-22 as a part of Internal Assessment as per curriculum of Sant Gadge Baba Amravati University, Amravati of B.Sc. programme.


Head
Dept. of Mathematics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.


PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan. Dist. Amravati



VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.)

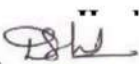
Certificate


Department of Mathematics

This is to certify that, the group of students named

1. Akansha Kashinath Raut
2. Anuja Ajay Tayade
3. Chaitali Sanjay Dok

of B.Sc. II semester IV, has undertaken and completed the project entitled *Applications of ring theory* for the session 2021-22 as a part of Internal Assessment as per curriculum of Sant Gadge Baba Amravati University, Amravati of B.Sc. programme.


[Head]
Dept. of Mathematics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.


PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan. Dist. Amravati



VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.)


Certificate


Department of Mathematics

This is to certify that, the group of students named

1. Damini Vilasrao Dhage
2. Ritu Devnarayan Chaudhari
3. Vaishnavi Ravindra Gatule

of B.Sc. II semester IV, has undertaken and completed the project entitled *Involvement of group theory in chemistry, Physics and biology* for the session 2021-22 as a part of Internal Assessment as per curriculum of Sant Gadge Baba Amravati University, Amravati of B.Sc. programme.


[Head]
Dept. of Mathematics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.


PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan. Dist. Amravati



VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.)

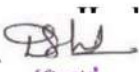
Certificate


Department of Mathematics

This is to certify that, the group of students named

1. Rutik Tryambakrao Jawalkar
2. Sahil Vikas Raut
3. Vivekanand Anil Pawar

of B.Sc. II semester IV, has undertaken and completed the project entitled *Types of functions with examples* for the session 2021-22 as a part of Internal Assessment as per curriculum of Sant Gadge Baba Amravati University, Amravati of B.Sc. programme.


[Head]
Dept. of Mathematics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.


PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan, Dist. Amravati



VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.)

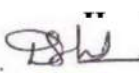
Certificate


Department of Mathematics

This is to certify that, the group of students named

1. Jay Shamrao Gawande
2. Dattatrya Onkar Giri
3. Durgesh Dhanjay Mendhe

of B.Sc. II semester IV, has undertaken and completed the project entitled *Softwares for group theory* for the session 2021-22 as a part of Internal Assessment as per curriculum of Sant Gadge Baba Amravati University, Amravati of B.Sc. programme.


[Head]
Dept. of Mathematics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.


PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan, Dist. Amravati



VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.)

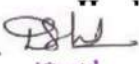
Certificate


Department of Mathematics

This is to certify that, the group of students named

1. Mayur Manish Tayade
2. Manish Kishor Tarhekar
3. Ritesh Motiram Ghoddeswar

of B.Sc. II semester IV, has undertaken and completed the project entitled *Work of Mathematicians in group theory* for the session 2021-22 as a part of Internal Assessment as per curriculum of Sant Gadge Baba Amravati University, Amravati of B.Sc. programme.


[Head]
Dept. of Mathematics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.


PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan, Dist. Amravati



VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.)

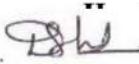
Certificate


Department of Mathematics

This is to certify that, the group of students named

1. Roshan Ashok Bharaskar
2. Shoeb Ahmad Noor
3. Talib Ramlani

of B.Sc. II semester IV, has undertaken and completed the project entitled *Applications of group theory in computer science* for the session 2021-22 as a part of Internal Assessment as per curriculum of Sant Gadge Baba Amravati University, Amravati of B.Sc. programme.


[Head]
Dept. of Mathematics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.


PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan, Dist. Amravati



VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.)


Certificate


Department of Mathematics

This is to certify that, the group of students named

1. Arpita Anilrao Bhoyar
2. Sakshi Devidas Ambulkar
3. Moh. Anwar Mohd Asrar

of B.Sc. III semester VI, has undertaken and completed the project entitled *History of Graph Theory* for the session 2021-22 as a part of Internal Assessment as per curriculum of Sant Gadge Baba Amravati University, Amravati of B.Sc. programme.


