Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com, M : 7384634726
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+ with PG in Chemistry)

No..... /V.M. Date : .....

From : Principal / Teacher-in-Charge & Secretary

Summary of list of students performed Project work/Field visit/Internship/Dissertation/Community Outreach Programme as per the requirment of the course curricula for partial fulfillment of their degree courses.

Sl No.	Subject/ Department with Course Code	Course	Semester (s)	No. of students undergone course on experimental learning through Project work/Field work/Internship
1.	Botany (DSE-4)	BSH	UG Sem-VI	09
2.	Chemistry (DSE-4)	BSH	UG Sem-VI	26
3.	Chemistry (MSCH-406)	MSCH	PG Sem-IV	08
4.	Economics (CC-14)	BSH, BAH	UG Sem-VI	06
5.	Geography (CC-11)	BAH, BSH	UG Sem-V	34
6.	Geography (SEC-I)	BAH, BSH	UG Sem-III	23
7.	Geography (CC-14)	BAH, BSH	UG Sem-VI	18
8.	History (SEC-I)	BAH	UG Sem-III	40
9.	Mass Communication and Journalism	BAH	UG Sem-VI	12
10.	Microbiology (CC-4)	BSH	UG Sem-II	12
11.	Political Science	BAH, BAP	UG Sem-III & V	30
12.	Zoology	BSP	UG Sem-I, III & V	38
13.	Zoology (DSE-3)	BSH	UH Sem-V, VI	34 (24 students have performed dual field work)
14.	Environmental Studies (AECC-1)	BAH, BAP, BSH, BSP	UG Sem-I	1065
	Total no of students participated in experimental learning through Field Study/Survey, Project work, Excursion, Dissertation or Community Outreach programme			**1355**

Principal
Vivekananda Mahavidyalaya
Burdwan

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com, M : 7384634726
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+ with PG in Chemistry)

No..... /V.M. Date : .....

From : Principal / Teacher-in-Charge & Secretary

TO WHOM IT MAY CONCERN

This is to certify that the following students of **Semester-I** (All BSH, BAH, BSP, BAP courses) have studied course on experimental learning through Project work/Field work/~~Internship~~ on Environmental Studies (Course Code: AECC-1) through duly submission of dissertation during the **session 2022-2023**. A list of total number of students took part in the course (Program Code wise) is given in the following table:

Program Code	**Course Code and Semester**	**Number of Students**
BAH in Bengali Honours	AECC-1, Sem-I	66
BSH in Botany Honours	AECC-1, Sem-I	13
BSH in Chemistry Honours	AECC-1, Sem-I	11
BAH/BSH in Economics Honours	AECC-1, Sem-I	02
BAH in English Honours	AECC-1, Sem-I	77
BAH/BSH in Geography Honours	AECC-1, Sem-I	41
BAH in History Honours	AECC-1, Sem-I	50
BAH in Mass Communication and Journalism Honours	AECC-1, Sem-I	22
BSH in Mathematics Honours	AECC-1, Sem-I	33
BSH in Microbiology Honours	AECC-1, Sem-I	26
BAH in Philosophy Honours	AECC-1, Sem-I	23
BSH in Physics Honours	AECC-1, Sem-I	12
BAH in Political Science Honours	AECC-1, Sem-I	57
BAH in Sanskrit Honours	AECC-1, Sem-I	46
BSH in Statistics Honours	AECC-1, Sem-I	06
BSH in Zoology Honours	AECC-1, Sem-I	22
BSP in Science General	AECC-1, Sem-I	36
BAP in Arts General	AECC-1, Sem-I	521
		Total =1065

Principal
Vivekananda Mahavidyalaya
Burdwan

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com, M : 7384634726
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+ with PG in Chemistry)

No..... /V.M. Date : .....

From : Principal / Teacher-in-Charge & Secretary

TO WHOM IT MAY CONCERN

This is to certify that the following students of Botany Honours **Semester-VI** (BSH Course) have studied a course on experimental learning through Project work/Field work/~~Internship~~ on Horticulture and Management (Course Code: DSE-4) through field visit followed by duly submission of dissertation during the **session 2022-2023**. A list of total number of students took part in the course (Program Code wise) is given in the following table:

Sl No	Name of the Student	Course Code and Semester	University Roll No.
2.	ANINDITA ROY	DSE-4, Sem-VI	200312200010
3.	KUSHAL PANJA	DSE-4, Sem-VI	200312200046
4.	MAHESWAR KISKU	DSE-4, Sem-VI	200312200048
5.	MRITTIKA CHOWDHURY	DSE-4, Sem-VI	200312200058
6.	POULAMI DUTTA	DSE-4, Sem-VI	200312200069
1.	SHREYA KAR	DSE-4, Sem-VI	200312200120
7.	TAMAGNA BANERJEE	DSE-4, Sem-VI	200312200161
8.	TRIPTI GANGULY	DSE-4, Sem-VI	200312200166
9.	USHASHREE MONDAL	DSE-4, Sem-VI	200312200169

Principal
Vivekananda Mahavidyalaya
Burdwan

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com, M : 7384634726
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+ with PG in Chemistry)

No..... /V.M. Date : .....

From : Principal / Teacher-in-Charge & Secretary

TO WHOM IT MAY CONCERN

This is to certify that the following students of **Chemistry Honours Semester-VI** (BSH Course) have performed internal Project work/~~Field work~~/~~Internship~~ through duly submission of dissertation on specified topics followed by powerpoint presentation on that topic (Course Code: DSE-4) during the **session 2022-2023**. A list of students took part in the course (Program Code wise) is given in the following table:

Sl. No	Student Name	Course Code and Semester	University Roll No
1	AMIYA CHOWDHURY	DSE-4, Sem-VI	200312200008
2	ANISH SEN	DSE-4, Sem-VI	200312200011
3	ANKAN SAHA	DSE-4, Sem-VI	200312200012
4	DEBNIL MONDAL	DSE-4, Sem-VI	200312200030
5	GOPESWAR DAS	DSE-4, Sem-VI	200312200037
6	MD WAREZ MALLICK	DSE-4, Sem-VI	200312200053
7	NURUL ISLAM ANSARY	DSE-4, Sem-VI	200312200064
8	PRITY CHATTERJEE	DSE-4, Sem-VI	200312200074
9	PUJA MONDAL	DSE-4, Sem-VI	200312200076
10	RITTIK DUTTA	DSE-4, Sem-VI	200312200085
11	ROHAN ROY	DSE-4, Sem-VI	200312200086
12	RUPARNA DEY	DSE-4, Sem-VI	200312200090
13	SAMARPITA MITRA	DSE-4, Sem-VI	200312200098
14	SANTANU GHOSH MONDAL	DSE-4, Sem-VI	200312200104
15	SANTANU KHAN	DSE-4, Sem-VI	200312200105
16	SHANAZ MOLLA	DSE-4, Sem-VI	200312200113
17	SHIBAM DAS	DSE-4, Sem-VI	200312200115
18	SHOVAN BARUI	DSE-4, Sem-VI	200312200117
19	SOUMEN PAL	DSE-4, Sem-VI	200312200131
20	SOYETA SAHA	DSE-4, Sem-VI	200312200140
21	SUTANU MONDAL	DSE-4, Sem-VI	200312200155
22	SUTONU HALDAR	DSE-4, Sem-VI	200312200156
23	SWAPNARAJ GOSWAMI	DSE-4, Sem-VI	200312200159
24	SOURAV PAL	DSE-4, Sem-VI	200312000080
25	SUCHAYAN PAL	DSE-4, Sem-VI	200312000089
26	SUMANTA BATABYAL	DSE-4, Sem-VI	200312000093

Principal
Vivekananda Mahavidyalaya
Burdwan

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com, M : 7384634726
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+ with PG in Chemistry)

No..... /V.M. Date : .....

From : Principal / Teacher-in-Charge & Secretary

TO WHOM IT MAY CONCERN

This is to certify that the following **PG Chemistry** students of **Semester-IV** (MSCH Course) have prepared Term paper as per the requirment of the course curricula for partial fulfillment of their degree course through duly submission of dissertation on specified topics followed by powerpoint presentation on that topic (Course Code: MSCH-406) during the course **session 2022-2023**. A list of students took part in the course is given in the following table:

Sl. No	Student Name	Course Code and Semester	University Roll No
1	ARPITA MONDAL	MSCH-406, PG Sem-IV	BUR/CH/2021/078
2	BIPASA KUNDU	MSCH-406, PG Sem-IV	BUR/CH/2021/079
3	ESIKA SANTRA	MSCH-406, PG Sem-IV	BUR/CH/2021/080
4	MONALISHA DWARI	MSCH-406, PG Sem-IV	BUR/CH/2021/082
5	RISHOV MONDAL	MSCH-406, PG Sem-IV	BUR/CH/2021/083
6	SANCHITA MONDAL	MSCH-406, PG Sem-IV	BUR/CH/2021/085
7	SONALI GOUR	MSCH-406, PG Sem-IV	BUR/CH/2021/087
8	SURAJIT MONDAL	MSCH-406, PG Sem-IV	BUR/CH/2021/088

Principal
Vivekananda Mahavidyalaya
Burdwan

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com, M : 7384634726
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+ with PG in Chemistry)

No..... /V.M. Date : .....

From : Principal / Teacher-in-Charge & Secretary

TO WHOM IT MAY CONCERN

This is to certify that the following students of **Economics Honours Semester-VI** (BAH & BSH Course) have studied course on experimental learning through Project work/Field Work/~~Internship~~ through Field survey followed by duly submission of dissertation during the **session 2022-2023**. A list of total number of students took part in the course (program code & Course code) is given in the following table:

Sl. No	Student Name	Course Code and Semester	University Roll No
1	SAHIL HALDER	BAH, CC-14, Sem-VI	200112200237
2	GAYTRI SHARMA	BSH, CC-14, Sem-VI	200312200035
3	SABYASACHI MONDAL	BSH, CC-14, Sem-VI	200312200095
4	SK MUNTAZIR	BSH, CC-14, Sem-VI	200312200092
5	SK INJAMUL HAQUE	BSH, CC-14, Sem-VI	200312200124
6	SWAPNANIL DASGUPTA	BSH, CC-14, Sem-VI	200312200158

Principal
Vivekananda Mahavidyalaya
Burdwan

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com, M : 7384634726
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+ with PG in Chemistry)

No..... /V.M. Date : .....