Head
Dept. of Mathematics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.


PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khaa, Dist. Amravati



VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.)


Certificate


Department of Mathematics

This is to certify that, the group of students named

1. Leena Shankar Gondane
2. Swara Narendra Deshmukh
3. VaishnaV Santosh Raut

of B.Sc. III semester VI, has undertaken and completed the project entitled *Applications of Graph Theory in Molecular Biology* for the session 2021-22 as a part of Internal Assessment as per curriculum of Sant Gadge Baba Amravati University, Amravati of B.Sc. programme.


Head
Dept. of Mathematics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.


PRINCIPAL
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Nandgaon Khan, Dist. Amravati



VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.)


Certificate


Department of Mathematics

This is to certify that, the group of students named

1. Sakshi Kiranrao Gulhane
2. Lokesh Dipak Marotkar
3. Sneha Gajanan Sagale

of B.Sc. III semester VI, has undertaken and completed the project entitled *Applications of Graph Theory* for the session 2021-22 as a part of Internal Assessment as per curriculum of Sant Gadge Baba Amravati University, Amravati of B.Sc. programme.


Head
Dept. of Mathematics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.


PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan. Dist. Amravati



VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.)


Certificate


Department of Mathematics

This is to certify that, the group of students named

1. Namrata Mulchand Raut
2. Abhijeet Gajanan Rithe
3. Tejaswini Shrikrushna Gadhekar

of B.Sc. III semester VI, has undertaken and completed the project entitled *Application of Graph Theory in Security* for the session 2021-22 as a part of Internal Assessment as per curriculum of Sant Gadge Baba Amravati University, Amravati of B.Sc. programme.


Head
Dept. of Mathematics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.


PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan. Dist. Amravati



VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.)

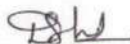
Certificate


Department of Mathematics

This is to certify that, the group of students named

1. Harshad Homdev Ghate
2. Vaibhav Shrikrushna Gulhane
3. Vrushbh Vshnu Madavi
4. Hitesh Vjay Raghute

of B.Sc. III semester VI, has undertaken and completed the project entitled *Applications of Graph Theory in Chemistry* for the session 2021-22 as a part of Internal Assessment as per curriculum of Sant Gadge Baba Amravati University, Amravati of B.Sc. programme.


Head
Dept. of Mathematics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.


PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan, Dist. Amravati



VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.)


Certificate


Department of Mathematics

This is to certify that, the group of students named

1. Nandini RaVndra Kanse
2. Puja Subhashrao Dukare
3. Rutuja Mangesh Gulhane

of B.Sc. III semester VI, has undertaken and completed the project entitled *Applications of Graph Theory in Computer Science* for the session 2021-22 as a part of Internal Assessment as per curriculum of Sant Gadge Baba Amravati University, Amravati of B.Sc. programme.


Head
Dept. of Mathematics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.


PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan, Dist. Amravati



VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.)

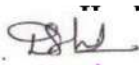
Certificate


Department of Mathematics

This is to certify that, the group of students named

1. Payal Vyankatesh Bhasme
2. Shweta Pandurang Charpe
3. Shubham Ramesrao Gulhane

of B.Sc. III semester VI, has undertaken and completed the project entitled *Applications of Graph Theory in Various* field for the session 2021-22 as a part of Internal Assessment as per curriculum of Sant Gadge Baba Amravati University, Amravati of B.Sc. programme.


Head
Dept. of Mathematics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.


PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan, Dist. Amravati



VINAYAK VIDNYAN MAHAVIDYALAYA, NANDGAON (Kh.)

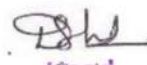
Certificate


Department of Mathematics

This is to certify that, the group of students named

1. Sneha Rajkumar Vanjari
2. Rutuja Bharat Devtale
3. Pratik Nandkishor Kaje
4. Om Pramodrao Ingole

of B.Sc. III semester VI, has undertaken and completed the project entitled *Any two softwares used to represent Graph* for the session 2021-22 as a part of Internal Assessment as per curriculum of Sant Gadge Baba Amravati University, Amravati of B.Sc. programme.


Head
Dept. of Mathematics
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.


PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan, Dist. Amravati



**VINAYAK VIDNYAN MAHAVIDYALAYA,
NANDGAON (Kh.)**

Certificate

This is to certify that, the group of students named
**Abhishek Prakash Chauragade, Achal Arun Bansod, Achal Gajanan
Masram, Achal Rajesh Satre, Amrapali Bhashkar Wahane**
of B.Sc. III semester VI, has undertaken and completed the project entitled
'DNA extraction from mango leaf and onion by crude method' for the
session 2021-22 as a part of curriculum by Sant Gadge Baba Amravati
University, Amravati as a part of B.Sc. programme.

P. Mahalle
Head
Head
Dept. of Zoology
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.

Abhis
Principal
PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan, Dist. Amravati



**VINAYAK VIDNYAN MAHAVIDYALAYA,
NANDGAON (Kh.)**

Certificate

This is to certify that, the group of students named
**Ankita Shankarrao Mandavgade, Anushka Sureshrao Izate, Asmita Gopal
Sable, Bhagyashri Jaykumar Shelke, Dimpal Vijayrao Jagtap**
of B.Sc. III semester VI, has undertaken and completed the project entitled
'DNA extraction from papaya leaf and goat liver by crude method' for the
session 2021-22 as a part of curriculum by Sant Gadge Baba Amravati
University, Amravati as a part of B.Sc. programme.

P. Mahalle
Head
Head
Dept. of Zoology
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.

P. Mahalle
Principal
PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan, Dist. Amravati



**VINAYAK VIDNYAN MAHAVIDYALAYA,
NANDGAON (Kh.)**

Certificate

This is to certify that, the group of students named
**Divya Murlidhar Kakade, Gauri Uddhavrao Dhawas, Harshad
Gunvantrao Dofe, Jayashree Rajendra Tankar, Kajal Vitthalrao Shinde**
of B.Sc. III semester VI, has undertaken and completed the project entitled
'Collection of some important polypeptide sequence from NCBI data' for
the session 2021-22 as a part of curriculum by Sant Gadge Baba Amravati
University, Amravati as a part of B.Sc. programme.

B. Mahalle
Head
**Head
Dept. of Zoology**
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.

B. Shis
Principal
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan, Dist. Amravati



**VINAYAK VIDNYAN MAHAVIDYALAYA,
NANDGAON (Kh.)**

Certificate

This is to certify that, the group of students named
**Kunal Rajendra Bitale, Manisha Madhukar Pongle, Pallavi Prabhakar
Gulhane, Pallavi Ramrao Tangale, Pooja Wasudev More**
of B.Sc. III semester VI, has undertaken and completed the project entitled
'Collection of some important Nucleotide sequence from NCBI data' for the
session 2021-22 as a part of curriculum by Sant Gadge Baba Amravati
University, Amravati as a part of B.Sc. programme.

P. Mahalle
Head
Head
Dept. of Zoology
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.

[Signature]
Principal
PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Kha. Dist. Amravati



VINAYAK VIDNYAN MAHAVIDYALAYA,
NANDGAON (Kh.)

Certificate

This is to certify that, the group of students named
**Prajwalsing Pratapsing Deshmukh, Pranali Gajananrao Agashe, Pratiksha
Vilasrao Shahade, Priyanka Pramodrao Gulhane, Punam Shalikram
Banarase**
of B.Sc. III semester VI, has undertaken and completed the project entitled '**List
and its application of some bioinformatics softwere**' for the session 2021-22
as a part of curriculum by Sant Gadge Baba Amravati University, Amravati as a
part of B.Sc. programme.