From : Principal / Teacher-in-Charge & Secretary

TO WHOM IT MAY CONCERN

This is to certify that the following students of **Mass Communication and Journalism Honours, Semester-VI** (BA Course) have studied a course on experimental learning through Project work/Field work/~~Internship~~ through duly submission of dissertation on specified topics (Course Code: DSE-4) during the **session 2022-2023**. A list of total number of students took part in the course (Program Code wise) is given in the following table:

Sl. No	Student Name	Course Code and Semester	University Roll No
1	ANTARA KARAK	DSE-4, Sem-VI	200112200022
2	ANWESHA DEY	DSE-4, Sem-VI	200112200028
3	ARPITA DAS	DSE-4, Sem-VI	200112200035
4	DEBASMITA MONDAL	DSE-4, Sem-VI	200112200072
5	ISHITA DUTTA	DSE-4, Sem-VI	200112400065
6	ISHIKA KONAR	DSE-4, Sem-VI	200112200096
7	MEGHA BHAGKAT	DSE-4, Sem-VI	200112200131
8	ROHAN KARMAKAR	DSE-4, Sem-VI	200112200221
9	SANCHITA CHATTERJEE	DSE-4, Sem-VI	200112200246
10	SHREYASHI JASH	DSE-4, Sem-VI	200112200277
11	SNEHA SAMANTA	DSE-4, Sem-VI	200112200287
12	SAUBANTIKA BANERJEE	DSE-4, Sem-VI	200112200297

Principal
Vivekananda Mahavidyalaya
Burdwan

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com, M : 7384634726
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+ with PG in Chemistry)

No..... /V.M. Date : .....

From : Principal / Teacher-in-Charge & Secretary

TO WHOM IT MAY CONCERN

This is to certify that the following students of **Microbiology Honours, Semester-II** (BSH Course) have studied a course on experimental learning through ~~Project work~~/Field work/~~Internship~~ on Education Tour and Laboratory Visit (Course Code: CC-4) followed by duly submission of field report during the **session 2022-2023**. A list of total number of students took part in the course (Program Code wise) is given in the following table:

Sl. No	Student Name	Course Code and Semester	University Roll No
1	DEBJIT KUNDU	BSH, CC-4, Sem-II	220312200037
2	DIYASHA KARMAKAR	BSH, CC-4, Sem-II	220312200041
3	KOUSTAV THAKUR	BSH, CC-4, Sem-II	220312200051
4	KOYENA SINHA	BSH, CC-4, Sem-II	220312200052
5	KUHELI PARAMANICK	BSH, CC-4, Sem-II	220312200053
6	KUSHAL MALLICK	BSH, CC-4, Sem-II	220312200055
7	LIPSA GUIN	BSH, CC-4, Sem-II	220312200056
8	MOLLA NIYAJ AHAMMED	BSH, CC-4, Sem-II	220312200061
9	SABNAM SULTANA	BSH, CC-4, Sem-II	220312200088
10	SUDIP MONDAL	BSH, CC-4, Sem-II	220312200121
11	TUNDRA CHAKRABORTY	BSH, CC-4, Sem-II	220312200136
12	ZARIN YASMEEN	BSH, CC-4, Sem-II	220312200137

Principal
Vivekananda Mahavidyalaya
Burdwan

THE UNIVERSITY OF BURDWAN

LOCAL FIELD TRIP TO CROP RESEARCH FARM AND BURDWAN SCIENCE CENTRE

COLLEGE NAME: VIVEKANANDA MAHAVIDYALAYA

UNIV. REG. NO.: 202001015334

UNIV. ROLL NO.: 200312200169

SUBJECT: BOTANY HONOURS SEM VI

PAPER: DSE-4

To,

The Principal

Vivekananda Mahavidyalaya

Burdwan

Respected Sir,

I would like to inform you that Department of Botany of your institution is going to organise a local field trip at crop research farm, The University of Burdwan at golapbag campus on 23/06/2023 under the guidance of Dr. Sangita Bhattacharya.

I am seeking for your permission on this ground. Thanking you.

Yours sincerely

Sumita Mondal

Sumita Mondal

H.O.D

Department of Botany

22.06.23

Allow

22/6/23

Head
Dept. of Botany
Vivekananda Mahavidyalaya
Simla(R), Purba Bardhaman-713103

Principal
Vivekananda Mahavidyalaya
Burdwan

List of candidates for local excursion at Crop Research Farm and Burdwan Science		
Sl. No.	Roll No	Name
1	200312200010	ANINDITA ROY
2	200312200046	KUSHAL PANJA
3	200312200048	MAHESWAR KISKU
4	200312200058	MRITTIKA CHOWDHURY
5	200312200069	POULAMI DUTTA
6	200312200120	SHREYA KAR
7	200312200161	TAMAGHNA BANERJEE
8	200312200166	TRIPTI GANGULY
9	200312200169	USHASHREE MONDAL

CERTIFICATE

This is to certify that Roll No. 200312200169 B. Sc 6th Sem student in Botany department of Vivekananda Mahavidyalaya, Burdwan. She has attended tour visit at Crop Research Farm and Burdwan Science Centre, Burdwan on 23/06/2023 in connection with Botany practical paper DSE4 for horticulture mention in their syllabus.

Head of the Department

Head
Dept. of Botany
Vivekananda Mahavidyalaya
Sripalli, Purba Bardhaman-713103

Introduction → The term "Horticulture" is derived from latin term "Hortus" meaning garden and english term "culture" meaning raising of plants. Horticulture is the science and art of cultivating plants, including fruits, vegetables, ornamental plants, spices and condiments, medicinal plants, aromatics, herbs and nuts. It is a broad field that encompasses the production, marketing and use of horticultural crops. Horticulture is practiced around the world and there are many different subfields with in the discipline.

Some of the most common subfields of horticulture includes →

(i) Fruit and vegetable production ⇒ This subfield deals with the cultivation of fruits and vegetables, from planting to harvesting.

(ii) Floriculture → This subfield deals with the cultivation of flowers, both for cut flowers and for potted plants.

(iii) Ornamental horticulture → This subfield deals with the cultivation of plants for their ornamental value such as trees, shrubs and ground covers.

(iv) Nursery management ⇒ This subfield deals with the production and sale of nursery stock, such as trees, shrubs and perennials.

(v) Landscape horticulture ⇒ This subfield deals with the design, installation and maintainance of landscape, both private and public.

Horticulture is a diverse and growing field, and there are many opportunities for people who are interested in plants. There are many institutes for study about horticulture as in pomology, olericulture, floriculture, silviculture etc. One can earn a degree in horticulture from a college or university, or can complete a shorter certificate or diploma program. There are also many opportunities for on the job training in horticulture.

No matter what is your educational background, if you are interested in plants and have a passion for growing things

then, a career in horticulture could be a great fit for you.

Here are some of the scopes of a career in horticulture:

(i) You get to work with plants. If you love plants, then a career in horticulture is a great way to be surrounded by them all day long.

(ii) You get to be creative. There are many different ways to design and maintain gardens and landscape, so you can be as creative as you want.

(iii) You get to help people. Horticulture can be very rewarding career, as you can help people improve their quality of life by providing them with healthy food and beautiful surroundings.

(iv) The job market is growing. The demand for horticulture products and service is growing, so there are many job opportunities in this field.

If you are interested in a career in horticulture, I encourage you to learn more about the different subfields and educational paths available. There are many opportunities for people who are passionate about plants and have a desire to help others.

- <u>Post harvest technology</u> → Post harvest technology is the application of scientific and engineering principles to the handling storage, packaging, distribution and sale of agricultural produce after it has been harvested. The goal of post harvest technology is to reduce losses between harvest and consumption and to ensure that the quality of the produce is maintained throughout the supply chain.

There are many different post harvest technologies available, including →

(i) <u>Cooling</u> → Cooling is one of the most important post harvest technology, as it can help to slow down the rate of respiration and decay in produce.

(ii) <u>Curing</u> → Curing is process that helps to improve the quality of some fruits and vegetables such as tomatoes and bananas.

(13) Grading → Grading is the process of sorting produce according to size, quality and maturity.

(14) Packaging → Packaging helps to protect produce from damage and contamination.

(15) Storage → Storage is the process of keeping produce in a controlled environment, such as a refrigerator or cold storage facility.

(16) Transportation → Transportation is the process of moving produce from the farm to the consumer.

Post harvest technology is an important part of the food supply chain, and it plays a vital role in ensuring that fresh produce is available to consumers all year around.

Significance → Horticulture has become a necessary part in various aspects of human being and environment, such as →

① They not only adorn the table but also enrich health by providing a nutritive menu, also help in toning up the energy and vigour of people.

② Horticulture is the mother of several industries like canning, wine making, dehydration, essential oils, refrigeration, cashew nut, transport etc which provide work for many people.

③ From unit area of land, horticultural crops will give high income opportunities and fruit crops give very high amount of calories per acre.

④ Horticultural fruits and vegetables are the chief source of vitamins and minerals which help in achieving proper health and resistance to diseases.

⑤ Flowers, gardens and ornamental plants play an important role in mind refreshment of local people and also reduce air pollution.

Some of the benefits of post harvest technology include →

(i) Reduced losses → Post harvest technology can help to reduce losses of fresh produce between harvest and consumption. This can save farmers' money and help to ensure that there is a reliable supply of fresh produce for consumers.

(ii) Improved quality → Post harvest technology can help to improve the quality of fresh produce. This can make produce more appealing to consumers and help to increase its market value.

(iii) Extended self life → Post harvest technology can help to extend the shelf life of fresh produce. This can make it more convenient for consumers to purchase and use fresh produce.

(iv) Increased food security → It can help to increase food security by making it possible to store and transport fresh product over long distance. This can help to ensure that people have access to fresh produce even in areas where it is not grown locality.

Post harvest technology is a rapidly growing field and there are many new technologies being developed all the time. These new technologies have the potential to revolutionize the food supply chain and make it possible to provide fresh produce to consumers all over the world.

[5] Field trip at crop research farm and Burdwan Science Centre →

Our area of study was crop research farm of Burdwan University and Burdwan Science Centre. The programme was held on 23rd June, 2023 and conducted by our respected Sir Dr Prasanta Mallik and madam Sangita Barman. Burdwan is a city of West Bengal state situated in eastern India. The latitude of Burdwan is 23.232513 and longitude is 87.863419. The GPS coordinates of Burdwan is 23°16'59N 87.8615°E Burdwan, West Bengal, India geographic information.

Rice field

Paddy crops

Country	India
Latitude	23,232513
Longitude	87,863419
DMS lat	23°13' 590168" N
DMS long	87.8615° E
UTN easting	588.334.53
Category	Cities
Country code	IN
Zoom level	11

The climate of Bandhaman is tropical. The average annual temperature is 25.7°C / 78.3°F. In a year, the rainfall is 1474 mm / 58.0 inch. We found different gymnosperms and angiosperms belonging various families. Various flowers are found in science centre were roses gerbera, Catharanthus roseus, dragon fruits, fish tail palms etc. A large area of different rice varieties was also seen in the University.

List of plants observed during field visit ⇒

Rice field → Oryza sativa, commonly known as rice, is the plant species most commonly referred to in English as rice. It is the type of farmed rice whose cultivars are most common globally, and was 1st domesticated in the Yangtze River Basin in India; 13,500 to 8,200 years ago.

Order : Poales
Family : Poaceae
Genus : Oryza
Species : O. sativa

Oryza sativa belongs to the genus Oryza of the grass family Poaceae, with a genome consisting of 430 Mbp across 12 chromosomes. It is renowned for being easy to genetically modify and is a model

Catharanthus roseus

Rose

organism for the botany of cereals.

The species has an erect and start on slender stalk or stem that grows between 80-120 cm tall, it has a smooth surface. The leaf is lanceolate 15-30 cm long and grows from a ligule between 10-20 mm long.

* Catharanthus roseus → It is commonly known as, bright eyes, cape periwinkle, graveyard plant, Madagascan periwinkle, old maid, pink periwinkle, rose periwinkle. It is a perennial species of flowering plant in the family apocyanaceae. It is native and endemic to Madagascar but grown elsewhere as an ornamental and medicinal plant. It is a source of the drugs vincristine and vinblastine, used to treat cancer. It was formerly included in the genus vinca as Vinca rosea.

Order : Gentianales

Family : Apocynaceae

Genus : Catharanthus

Species : C. roseus

It is an evergreen sub shrub or herbaceous plant growing 1m tall. The leaves are oval to oblong, glossy green, hairless, with a pale midrib and a short petiole 1-1.8 cm long. They are arranged in opposite pairs. The flowers range from white with yellow or red centre to pink with a darker red centre with a basal tube and a corolla with five petal like lobes. The fruit is a pair of follicles 2-4 cm long.

* Rose → Rose is a woody perennial flowering plant with fragrance of the Genus Rosa, in the family Rosaceae. They form a group of plants that can be erect shrubs (white butterfly wings, pink pearl drift) or trailing with stems that are often armed with sharp prickles. Flowers vary in size and shape and are usually large and showy.

Rose garden

Gerbera

Leaves are alternate on the stem, are long pinnate with adnate stipules. The number of leaflets are 3, 5 or 7 in number and usually have a serrated margin. Sepals are 5 in number and connate in a persistent, globose, ovoid or flask shaped tube with concentrated mouth.

There are multiple superior ovaries in gynoecium. Fruits are achenes, varieties for different purposes in different colours are available such as Bedding varieties (yellow-golden giant, orange-super star, pink-first prize, red-happiness, white-fusion); Exhibition varieties (Avon gordon party); Scented varieties (blue moon, the doctor) and Commercial varieties (mercedes, sonia).

(8) Gerberas ⇒ Gerbera L is a genus of the asteraceae which contains 38 species. It is a herbaceous, hairy, perennial plant. Leaves are petiolate, simple and exstipulate. Inflorescence is capitulum. The flowers in the receptacle are florets. Two types of floret are present in the central region. They are tubular and bisexual. The ray florets are present towards the periphery. They are pistillate.

Flowers are sessile, pentamerous, irregular, incomplete and epigynous. Calyx is represented by ring of small hairs. Corolla is gamopetalous, 5 in number. They are yellow, orange, white, pink or red in colours. Androecium contains 5 stamens which are epipetalous. gynoecium is bicarpellary, syncarpous, inferior ovary containing with basal placentation.

The domesticated cultivars are mostly a result of a cross between Gerbera jamesonii and another South African species Gerbera viridifolia. The cross is known as Gerbera hybrida. Thousands of cultivars exist. They vary greatly in shape and size. Colours include white, red, yellow, orange and pink. The varieties are yellow: Talosa, red: Ruby red, Rose: Roselin, Pink: Pink elegance, cream: Fanida.

Hibiscus

Albizia lebbeck

⊛ Hibiscus → Hibiscus is a genus of flowering plants in the mallow family, Malvaceae. The genus is quite large, comprising several hundred species that are native to warm temperate, subtropical and tropical regions throughout the world. Member species are renowned showy flowers and these species are commonly known as 'Hibiscus' and less widely known as 'rose mallow'. Other names include hardy hibiscus, tropical hibiscus, rose of sharon etc.

Order : Malvales
Family : Malvaceae
Sub-family : Malvoideae
Genus : Hibiscus

The leaves are alternate, ovate to lanceolate, often with a toothed or lobed margin (dentate). The flowers are large, conspicuous, trumpet shaped, with five or more petals, colour from white to pink, red, blue, orange, peach, yellow or purple and from 4-18 cm broad.

Flower colour in certain species, such as Hibiscus mutabilis and Hibiscus tiliaceus, changes with age. The fruit is a dry five-lobed capsule, containing several seeds in each lobe, which are released when the capsule dehisces (splits open) at maturity. It is of red and white colours. It is an example of complete flowers.

⊛ Albizia lebbeck → Albizia lebbeck is a species of plant in the family Fabaceae, native to the Indian sub continent and Mayanmar. It is widely cultivated and naturalised in other tropical and sub-tropical regions, including Australia. Common names in English include siris, East Indian walnut, Broome raintree, lebbeck, lebbeck tree, fry wood, koko and women's tongue tree. The latter name is a play on the sound the seeds make as they rattle inside the pods.

Fruits of Albizia

Nelumbo nucifera

Order : Fabales
Family : Fabaceae
Sub-family : Caesalpinioidae
Genus : Albizia
Species : A. lebbeck

It is a growing tree to a height 18-30 m tall with a trunk 50cm to 1m in diameter. The leaves are bipinate with one to four pairs of pinnae. Each pinna is with 6-18 leaflets. The flowers are white with numerous stamens with a sweet fragrance. The fruit is a pod (15-30cm long) containing six to twelve seeds.

Its uses include environmental management, forage, medicine and wood. It is cultivated as shade tree in North and South America. In India and Pakistan, the tree is used to produce timber wood. Some indigenous herbivores are liable to utilize lebbeck as a food resource. For example, the greater rhea (Rhea americana) has been observed feeding on it in the Cerrado of Brazil.

(3) Nelumbo nucifera ⇒ Nelumbo nucifera, also known as sacred lotus, Laxmi lotus, Indian lotus or simply lotus is one of two extant species of aquatic plant in the family Nelumbonaceae. It is sometimes colloquially called a water lily.

Order : Proteales
Family : Nelumbonaceae
Genus : Nelumbo
Species : N. nucifera

The lotus roots are planted in peat or river bottom soil, while the leaves float on the water's surface or are held well above it. The flowers are usually found on thick stems rising several centimeters above the leaves. The leaf stalks can be up to 200 cm long allowing the plant grow in water to that depth. The peltate leaf blade or lamina can have a horizontal spread of 1m. The

Pink lotus

Ravenala

leaves may be as large as 80 cm in diameter, while the showy flowers can be up to 30 cm in diameter but 14 inches has been frequently reported.

* Ravenala → Ravenala is a genus of monocotyledonous flowering plants, classically, the genus was considered to include a single species, Ravenala Madagascariensis, commonly known as the travellers tree, travellers palm or East-West palm, from Madagascar.

Order : Zingiberales
Family : Strelitziaceae
Genus : Ravenala
Species : Ravenala madagascariensis

The enormous paddle shaped leaves are borne to long petioles, in a distinctive fan shape alligned in a single plane. The large white flowers are structurally similar to those of its relatives, the Bird-of-Paradise flowers strelitzia reginae and Strelitzia nicolai, but are generally considered as less attractive.

* Selenicereus undatus → Selenicereus undatus, the white flesh Pitahaya is a species of the genus Selenicereus in the family cactaceae and is the most cultivated species in the genus. It is used both as an ornamental vine and as a fruit crop - the Pitahaya or dragon fruit.

Order : Caryophyllales
Family : Cactaceae
Genus : Selenicereus
Species : S. undatus

Dragon fruit stems are scandent (climbing habit), creeping, sprawling or clambering and branched profusely. There can be 4-7 of them with generally three ribs; margins are corneous (horn like) with age and undulate. Spins on the adult branches are 1-4 mm

Selenicereus undatus

Dragon fruits

Fishtail palms

long being aciculan (needle like) to almost conical and greyish brown to black in colour and shreading with a deep green epidermis.