P. Mahalle
Head,
Head
Dept. of Zoology
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.

P. Bhis
Principal
PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan, Dist. Amravati



**VINAYAK VIDNYAN MAHAVIDYALAYA,
NANDGAON (Kh.)**

Certificate

This is to certify that, the group of students named
**Rajani Ashokrao Chavhan, Rupali Vasudeo Mahato, Rushali Ganesh
Vairagade, Rutuja Subhashrao Zanzat, Sachin Vilasrao Bhagat**
of B.Sc. III semester VI, has undertaken and completed the project entitled
'Phylogeny of insulin of some selected species' for the session 2021-22 as a
part of curriculum by Sant Gadge Baba Amravati University, Amravati as a part
of B.Sc. programme.

P. Mahalle
Head
Head
Dept. of Zoology
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.

[Signature]
Principal
PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Kha. Dist. Amravati



**VINAYAK VIDNYAN MAHAVIDYALAYA,
NANDGAON (Kh.)**

Certificate

This is to certify that, the group of students named
**Sanika Mohan Darwhatkar, Sarthak Uttamrao Raut, Saurabh Ramesh
Kalekar, Shamal Divakar Ingole, Shruti Sanjay Ravekar**
of B.Sc. III semester VI, has undertaken and completed the project entitled
'**Phylogeny of some selected species**' for the session 2021-22 as a part of
curriculum by Sant Gadge Baba Amravati University, Amravati as a part of
B.Sc. programme.

P. Mahalle
Head
Head
Dept. of Zoology
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.

[Signature]
Principal
PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Kha. Dist. Amravati



**VINAYAK VIDNYAN MAHAVIDYALAYA,
NANDGAON (Kh.)**

Certificate

This is to certify that, the group of students named
**Shubham Bandu Sanap, Snehal Dattatray Dhurte, Sumit Madhukar
Jadhao, Tejaswini Balu Deotale, Vaibhav Dipakrao Dhande, Vaishnavi
Gajananrao Gawner, Vaishnavi Sanjay Khope**
of B.Sc. III semester VI, has undertaken and completed the project entitled '**RT-
PCR technique and applications**' for the session 2021-22 as a part of
curriculum by Sant Gadge Baba Amravati University, Amravati as a part of
B.Sc. programme.

Pomahalle
Head

**Head
Dept. of Zoology**
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.

Blis
Principal

Principal
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan, Dist. Amravati



FIELD VISITS

PHYSICS & ZOOLOGY-BOTANY



To
The Principal
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khandeshwar, Dist.: Amravati

Subject: Permission to organize one day educational tour to “**Raman Science Centre**” Nagpur for the students of B.Sc. I

Respected Madam.

As per the above-cited subject. Department of Physics, Vinayak Vidnyan Mahavidyalaya. Nandgaon Khandeshwar. Dist. Amravati is planning to organize one day educational tour to “**Raman Science Centre**” Nagpur for the students of B.Sc. I on 27th November 2021.

Please permit us to organize the above-mentioned educational tour.


List of Students is attached with this letter.

Thanking you.

Date: **15 Nov. 2021**

Place: **Nandgaon Khandeshwar Yours Sincerely**

*Permission granted
to
organize educational tour*
S. M. S.
PRINCIPAL
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan. Dist. Amravati


Dr. Anant S. Wadtkar
Assistant Prof. and Head
Department of Physics



VINAYAK VIDNYAN MAHAVIDYALAYA

Nandgaon Khandeshwar, Dist. Amravati

(An Institute run by Pravin Khodke Memorial Trust, Amravati)

Dr. Anant Wadatkar
Head
Mob. 96235 64711

Department of Physics

Dr. Alka A. Bhise
Principal
Mob. 98235 26341

NOTICE

Department of Physics

All the students of B.Sc. I of Physics (PCM, P.M.Cp. and P.E.Cp.) are hereby informed Department of Physics is going to organized one day educational tour to “Raman Science Centre” Nagpur on date 27th November 2021. Interest students register their name and tour Fees of Rs. 500 on or before 20th November 2021 to Dr. Prashant B. Kharat.