The fruit is oblong to ovale 6-12 cm long, red with large bracteales, with white or more uncommonly pink pulp and edible black seeds.

Fishtail palms → One of the most widely known species of fishtail palm is Caryota urens under the family Arecaceae. They are often known as fishtail palms because of the shape of their leaves. Caryota urens is a solitary trunked tree that are widely spaced; leaf scar rings cover its grey trunk.

Order: Arecales
Family: Arecaceae
Genus: Caryota
Species: C. urens

The bipinnate leaves are triangular in shape, bright to deep green, 3.5m long. The obdeltoid pinnae are 30 cm long. The 3m long inflorescences emerge at each leaf node, from top to bottom producing pendent clusters of white, unisexual flowers. As these plants are monocarpic (that flowers and bears fruit only once before dying), the completion of the flower and fruiting process results in the death of the tree. A few species are Caryota alberti, Caryota maxima, Caryota obtuse etc.

The fruit matures to a round, 1cm drupe (usually contains a single seed), red in colour with one seed. Like all Caryotas, the fruit contains oxalic acid, a skin and membrane irritant.

Crop Research Farm

Buradavan Science Centre

Artificial grasses

Documentation -> In this field trip we visited different kind of plants such as herbs, shrubs and trees in field areas. Different types of plants such as annual, biennial and perennial plants are also present there. In crop research farm, there is presence of triangle Thuja in one corner, another is fistal palm in the middle and seed research laboratory is also seen.

In Science Centre, also there are Araucaria in combination with fish tail palms in the middle of the area. The monocot Ravenala madagascariensis is present. The familiar plant is in association with Michelia champaca, the excellent ornamental dicot plant in Science Centre. We also found different coloured Rose plants, Hibiscus plants and Daffodil plants and also many other plants present in crop research farm and Science Centre.

In Science Centre, there is lawn with sitting place and artificially cut grasses and shrubs plants. In Crop Research Farm, there is Nymphaea plant, an aquatic herb in ponds in association with different trees in the surroundings of ponds such as Cocos nucifera, Areca catechu.

The ornamental tree Albizia lebbeck and Michelia champaca with yellow, beautifully scented flowers are present in the garden.

The white coloured scented Polyanthes tuberosa is special attraction of Crop Research Farm, the violet Ruellia tuberosa and pink coloured Mimosa pudica is special attraction of Golapbag Campus, Botany department, Burdwan University.

Thuja

Ruellia

Coloured varieties

Special features of Thuja are as follows — the wood is light, soft and aromatic. It can be easily splitted and resists decay. The wood has been used for many applications. Thuja poles are often used to make fence posts and nails. It is a genus of cypress family — Cupressaceae.

Order : Cupressales

Class : Pinopsida

Division : Pinophyta

Araucaria also contains several special features such as, Evergreen, mostly diocious trees with regularly whorled branches. Buds inconspicuous, young trees branched to the ground, old trees with a long cleanable and flattened crown. Juvenile leaves needle like, their loosely imbricate, spirally arranged. It is genus in the family Araucariaceae, in the major group of gymnosperms, Araucaria.

Order : Araucariales

Class : Pinopsida

Division : Pinophyta

Family : Araucariaceae

Moreover, in Science Centre, we have seen different coloured plants with a great combination of herbs, shrubs and trees of various sizes and shapes are arranged in one place, for entertaining the tourists and for eye attraction.

Thus, horticulture provides a great mean to eco-tourism, transportation and entertainments of people, students, researchers and provide income source to farmers and labourers.

Conclusion => The horticultural resources help to shape us urban horticulture, environmental conservation and eco-tourism industry in various geographic regions properly. But inspite this, the principle of a field trip cannot be scientifically followed by these regions. So, it is needed to say that practices of these field visits need proper planning and management by which the entire vegetation can be exhibited and preserved successfully and excellently.

Bankim 13/7/23

EXAMINED
Dept. of Botany
Vivekananda Mahavidyalaya
Burdwan

S.Bhattacharya 5/7/23

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

Paints and Pigments

Submitted as DSE-4 paper in B.Sc. (Honours)
Sem- VI Examination 2023

By

Amiya Chowdhury

UNIVERSITY ROLL NO. – 200312200008

UNIVERSITY REGISTRATION NO. –
202001015173 of 2020-21

SUBJECT: - CHEMISTRY

PAPER: - DSE-4

SEMESTER: - 6

TO WHOM IT MAY CONCERN

This is to certify that the Dissertation "**PAINTS AND PIGMENTS**", has been completed under the supervision of **Dr. Palash Mondal**, Assistant Professor, Department of Chemistry, Vivekananda Mahavidyalaya, as a curriculum under DSE 4 paper which is a part of the syllabus of 6th Semester, B.Sc. Honours course in Chemistry offered by **The University of Burdwan.** This dissertation is presented followed by power point presentation.

Palash Mondal
Supervisor 02/08/2023

Department of Chemistry
Vivekananda Mahavidyalaya

09/8/23

H.O.D.

Department of Chemistry
Vivekananda Mahavidyalaya

Associate Professor & Head
Dept. of Chemistry (U.G. & P.G.)
Vivekananda Mahavidyalaya, Burdwan

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

(DEPT. OF CHEMISTRY)

Dissertation Submitted by

Name: Anish Sen
Univ. Roll No: 200312200011
Univ. Reg. No: 202001015176 of 2020-21
Stream: B.Sc. Chemistry Honours
College Roll No: 27
Semester: VI
Course Code: DSE-4

VIVEKANANDA MAHAVIDYALAYA

Jagat Berh, P.O. Sripally, Dist. Burdwan, Pin -713103

To whom it may concern

This is to certify that the dissertation entitled "Solar Cell" has been carried out by Anish Sen under the guidance of Dr. Palash Mondal, Assistant Professor, Department of Chemistry (U.G & P.G), Vivekananda Mahavidyalaya, Burdwan for the partial fulfillment of the requirement of ordinance for B.Sc. examination in Chemistry of the University of Burdwan.

Supervisor
Dept. of Chemistry
Vivekananda Mahavidyalaya

Head of the Dept.
Dept. of Chemistry
Vivekananda Mahavidyalaya

DISSERTATION

Lithium Ion Battery

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

(DEPT. OF CHEMISTRY)

Dissertation Submitted by

- **Name**: Ankan Saha
- **Univ. Roll No**: 200312200012
- **Univ. Reg No**: 202001015177 of 2020-21
- **Stream:** B.Sc. Chemistry Honours
- **College Roll No**: 31
- **Semester**: VI
- **Course Code**: DSE-4

To whom it may concern

This is to certify that the dissertation entitled "**Lithium Ion Battery**" has been carried out by **Ankan Saha** under the guidance of **Dr. Palash Mondal**, Assistant Professor, Department of Chemistry (U.G & P.G), Vivekananda Mahavidyalaya, Burdwan for the partial fulfilment of the requirement of ordinance for B.Sc. examination in the Chemistry Honours of the University of Burdwan based on the Dissertation followed by Power Point presentation.

Palash Mondal 02/08/2023

Supervisor

Dept. of Chemistry

Vivekananda Mahavidyalaya

04/8/23

Head of the Dept.

Dept. of Chemistry

Vivekananda Mahavidyalaya

Associate Professor & Head
Dept. of Chemistry (U.G. & P.G.)
Vivekananda Mahavidyalaya, Burdwan

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

(Department of Chemistry)

Dissertation Submitted by

Name : DEBNIL MONDAL

Univ. Roll No. : 200312200030

Univ. Regd. No. : 202001015195 of 2020-21

Subject : CHEMISTRY (HONOURS)

College Roll No. : 21

Semester : VI

Course Code : DSE-4

VIVEKANANDA MAHAVIDYALAYA

Jagat Berh, P.O. Sripally, Dist. Burdwan, Pin -713103

To Whom It May Concern

This is to certify that the dissertation entitled "MANUFACTURING PROCESS AND IMPORTANCE OF DIFFERENT KINDS OF FERTILIZER" has been carried out by Debnil Mondal under the guidance of Dr. Palash Mondal, Assistant Professor, Department of Chemistry (U.G & P.G), Vivekananda Mahavidyalaya, Burdwan for the partial fulfillment of the requirement of ordinance for B.Sc. examination in Chemistry of the University of Burdwan.

02/08/23

Supervisor
Dept. of Chemistry
Vivekananda Mahavidyalaya

04/8/23

Head of the Dept.
Dept. of Chemistry
Vivekananda Mahavidyalaya

Associate Professor & Head
Dept. of Chemistry (U.G. & P.G.)
Vivekananda Mahavidyalaya, Burdwan

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

(Department of Chemistry)

Dissertation Submitted by

Name : GOPESWAR DAS

Univ. Roll No. : 200312200037

Univ. Regd. No. : 202001015202 of 2020-21

Subject : CHEMISTRY (HONOURS)

College Roll No. : 26

Semester : VI

Course Code : DSE-4

VIVEKANANDA MAHAVIDYALAYA

Jagat Berh, P.O. Sripally, Dist. Burdwan, Pin -713103

To Whom It May Concern

This is to certify that the dissertation entitled "MANUFACTURING PROCESS AND IMPORTANCE OF DIFFERENT KINDS OF FERTILIZER" has been carried out by Gopeswar Das under the guidance of Dr. Palash Mondal, Assistant Professor, Department of Chemistry (U.G & P.G), Vivekananda Mahavidyalaya, Burdwan for the partial fulfillment of the requirement of ordinance for B.Sc. examination in Chemistry of the University of Burdwan.

Palash Mondal 02/08/23

Supervisor
Dept. of Chemistry
Vivekananda Mahavidyalaya

01/8/23

Head of the Dept.
Dept. of Chemistry
Vivekananda Mahavidyalaya

Associate Professor & Head
Dept. of Chemistry (U.G. & P.G.)
Vivekananda Mahavidyalaya, Burdwan

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

DISSERTATION

- TOPIC :- Homogeneous Catalysis and their Industrial Applications.
- NAME :- Md. Warez Mallick.
- COURSE :- BSc. Chemistry Honours.
- SEMESTER :- VI.
- COURSE CODE :- DSE-IV.
- COLLEGE ROLL NO. :- 356.
- UNIVERSITY ROLL NO. :- 200312200053.
- REGISTRATION NO. :- 202001015218 of 2020-21.

VIVEKANANDA MAHAVIDYALAYA

Jagat Berh , P.O.- Sripally , Dist.- Purba Bardhaman , Pin - 713103

To Whom It May Concern

This is to certify that the dissertation entitled " **HOMOGENEOUS CATALYSIS AND THEIR INDUSTRIAL APPLICATIONS** " has been carried out by **Md. Warez Mallick** under the guidance of **Dr. Palash Mondal**, Assistant Professor, Department of Chemistry (U.G & P.G), Vivekananda Mahavidyalaya, Burdwan for the partial fulfilment of the requirement of ordinance for B.Sc. Examination in Chemistry Honours of the University of Burdwan based on the Dissertation followed by Power Point Presentation.

Palash Mondal 02/08/23

Supervisor
Dept. of Chemistry,
Vivekananda Mahavidyalaya.

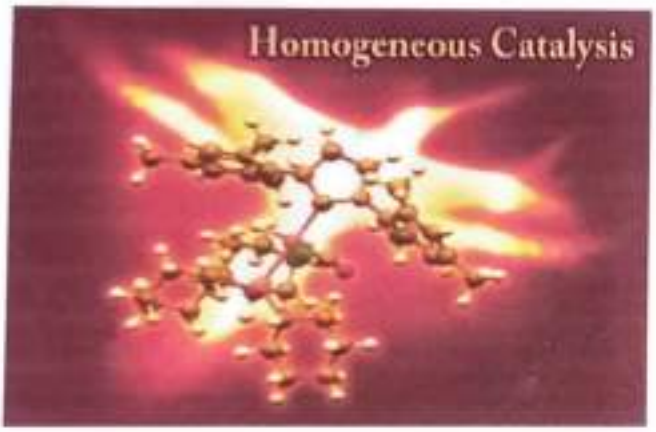
04/8/23

Head of the Dept.
Dept. of Chemistry,
Vivekananda Mahavidyalaya.

Associate Professor & Head
Dept. of Chemistry (U.G. & P.G.)
Vivekananda Mahavidyalaya, Burdwan

DISSERTATION

HOMOGENEOUS CATALYSIS AND THEIR INDUSTRIAL APPLICATIONS



ABSTRACT

Homogeneous catalysis is among the most important areas of contemporary chemistry and chemical technology; new applications of transition metals as central atoms of ligand-modified complexes (and thus a tailoring and tuning of the whole catalyst system) opens novel routes to new compounds, together with new possibilities for reaction control and separation of the homogeneous catalyst from the reactants and the substrate.

SUBMITTED BY:

Md.Warez Mallick,

Department Of Chemistry,

Vivekananda Mahavidyalaya

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

DISSERTATION

- TOPIC :- Homogeneous Catalysis and their Industrial Applications.
- NAME :- Md. Warez Mallick.
- COURSE :- BSc. Chemistry Honours.
- SEMESTER :- VI.
- COURSE CODE :- DSE-IV.
- COLLEGE ROLL NO. :- 356.
- UNIVERSITY ROLL NO. :- 200312200053.
- REGISTRATION NO. :- 202001015218 of 2020-21.

VIVEKANANDA MAHAVIDYALAYA

Jagat Berh , P.O.- Sripally , Dist.- Purba Bardhaman , Pin - 713103

To Whom It May Concern

This is to certify that the dissertation entitled " **HOMOGENEOUS CATALYSIS AND THEIR INDUSTRIAL APPLICATIONS** " has been carried out by **Md. Warez Mallick** under the guidance of **Dr. Palash Mondal**, Assistant Professor, Department of Chemistry (U.G & P.G), Vivekananda Mahavidyalaya, Burdwan for the partial fulfilment of the requirement of ordinance for B.Sc. Examination in Chemistry Honours of the University of Burdwan based on the Dissertation followed by Power Point Presentation.

Palash Mondal 02/08/23

Supervisor
Dept. of Chemistry,
Vivekananda Mahavidyalaya.

09/8/23

Head of the Dept.
Dept. of Chemistry,
Vivekananda Mahavidyalaya.

Associate Professor & Head
Dept. of Chemistry (U.G. & P.G.)
Vivekananda Mahavidyalaya, Burdwan

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

Paints and Pigments

Submitted as DSE-4 paper in B.Sc. (Honours) Sem- VI Examination 2023

By

Prity Chatterjee

UNIVERSITY ROLL NO. – 200312200074

UNIVERSITY REGISTRATION NO. – 202001015242 of 2020-21

SUBJECT: - CHEMISTRY

PAPER: - DSE-4

SEMESTER: - 6

TO WHOM IT MAY CONCERN

This is to certify that the Dissertation **"PAINTS AND PIGMENTS"**, has been completed under the supervision of **Dr. Palash Mondal**, Assistant Professor, Department of Chemistry, Vivekananda Mahavidyalaya, as a curriculum under DSE 4 paper which is a part of the syllabus of 6th Semester, B.Sc. Honours course in Chemistry offered by **The University of Burdwan.** This dissertation is presented followed by power point presentation.

Palash Mondal
Supervisor 22/08/2023

Department of Chemistry
Vivekananda Mahavidyalaya

09/8/23

H.O.D.

Department of Chemistry
Vivekananda Mahavidyalaya

Associate Professor & Head
Dept. of Chemistry (U.G. & P.G.)
Vivekananda Mahavidyalaya, Burdwan

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

(DEPT. OF CHEMISTRY)

Dissertation Submitted by

- **Name**: Rittik Dutta
- **Univ. Roll No**: 200312200085
- **Univ. Reg No**: 202001015253 of 2020-21
- **Stream:** B.Sc. Chemistry Honours
- **College Roll No**: 46
- **Semester**: VI
- **Course Code**: DSE-4

To whom it may concern

This is to certify that the dissertation entitled "**Lithium Ion Battery**" has been carried out by **Rittik Dutta** under the guidance of **Dr. Palash Mondal**, Assistant Professor, Department of Chemistry (U.G & P.G), Vivekananda Mahavidyalaya, Burdwan for the partial fulfilment of the requirement of ordinance for B.Sc. examination in the Chemistry Honours of the University of Burdwan based on the Dissertation followed by Power Point presentation.

Palash Mondal 02/08/2023

Supervisor
Dept. of Chemistry
Vivekananda Mahavidyalaya

09/8/23

Head of the Dept.
Dept. of Chemistry
Vivekananda Mahavidyalaya

Associate Professor & Head
Dept. of Chemistry (U.G. & P.G.)
Vivekananda Mahavidyalaya, Burdwan

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

Paints and Pigments

Submitted as DSE-4 paper in B.Sc. (Honours)
Sem- VI Examination 2023

By

Rohan Roy

UNIVERSITY ROLL NO. – 200312200086

UNIVERSITY REGISTRATION NO. – 202001015255 of 2020-21

SUBJECT: - CHEMISTRY

PAPER: - DSE-4

SEMESTER: - 6

TO WHOM IT MAY CONCERN

This is to certify that the Dissertation **"PAINTS AND PIGMENTS"**, has been completed under the supervision of **Dr. Palash Mondal**, Assistant Professor, Department of Chemistry, Vivekananda Mahavidyalaya, as a curriculum under DSE 4 paper which is a part of the syllabus of 6th Semester, B.Sc. Honours course in Chemistry offered by **The University of Burdwan.** This dissertation is presented followed by power point presentation.

Palash Mondal 02/08/2023
Supervisor

Department of Chemistry
Vivekananda Mahavidyalaya

04/8/23
H.O.D.

Department of Chemistry
Vivekananda Mahavidyalaya

Associate Professor & Head
Dept. of Chemistry (U.G. & P.G.)
Vivekananda Mahavidyalaya, Burdwan

Dissertation

HOMOGENEOUS CATALYSIS AND THEIR INDUSTRIAL APPLICATIONS

Submitted By: RUPARNA DEY

Department Of Chemistry

Vivekananda Mahavidyalaya

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

DISSERTATION

Topic:	Homogeneous Catalysis and their Industrial Applications
Submitted by:	Ruparna Dey
Course:	BSc. Chemistry Honours
Semester:	VI
Course Code:	DSE-IV
University Roll No:	200312200090
Registration No:	202001015259 of 2020-21

VIVEKANANDA MAHAVIDYALAYA

Jagat Berh , P.O. Sripally , Dist. PurbaBardhaman , Pin - 713103

To Whom It May Concern

This is to certify that the dissertation entitled "**HOMOGENEOUS CATALYSIS AND THEIR INDUSTRIAL APPLICATIONS** "has been carried out by **Ruparna Dey** under the guidance of **Dr. Palash Mondal**,Assistant Professor, Department of Chemistry (U.G & P.G),Vivekananda Mahavidyalaya, Burdwan for the partial fulfilmentof the requirement of ordinance for B.Sc. Examination in Chemistry Honours of the University of Burdwan based on theDissertation followed by Power Point Presentation.

Palash Mondal
02/08/23

Supervisor
Dept. of Chemistry,
Vivekananda Mahavidyalaya.

04/8/23

Head of the Dept.
Dept. of Chemistry,
Vivekananda Mahavidyalaya.