Date 15.11.2021

Dr. Anant S. Wadatkar
Assistant Professor and Head
Department of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon (Kh.), Dist. Amravati



VINAYAK VIDNYAN MAHAVIDYALAYA

Nandgaon Khandeshwar, Dist. Amravati

(An Institute run by Pravin Khodke Memorial Trust, Amravati)

Sau. Sulabha Sanjay Khodke

(MLA, Amravati)

President, PKM Trust, Amravati

College Code: 197 Ph. No. 07221-222245

Email: vvm197@sgbau.ac.in

Dr. Alka Anant Bhise

Principal

Mob. 98235 26341

Ref: PKMT/VVM/ 2021/05/ 20.11.21

Date: 20.11.2021

To,
Project Director,
Raman Science Center
Nagpur-440018

Subject: Regarding the educational tour at Raman Science Center, Nagpur.

Dear Sir/Madam,

Department of Physics, Vinayak Vidnyan Mahavidyalaya, Nandgaon Khandeshwar, Dist. Amravati has planned an educational tour at **Raman Science Center, Nagpur** on **Saturday, 27th November, 2021**. There will be **20 students and 3 teaching staff** arriving at your Center, so please allow our students and staff with necessary concession in the fees for the same.

Yours faithfully,

Dr. Alka Bhise

PRINCIPAL

Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khan, Dist. Amravati



VINAYAK VIDNYAN MAHAVIDYALAYA

Nandgaon Khandeshwar, Dist. Amravati
(An Institute run by Pravin Khodke Memorial Trust, Amravati)

Dr. Anant Wadtkar
Head
Mob. 96235 64711

Department of Physics

Dr. Alka A. Bhise
Principal
Mob. 98235 26341

Educational Tour schedule

Department of Physics, Vinayak Vidnyan Mahavidyalaya, Nandgaon Khandeshwar has organized one day educational tour for BSC 1st year students at Raman Science Centre, Nagpur on 27th November 2021. there where 20 students and 23 teaching staff the schedule of the tour is tabulated as follows.

Time	Event
7:30 AM	Departed from College (VVM, Nandgaon Kh.)
12:30 PM	Reached Raman Science Centre, Nagpur
01 :00 pm to 01 :20	Planetarium Show
01 :30 pm to 01:20	Science on a Sphere Show
02: 00 pm to 02:20	3-D Science Show
02: 30 pm to 02:50	Fun Science Gallery
03:00 pm to 03:30	Lunch
03:30 pm to 04:00	Inventions Gallery
04:00 pm to 04:50	Water: The Elixir of life Gallery
5:30 PM	Departed from Raman Science Centre for College
9:30 PM	Arrived at College (VVM, Nandgaon Kh.)

Dr. Anant S. Wadtkar
Assistant Professor and Head
Department of Physics
Vinayak Vidnyan Mahavidyalaya
Nandgaon (Kh.), Dist. Amravati

Vinayak Vidnyan Mahavidyalaya, Nandgaon Khandeshwar
Department of Physics
Educational Tour at Raman Science Centre, Nagpur