Associate Professor & Head
Dept. of Chemistry (U.G. & P.G.)
Vivekananda Mahavidyalaya, Burdwan

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

DISSERTATION

Topic:	Homogeneous Catalysis and their Industrial Applications
Submitted by:	Samarpita Mitra
Course:	BSc. Chemistry Honours
Semester:	VI
Course Code:	DSE-IV
University Roll No:	200312200098
Registration No:	202001015266 of 2020-21

VIVEKANANDA MAHAVIDYALAYA

Jagat Berh , P.O.- Sripally , Dist.- Purba Bardhaman , Pin - 713103

To Whom It May Concern

This is to certify that the dissertation entitled " **HOMOGENEOUS CATALYSIS AND THEIR INDUSTRIAL APPLICATIONS** " has been carried out by **Samarpita Mitra** under the guidance of **Dr. Palash Mondal**, Assistant Professor, Department of Chemistry (U.G & P.G), Vivekananda Mahavidyalaya, Burdwan for the partial fulfilment of the requirement of ordinance for B.Sc. Examination in Chemistry Honours of the University of Burdwan based on the Dissertation followed by Power Point Presentation.

Palash Mondal
Supervisor 02/08/23
Dept. of Chemistry,
Vivekananda Mahavidyalaya.

09/8/23
Head of the Dept.
Dept. of Chemistry,
Vivekananda Mahavidyalaya.

Associate Professor & Head
Dept. of Chemistry (U.G. & P.G.)
Vivekananda Mahavidyalaya, Burdwan

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

Paints and Pigments

Submitted as DSE-4 paper in B.Sc. (Honours)
Sem- VI Examination 2023

By

Shanaz Molla

UNIVERSITY ROLL NO. – 200312200113

UNIVERSITY REGISTRATION NO. – 202001015279 of 2020-21

SUBJECT: - CHEMISTRY

PAPER: - DSE-4

SEMESTER: - 6

TO WHOM IT MAY CONCERN

This is to certify that the Dissertation "**PAINTS AND PIGMENTS**", has been completed under the supervision of **Dr. Palash Mondal**, Assistant Professor, Department of Chemistry, Vivekananda Mahavidyalaya, as a curriculum under DSE 4 paper which is a part of the syllabus of 6th Semester, B.Sc. Honours course in Chemistry offered by **The University of Burdwan.** This dissertation is presented followed by power point presentation.

Palash Mondal
Supervisor 02/08/2023

Department of Chemistry
Vivekananda Mahavidyalaya

09/8/23
H.O.D.

Department of Chemistry
Vivekananda Mahavidyalaya

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

TITLE OF DISSERTATION :

Composition And Properties Of Various Kinds Of Glass

Dissertation Submitted by

Name – Santanu Ghosh Mondal

Univ. Roll No : 200312200104

Univ. Reg No : 202001015272 of 2020-21

Stream: B.Sc. Chemistry Hons.

College Roll No : 44

Semester : VI

Course Code : DSE-IV

VIVEKANANDA MAHAVIDYALAYA

Jagat Berh , P.O. Sripally , Dist. Burdwan, Pin - 713103

To Whom It May Concern

This is to certify that the dissertation entitled " **Composition and Properties of Various Kinds of Glasses**" has been carried out by **Santanu Ghosh Mondal** under the guidance of **Dr. Palash Mondal**, Assistant Professor, Department of Chemistry (U.G & P.G) , Vivekananda Mahavidyalaya , Burdwan for the partial fulfilment of the requirement of ordinance for B.Sc. Examination in the Chemistry of the University of Burdwan.

Palash Mondal 02/08/23

Supervisor
Dept. of Chemistry
Vivekananda Mahavidyalaya

D Saha 04/8/23

Head
Dept. of Chemistry
Vivekananda Mahavidyalaya

Associate Professor & Head
Dept. of Chemistry (U.G. & P.G.)
Vivekananda Mahavidyalaya, Burdwan

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAY

- Name: SANTANU KHAN
- Univ. Roll No: 200312200105
- Univ. Reg No: 202001015273 OF 2020-21
- College Roll No: 19
- Class: B.Sc Chemistry Honours
- Semestar: 6th semestar
- Course Code: DSE- IV

DISSERTATION

Organic explosives and it's related compounds

ABSTRACT

Explosive and its related compounds are a very hot topic in chemistry and it is mostly because of the power and energy of these compounds which is widely used for defence of a country as well as commercial. In this project we have discussed about the background of explosives ,types, it's properties , chemical composition, availability and cost , toxicity and classification of explosives also. Along with this we have also discussed about it's various application, it's lifetime , various countries rules and regulation on explosives and finally a list of explosive compounds so that we can have a clear understanding on explosives and its related compounds.

By Santanu Khan

Dissertation

VIVEKANANDA MAHAVIDYALAYA

Jagat Berh , P.O.- Sripally , Dist.- Purba Bardhaman , Pin - 713103

To Whom It May Concern

This is to certify that the dissertation entitled " **Organic Explosive and its related compounds** " has been carried out under the guidance of **Dr. Palash Mondal**, Assistant Professor, Department of Chemistry (U.G & P.G), Vivekananda Mahavidyalaya, Burdwan for the partial fulfilment of the requirement of ordinance for B.Sc. Examination in Chemistry Honours of the University of Burdwan based on the Dissertation followed by Power Point Presentation.

Palash Mondal 02/08/23

Supervisor

Dept. of Chemistry,

Vivekananda Mahavidyalaya

D Saha 09/8/23

Head of the Dept.

Dept. of Chemistry,

Vivekananda Mahavidyalaya.

Associate Professor & Head
Dept. of Chemistry (U. G. & P. G.)
Vivekananda Mahavidyalaya, Burdwan

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

(DEPT. OF CHEMISTRY)

Dissertation Submitted by

- **Name**: Soumen Pal
- **Univ. Roll No**: 200312200131
- **Univ. Reg No**: 202001015297 of 2020-21
- **Stream**: B.Sc. Chemistry Honours
- **College Roll No**: 49
- **Semester**: VI
- **Course Code**: DSE-IV

To whom it may concern

This is to certify that the dissertation entitled **"Lithium Ion Battery"** has been carried out by **Soumen Pal** under the guidance of **Dr. Palash Mondal,** Assistant Professor, Department of Chemistry (U.G & P.G), Vivekananda Mahavidyalaya, Burdwan for the partial fulfilment of the requirement of ordinance for B.Sc. examination in the Chemistry Honours of the University of Burdwan based on the Dissertation followed by Power Point presentation.

Palash Mondal
02/08/2023

Supervisor
Dept. of Chemistry
Vivekananda Mahavidyalaya

04/08/23

Head of the Dept.
Dept. of Chemistry
Vivekananda Mahavidyalaya
Associate Professor & Head
Dept. of Chemistry (U.G. & P.G.)
Vivekananda Mahavidyalaya, Burdwan

Dissertation

Submitted By: SOURAV PAL

Department Of Chemistry

Vivekananda Mahavidyalaya

ORGANIC EXPLOSIVES AND IT'S RELATED COMPOUNDS

VIVEKANANDA MAHAVIDYALAYA

Jagat Berh , P.O.-Sripally , Dist.- PurbaBardhaman , Pin - 713103

To Whom It May Concern

This is to certify that the dissertation entitled "**Organic Explosive and its related compound** "has been carried out by **Sourav Pal** under the guidance of **Dr. Partha sarathi Sengupta**,Assistant Professor, Department of Chemistry (U.G & P.G),Vivekananda Mahavidyalaya, Burdwan for the partial fulfilmentof the requirement of ordinance for B.Sc. Examination in Chemistry Honours of the University of Burdwan based on theDissertation followed by Power Point Presentation.

Partha Sarathi Sengupta
1/8/23

Supervisor
Dept. of Chemistry,
Vivekananda Mahavidyalaya.

01/8/23

Head of the Dept.
Dept. of Chemistry,
Vivekananda Mahavidyalaya.

Associate Professor & Head
Dept. of Chemistry (U.G. & P.G.)
Vivekananda Mahavidyalaya, Burdwan

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

(DEPT. OF CHEMISTRY)

Dissertation Submitted by

Name: Soyeta Saha
Univ. Roll No: 200312200140
Univ. Reg. No: 202001015306 of 2020-21
Stream: B.Sc. Chemistry Honours
College Roll No: 47
Semester: VI
Course Code: DSE-4

VIVEKANANDA MAHAVIDYALAYA

Jagat Berh, P.O. Sripally, Dist. Burdwan, Pin -713103

To whom it may concern

This is to certify that the dissertation entitled "Solar Cell" has been carried out by Soyeta Saha under the guidance of Dr. Palash Mondal, Assistant Professor, Department of Chemistry (U.G & P.G), Vivekananda Mahavidyalaya, Burdwan for the partial fulfillment of the requirement of ordinance for B.Sc. examination in Chemistry of the University of Burdwan.

Palash Mondal 02/08/23
Supervisor
Dept. of Chemistry
Vivekananda Mahavidyalaya

S Saha 04/8/23
Head of the Dept.
Dept. of Chemistry
Vivekananda Mahavidyalaya

Associate Professor & Head
Dept. of Chemistry (U.G. & P.G.)
Vivekananda Mahavidyalaya, Burdwan

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

(DEPT. OF CHEMISTRY)

Dissertation Submitted by

- Name: Suchayan Pal
- Univ. Roll No: 200312000089
- Univ. Reg No: 202001013961 of 2020-21
- Stream: B.Sc. Chemistry Honours
- College Roll No: 688
- Semester: VI
- Course Code: DSE-IV

VIVEKANANDA MAHAVIDYALAYA

Jagat Berh, P.O. Sripally, Dist. Burdwan, Pin -713103

To Whom It May Concern

This is to certify that the dissertation entitled "MANUFACTURING PROCESS AND IMPORTANCE OF DIFFERENT KINDS OF FERTILIZER" has been carried out by Suchayan Pal under the guidance of Dr. Palash Mondal, Assistant Professor, Department of Chemistry (U.G & P.G), Vivekananda Mahavidyalaya, Burdwan for the partial fulfillment of the requirement of ordinance for B.Sc. examination in Chemistry of the University of Burdwan.

Palash Mondal 02/08/23

Supervisor
Dept. of Chemistry
Vivekananda Mahavidyalaya

04/8/23

Head of the Dept.
Dept. of Chemistry
Vivekananda Mahavidyalaya

Associate Professor & Head
Dept. of ... & P.G.)
Vivekananda ... Burdwan

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

TITLE OF DISSERTATION :

Composition And Properties Of Various Kinds Of Glass

Dissertation Submitted by

Name – Sumanta Batabyal

Univ. Roll No : 200312000093

Univ. Reg No : 202001013965 of 2020-21

Stream: B.Sc. Chemistry Hons.

College Roll No : 686

Semester : VI

Course Code : DSE-IV

VIVEKANANDA MAHAVIDYALAYA

Jagat Berh , P.O. Sripally , Dist. Burdwan, Pin - 713103

To Whom It May Concern

This is to certify that the dissertation entitled " **Composition and Properties of Various Kinds of Glasses**" has been carried out by **Sumanta Batabyal** under the guidance of **Dr. Palash Mondal**, Assistant Professor, Department of Chemistry (U.G & P.G) , Vivekananda Mahavidyalaya , Burdwan for the partial fulfilment of the requirement of ordinance for B.Sc. Examination in the Chemistry of the University of Burdwan.

Palash Mondal 02/08/23

Supervisor
Dept. of Chemistry
Vivekananda Mahavidyalaya

04/8/23

Head
Dept. of Chemistry
Vivekananda Mahavidyalaya

Associate Professor & Head
Dept. of Chemistry (U.G. & P.G.)
Vivekananda Mahavidyalaya, Burdwan

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

DISSERTATION

Topic: Homogeneous Catalysis and their Industrial Applications

Submitted by: Sutanu Mondal

Course: BSc. Chemistry Honours

Semester: VI **Course Code:** DSE-IV

University Roll No.: 200312200155

Registration Number:202001015321 of 2020-2021

VIVEKANANDA MAHAVIDYALAYA

Jagat Berh , P.O.- Sripally , Dist.- Purba Bardhaman , Pin - 713103

To Whom It May Concern

This is to certify that the dissertation entitled " **HOMOGENEOUS CATALYSIS AND THEIR INDUSTRIAL APPLICATIONS** " has been carried out by **Sutanu Mondal** under the guidance of **Dr. Palash Mondal**, Assistant Professor, Department of Chemistry (U.G & P.G), Vivekananda Mahavidyalaya, Burdwan for the partial fulfilment of the requirement of ordinance for B.Sc. Examination in Chemistry Honours of the University of Burdwan based on the Dissertation followed by Power Point Presentation.

Palash Mondal 02/08/23

Supervisor
Dept. of Chemistry,
Vivekananda Mahavidyalaya.

09/8/23

Head of the Dept.
Dept. of Chemistry,
Vivekananda Mahavidyalaya.

Associate Professor & Head
Dept. of Chemistry (U.G. & P.G.)
Vivekananda Mahavidyalaya, Burdwan

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

(DEPT. OF CHEMISTRY)

Dissertation Submitted by

Name: Swapnaraj Goswami
Univ. Roll No: 200312200159
Univ. Reg. No: 202001015325 of 2020-21
Stream: B.Sc. Chemistry Honours
College Roll No: 23
Semester: VI
Course Code: DSE-4

VIVEKANANDA MAHAVIDYALAYA

Jagat Berh, P.O. Sripally, Dist. Burdwan, Pin -713103

To whom it may concern

This is to certify that the dissertation entitled "Solar Cell" has been carried out by Swapnaraj Goswami under the guidance of Dr. Palash Mondal, Assistant Professor, Department of Chemistry (U.G & P.G), Vivekananda Mahavidyalaya, Burdwan for the partial fulfillment of the requirement of ordinance for B.Sc. examination in Chemistry of the University of Burdwan.

Palash Mondal
Supervisor 02/08/23
Dept. of Chemistry
Vivekananda Mahavidyalaya

09/8/23
Head of the Dept.
Dept. of Chemistry
Vivekananda Mahavidyalaya
Associate Professor & Head
Dept. of Chemistry (U.G. & P.G.)
Vivekananda Mahavidyalaya, Burdwan

THE UNIVERSITY OF BURDWAN

NEXT GENERATION IRIDIUM BASED ANTI-CANCER DRUGS

SUBMITTED AS TERM PAPER FOR M.Sc SEMESTER-IV EXAMINATION 2023

BY

ARPITA MONDAL

ROLL NO: BUR/CH/2021/078

REGISTRATION NO: 201801005021 of 2018-19

COURSE CODE: MSCH406-I

P.G SECTION

VIVEKANANDA MAHAVIDYALAYA

BURDWAN, WEST BENGAL

2023

VIVEKANANDA MAHAVIDYALAYA

Jagat Berh, P.O.Sripally, Dist. Burdwan, Pin-713103

To Whom It May Concern

This is to certify that the dissertation entitled, **"Next Generation Iridium Based Anti-Cancer Drugs"** has been carried out by **Arpita Mondal** under the guidance of **Dr. Partha Sarathi Sengupta**, Associate Professor, Department of Chemistry (UG & PG) Vivekananda Mahavidyalaya, Burdwan, for the partial fulfillment of the requirement of ordinance for M.Sc. examination in Chemistry of the University of Burdwan. The works incorporated in this dissertation consist of mainly the survey of literature.

Partha Sarathi Sengupta 11/8/23

Supervisor
Department of Chemistry
Vivekananda Mahavidyalaya
Associate Professor
Dept. of Chemistry (U.G. & P.G.)
VIVEKANANDA MAHAVIDYALAYA, BURDWAN

11.8.23

Head
Department of Chemistry
Vivekananda Mahavidyalaya
Associate Professor & Head
Dept. of Chemistry (U.G. & P.G.)
Vivekananda Mahavidyalaya, Burdwan

11/8/23

Principal
Department of Chemistry
Vivekananda Mahavidyalaya
Principal
Vivekananda Mahavidyalaya
BURDWAN

THE UNIVERSITY OF BURDWAN

INORGANIC NANOPARTICLE FOR BIOMEDICAL IMAGING: PRESENT AND FUTURE PROSPECT

SUBMITTED AS TERM PAPER FOR M.SC SEMESTER-IV EXAMINATION 2023

BY

BIPASA KUNDU

ROLL NO: BUR/CH/2021/079

REGISTRATION NO: 202103000125 OF 2021-22

COURSE CODE: MSCH406-I

VIVEKANANDA MAHAVIDYALAYA

BURDWAN, WEST BENGAL

2023

VIVEKANANDA MAHAVIDYALAYA

Jagat Berh,P.O.Sripally,Dist.Burdwan,Pin-713103

To Whom It May Concern

This is to certify that the dissertation entitled "**Inorganic Nanoparticle For Biomedical Imaging: Present And Future Prospect**" has been carried out by Bipasa Kundu under the guidance of Dr. Partha Sarathi Sengupta, Associate Professor, Department Of Chemistry (UG &PG) Vivekananda Mahavidyalaya, Burdwan , for the partial fulfilment of the requirement of ordinance for M.Sc. examination in Chemistry of the University of Burdwan. The works incorporated in this dissertation consist of mainly the survey of literature.

Partha Sarathi Sengupta
11.8.2023

Supervisor

Department of Chemistry

Vivekananda Mahavidyalaya

Associate Professor
Dept. of Chemistry (U.G. & P.G.)
VIVEKANANDA MAHAVIDYALAYA, BURDWAN

11.8.23

Head

Department Of Chemistry

Vivekananda Mahavidyalaya

Associate Professor & Head
Dept. of Chemistry (U.G. & P.G.)
Vivekananda Mahavidyalaya, Burdwan

11/8/23

Principal

Department of Chemistry

Vivekananda Mahavidyalaya

Principal
Vivekananda Mahavidyalaya
BURDWAN

THE UNIVERSITY OF BURDWAN

2D-NANOMATERIALS

SUBMITTED AS TERM PAPER FOR M.SC SEMESTER-IV EXAMINATION 2023

BY

MONALISHA DWARI

ROLL NO : BUR/CH/2021/082

REGISTRATION NO : 201801015868 OF 2018-19

COURSE CODE : MSCH406-I

VIVEKANANDA MAHAVIDYALAYA

BURDWAN, WEST BENGAL

2023

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

Jagat Berh, P.O.Sripally, Dist. Burdwan, Pin-713 103

To Whom It May Concern

This is to certify that the dissertation entitled, **"2D-Nanomaterials"** has been carried out by **Monalisha Dwari** under the guidance of **Dr. Palash Mondal**, Associate Professor, Department of Chemistry (UG & PG), Vivekananda Mahavidyalaya, Burdwan, for the partial fulfillment of the requirements of qualification for M.Sc. examination in Chemistry of the University of Burdwan. The results incorporated in this dissertation consist of mainly the survey of literature.

11.8.23

Palash Mondal 11/08/2023

SUPERVISOR	HEAD	PRINCIPAL
Department of Chemistry	Department of Chemistry	Department of Chemistry
Vivekananda Mahavidyalaya	Vivekananda Mahavidyalaya	Vivekananda Mahavidyalaya
Burdwan	Burdwan	Burdwan
Associate Professor	Associate Professor	
Dept. of Chemistry (UG & PG)	Dept. of Chemistry (UG & PG)	
Vivekananda Mahavidyalaya, Burdwan	Vivekananda Mahavidyalaya, Burdwan	

CARBON QUANTUM DOTS

SUBMITTED BY

SANCHITA MONDAL

University Roll No. – BUR/CH/2021/085

Registration No. – 201801010649 of 2018-19

IN PARTIAL FULFILLMENT FOR THE AWARD OF THE DEGREE

OF

MASTER OF SCIENCE

IN

CHEMISTRY

UNDER THE ESTEEMED GUIDANCE OF

DR. PALASH MONDAL

DEPARMENT OF CHEMISTRY

VIVEKANANDA MAHAVIDYALAYA,BURDWAN

UNDER

THE UNIVERSITY OF BURDWAN

BURDWAN-713103,WEST BENGAL, INDIA

TO WHOM IT MAY CONCERN

This is to certify that the dissertation as term paper entitled **"Carbon Quantum Dots"** submitted by **Sanchita Mondal** (University roll no.-BUR/CH/2021/085, Registration no.-201801010649 of 2018-19) under the guidance of **"Dr. Palash Mondal"**, Associate Professor to the Department of Chemistry (UG & PG), Vivekananda Mahavidyalaya, Burdwan for the partial fulfillment of the requirement for the award of the degree of Master of Science in Chemistry of The University of Burdwan. It is further certified that the dissertation is mainly a review of literature on the nforementioned field of latest research.