List of Students

Sr.No.	Name of Students	Mobile No.	Class	Fees	Remark
1.	Chetan Chandan Shinde	8265074287	B.Sc. I	500	Paid
2.	Chetan Ganeshrao Vaidya	8806680775	B.Sc. I	500	Paid
3.	Komal Rajesh Narode	8767123060	B.Sc. I	500	Paid
4.	Pratik Rajendra Shendre	9021356371	B.Sc. I	500	Paid
5.	Sakshi Hemantrao Sonone	7350958117	B.Sc. I	500	Paid
6.	Sameer Damodhar Dhomane	9657435955	B.Sc. I	500	Paid
7.	Shaikh Tahir Shaikh Ameen .	9175256250	B.Sc. I	500	Paid
8.	Shivam Shyam Bhusare	7498983428	B.Sc. I	500	Paid
9.	Shyam Niranjana Kanse	7709617712	B.Sc. I	500	Paid
10.	Vaishnavi Ratnakar Belsare	9158491418	B.Sc. I	500	Paid
11.	Aachal Rajesh Tobre	7498743312	B.Sc. I	500	Paid
12.	Prajwal Govindrao Kakade	7218725501	B.Sc. I	500	Paid
13.	Sachin Kishor Raut	9529232567	B.Sc. I	500	Paid
14.	Yash Vinod Ravekar	9823682393	B.Sc. I	500	Paid
15.	Ajinkya Sureshrao Daroi	9307120056	B.Sc. I	500	Paid
16.	Aman Sanjeet Tadam	7030060212	B.Sc. I	500	Paid
17.	Buddhshanti Pramod Sukhdeve	8551099490	B.Sc. I	500	Paid
18.	Pratik Jayvant Gadekar	7841004256	B.Sc. I	500	Paid
19.	Prerna Sanjay Deshmukh	8999950130	B.Sc. I	500	Paid
20.	Shantanu Avinash Solanke	9370910662	B.Sc. I	500	Paid

Head
Department of Physics

Principal
Vinayak Vidnyan Mahavidyalaya
Nandgaon Khandeshwar,

Vinayak Vidnyan Mahavidyalaya, Nandgaon Kh. Department of Physics

Report of Educational Tour

Title: Educational Tour at Raman Science Centre, Nagpur

Date: 27th November 2021

Educational tour objectives, students need to apply skills, values and general knowledge in new settings. It is a great and actual way to learn specific subjects beyond textbooks and lectures. Study tours can be a great way to learn new things about different cultures and be aware of certain differences between them, as well as similarities. It makes students see certain issues in a new perception and some study tours even allow students to immerse themselves in a different community. In return, they are exposed to cultures of different socio-economic statuses which help them build consideration and better thoughtful for these cultures.

Science is a part of our routine life and is universal. There is a necessity to have clear vision and determination to pursue it and Raman Science Centre is a place which helps students in giving that vision and determination. This tour not only enhanced their quality to know more in depth, but also provide proper guidance to sightsee more and come up with new ideas.

At this Raman Science Centre, students observed Spiral musical pipe and understood its functioning. They also observed Size-weight illusion, Kinetic sculpture, Pendulum wave, Invisible chair, Colour filters, Colour TV principle, Hyperbolic, Simple camera, Taller and easier balance, illusion mechanism, pattern recognition. Students also collected an information of Scientists and their Inventions. Students enjoyed the experiments placed in 3D show of Apollo and Planetarium the story "The Sun". Students also experienced learning and understood that science is really fun and full of knowledge.



Dr. Anant S. Wadtkar
Assistant Professor and Head
Department of Physics



Report on World Wetlands Day (Field Work)



Vinayak Vigyan Mahavidyalaya Nandgaon Khandeshwar, run by Pravin Khodke Memorial Trust, jointly celebrated World Wetlands Day on 2nd February 2022 in association with Zoology and Botany. On this occasion, bird watching was organized for the college students at Savner Lake near Nandgaon

Khandeshwar.

The Department of Zoology and Botany of the College always organizes various programs for environmental awareness. 35 students visited the lake at Savner on the occasion of World Wetlands Day on 2nd February. The aim of the program is about to create awareness among the students about the environment and the biodiversity of birds.

First of all, the organizer of this program Asst Prof. Dr. Swapnil Tinkhede explained the role of this program. Mr. Amit Sontakke, Wildlife Scholar, was the chief guide on this occasion. He gave important information to the students about different birds as well as their habitat, their way of life. At this time the students observed many migratory birds from different regions.

The students got to see a variety of migratory and local birds such as River tern, Painted Stock, Black Head Ibis, Gray Heron, Black Wing Stealth at the lake. On this occasion, IQAC coordinator of the college Asst Prof.. Dr. Suchita Khodke was the chief guest. She also guided the students about the environment and its depletion.





Head of Zoology Prof. Dr. Pratibha Mahalle also guided the students on the importance of birds in the environment. A large number of students were present at this time. At the end of the program, Prof. Dr. Gajendrasingh Pachlore thanked the audience. For the success of the program, Prof. Dr. Swapnil

Tinkhede, Prof. Dr. Gajendrasingh Pachlore, Asst prof. Shilanand Hiwarale, Prof. Subodh Bansod worked tirelessly and the event passed with enthusiasm.

Pratibha Mahalle
Head
Dept. of Zoology
Vinayak Vidnyan Mahavidyalaya
Nandgaon Kh.



INTERNSHIP COMPLETION CERTIFICATES

B.Sc. III and B.Com. III





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Ref. No.

Date 07 JUL 2022

To,
The Principal,
Vinayak Vidnyan Mahavidyalaya,
Nandgaon Khandeshwar, Dist. Amravati.


Subject: Summer Internship Programme 2021-22

This is to certified that, following students of the class **B.Sc. Part III** with subject **Botany** from your institutes have completed a "Summer Internship" on "Biofertilizer" from 21st June to 6th July 2022.

During this internship, we had given enough exposure to theory as well as practical aspects of the Biofertilizer which will be proven helpful for their academic progress in future. All the students were **Curious, Hardworking, and Diligent** during this internship programme.

We wish them every success in their life and career. Looking forward for the same cooperation in future also.

List of students for Internship in 2021-2022			
Sr. No.	Name of Student	Class	College
1	Asmita Gopal Sable	B.Sc. III	Vinayak Vidnyan Mahavidyalaya, Nandgaon Kh. Dist-Amravati
2	Bhagyashri Jaykumar Shelke		
3	Divya Murlidhar Kakade		
4	Jayashree Rajendra Tankar		
5	Pallavi Prabhakar Gulhane		
6	Pratiksha Vilasrao Shahade		
7	Priyanka Pramodrao Gulhane		
8	Rajani Ashokrao Chavhan		
9	Rupali Vasudeo Mahato		
10	Sarthak Uttamrao Raut		

Sign

Special Biochem Pvt. Ltd.
Dr. Nisha S. Sonare
Managing Director
Director



18 JUL 2022

To,
The principal,
Vinayak Vidnyan Mahavidyalaya
Nandgaon Khandeshwar,
Dist. Amravati

Subject : Summer Internship Program 2021-22

This is to certify that, Following Student of your College Vinayak Vidnyan Mahavidyalaya, Nandgaon Khandeshwar affiliated to Sant Gadge Baba Amravati University, Amravati has completed an internship programme "Customer Relationship Management at our organization from 01 July 2022 to 15 July 2022.

During his internship period, we found him sincere, dedicated and enthusiastic, we wish him good luck for his future projects.

Sr. No	Name of Candidate	Class
1	Abhijeet Ramesh Suroshe	B.Com -III
2	Abhijit Pravin Mohture	B.Com -III
3	Adarsh Sanjay Lanjewar	B.Com -III
4	Aditya Prakashrao Hadke	B.Com -III
5	Arpit Sudhir Ganthale	B.Com -III
6	Ashish Ramesh Nagpure	B.Com -III
7	Ashvini Namdeo Marabde	B.Com -III
8	Dipali Manikrao Meshram	B.Com -III
9	Dipali Sanjay Shende	B.Com -III
10	Divya Rajeshrao Kene	B.Com -III
11	Gaurav Arunrao Shinde	B.Com -III
12	Gaurav Subhash Hambarde	B.Com -III
13	Prathmesh Vijay Raut	B.Com -III
14	Pratiksha Rajesh Ingole	B.Com -III
15	Vaishnavi Gajanan Marotkar	B.Com -III



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