PURBA BARDHAMAN

DATE: 11.08.2023

Palash Mondal
Signature 11.08.2023

Supervisor
Department of Chemistry
Vivekananda Mahavidyalaya
Burdwan
Associate Professor
Dept. of Chemistry (U.G. & P.G.)
VIVEKANANDA MAHAVIDYALAYA, BURDWAN

11.8.23
Signature

H.O.D
Department of Chemistry
Vivekananda Mahavidyalaya
Burdwan
Associate Professor & Head
Dept. of Chemistry (U.G. & P.G.)
Vivekananda Mahavidyalaya, Burdwan

11/8/23
Signature

Principal
Vivekananda Mahavidyalaya
Burdwan
Principal
Vivekananda Mahavidyalaya
BURDWAN

UNIVERSITY OF BURDWAN

MESOPOROUS MATERIALS

Submitted as Term Paper for MSc Semester -IV

Examination 2023

By

SONALI GOUR

ROLL NO: BUR/CH/2021/087

REG NO: 201801015935 of 2018-2019

COURSE CODE: MSCH406-I

VIVEKANANDA MAHAVIDYALAYA

BURDWAN, WEST BENGAL

2023

VIVEKANANDA MAHAVIDYALAYA

Jagat Berh, P.O. Sripally, Dist. Burdwan, Pin 713103

TO WHOM IT MAY CONCERN

This is to certify that the dissertation entitled, **"Mesoporous Materials"**has been carried out by **Sonali Gour**under the guidance of **Dr. Palash Mondal**, Associate Professor,Department of Chemistry(U.G. & P.G.), Vivekananda Mahavidyalaya, Burdwan for the partial fulfillment of requirement of the ordinance for M.Sc. examination in Chemistry of the University of Burdwan. The works incorporated in this dissertation consist of mainly the survey of literature.

Palash Mondal 11/08/2023

Supervisor

Department of Chemistry
Vivekananda Mahavidyalaya
Burdwan

Associate Professor
Dept. of Chemistry (U.G. & P.G.)
VIVEKANANDA MAHAVIDYALAYA, BURDWAN

11.8.23

HOD

Department of Chemistry
Vivekananda Mahavidyalaya
Burdwan

Associate Professor & Head
Dept. of Chemistry (U.G. & P.G.)
Vivekananda Mahavidyalaya, Burdwan

11/8/23

Principal

Vivekananda Mahavidyalaya
Burdwan

Principal
Vivekananda Mahavidyalaya
Burdwan

MAGNETICALLY RECOVERABLE NANOCATALYSTS FOR HYDROGENATION OF CARBON-CARBON MULTIPLE BONDS AND CARBONYL GROUP

PAPER CODE : MSCH406-O

SUBJECT : ORGANIC CHEMISTRY

SUBMITTED BY - **RISHOV MONDAL**

REGISTRATION NO : 201801024267 of 2018-19

ROLL NO : BUR/CH/2021/083

M.Sc Semester - IV

PROJECT INSTRUCTOR : **Dr. DIPANWITA SAHA**

DEPARTMENT OF CHEMISTRY, THE UNIVERSITY OF BURDWAN

GOLAPBAG, BURDWAN, 713104, WEST BENGAL, INDIA

TO WHOM IT MAY CONCERN

It is my pleasure to certified that the work described in the accompanying term paper entitled **"MAGNETICALLY RECOVERABLE NANOCATALYSTS FOR HYDROGENATION OF CARBON-CARBON MULTIPLE NONDS AND CARBONYL GROUP"** has been carried out entirely by the candidate **RISHOV MONDAL** (Roll No.- **BUR/CH/2021/083** Reg No.- **201801024267 of 2018-2019**) to the Department of Chemistry, The University of Burdwan, Golapbag, Purba Bardhaman for the partial fulfilment of the requirement for the award of the degree of M.Sc., is a bonafied record of the work carried out under my supervision and guidance. This term paper has not been submitted previously anywhere for any degree whatsoever by him or by anyone else.

14.8.23.	14.8.23.	14/8/23
.....	.....	.....
Signature of Supervisor	Signature of HOD	Signature of Principal
Department of Chemistry	Department of Chemistry	Vivekananda Mahavidyalaya
(UG & PG)	(UG & PG)	Bardhaman
Associate Professor & Head Dept. of Chemistry (U.G. & P.G.) Vivekananda Mahavidyalaya, Burdwan	Associate Professor & Head Dept. of Chemistry (U.G. & P.G.) Vivekananda Mahavidyalaya, Burdwan	Principal Vivekananda Mahavidyalaya BURDWAN

CONTENTS

1. ABSTRACT

From past two decades magnetically, separable catalysts have become a hot topic in organic synthesis. In this review we aim to represent a brief picture of the application of these catalysts for hydrogenation reaction of carbon-carbon multiple bonds and carbonyl groups. The active noble metal nanoparticles are of mostly second and third row transition elements like Pd, Pt, Rh, Ru, Au etc. among Pd is widely employed. The activity of more abundant and greener metals like Fe, Ni are also being tried to explore. The basic idea of these catalysts is simply to introduce a magnetic property by using magnetic elements, generally magnetite (Fe center of Fe_3O_4) nanoparticles. Then suitable ligands are used to encapsulate the magnetite particles to both stabilize and get a well dispersion of noble metal nanoparticle onto the surface of the catalyst. Most of the ligands used for this purpose contain atom with unshared pair of electrons, which can effectively stabilize the noble metal nano particles. Sometime to introduce heterogenicity to the nanocatalyst inorganic metal oxides with cationic or anionic vacancy and carbonaceous materials like derivates of graphene are used. Use of chemically derives graphene or graphene oxides are very common supports are used in case of Fe nanoparticles as iron is magnetic itself. The ease of separation by using an external magnet makes them recyclable but with reuse the efficiency of the catalyst is decreased, which can be determined experimentally by recyclability test. The recyclable property depends on the solvent, ligands or stabilizing materials and also on the morphology or structural property of the nanocatalysts.

2. INTRODUCTION

Catalysis is becoming a strategic field of science because it represents a new way to meet the challenges of energy and sustainability. These challenges are becoming the main concerns of the global vision of societal challenges and world economy. The societal pressure has been at the origin of the concept of green chemistry, which is becoming a leitmotiv in any important project dealing with this strategic domain of science. The concept of green chemistry, which makes catalysis science even more creative, has become an integral part of sustainability.

One of the urgently needed challenges facing chemists now is the design and use of environmentally benign catalysts. A sustainable and "green" catalyst [1] must therefore possess specific features including low preparation cost, high activity, great selectivity, high stability, efficient recovery, and good recyclability.

Conventional catalysts can be divided into homogeneous [2] and heterogeneous [3], both of them holding advantages such as good activity and selectivity and accessible mechanistic studies leading to catalyst optimization of the former one and separating ease of the latter. However, the difficulty of separating homogeneous catalysts from reaction medium [4] consumedly restricts their applications in industry, especially in the pharmaceutical industry owing to the issue of metal contamination in the case of metal-catalyzed synthesis. Heterogenization of homogeneous molecules [5] with a solid support [6] fabricating insoluble heterogeneous catalytic systems is an efficient strategy in order to achieve the isolation and separation of catalysts. However, the activities of conventional heterogeneous catalysts are generally lower than those of their homogeneous counterparts, due to the lower dimensionality of the interaction between the components and the catalyst surface.

To overcome these issues, use of magnetic nanoparticles (MNPs) appears to be the most logical solution [7]. Magnetic nanocatalysts are simply and efficiently removed from reaction mixtures with an external magnetic field, and MNPs have emerged as ideal catalysts or supports [8]. The applications of magnetic materials with good reproducibility in heterogeneous catalysis have been widely reported [8,9]. Both MNPs and functionalized MNPs are capable of catalyzing various reactions and are easily separated from the reaction systems.

Catalytic hydrogenations are among the most important and widely accessed transformations in the chemical industry [10,11,12]. If molecular hydrogen is used and the catalyst is recyclable, this method is atom economic and arguably the cleanest possible way to reduce an organic compound. Selective hydrogenation of alkynes to alkenes, without further reduction to alkanes, is of great significance in the production of polymers as well as the synthesis of fine chemicals. Homogeneous catalysts of transition metals like Ni, Pt, Pd, Rh, Ru etc. are widely used in hydrogenation reactions as they show greater selectivity than other transition metals.

3. APPLICATIONS IN HYDROGENATION REACTIONS OF C=C AND C=O

3.1. Use of Pd Nanocatalyst:

Among the transition metals Pd is the most powerful and widely used for hydrogenation reaction of carbon-carbon multiple bonds because of its greater selectivity and higher reaction rates.[13] Li. et al. successfully prepared a palladium-based catalyst supported on chitosan magnetite nanoparticles [Fig-1]. Bio-based polymers like chitosan possesses a great quantity of hydroxyl and amine groups, which can be coordinated with metal ions through chelate mechanism also they are natural, nontoxic and reproducible molecule. The catalyst [CS-Fe_3O_4-Pd] with average diameters of chitosan, Fe_3O_4, Pd nanoparticles are 200 nm, 7-12 nm, 7.2 nm showed great yield of 92-98% with a reaction time of 30-60 min under 1 atm H_2 in ethanol at room temperature. Moreover, the catalyst was easy to recycle and was found to reusable up to seven times.

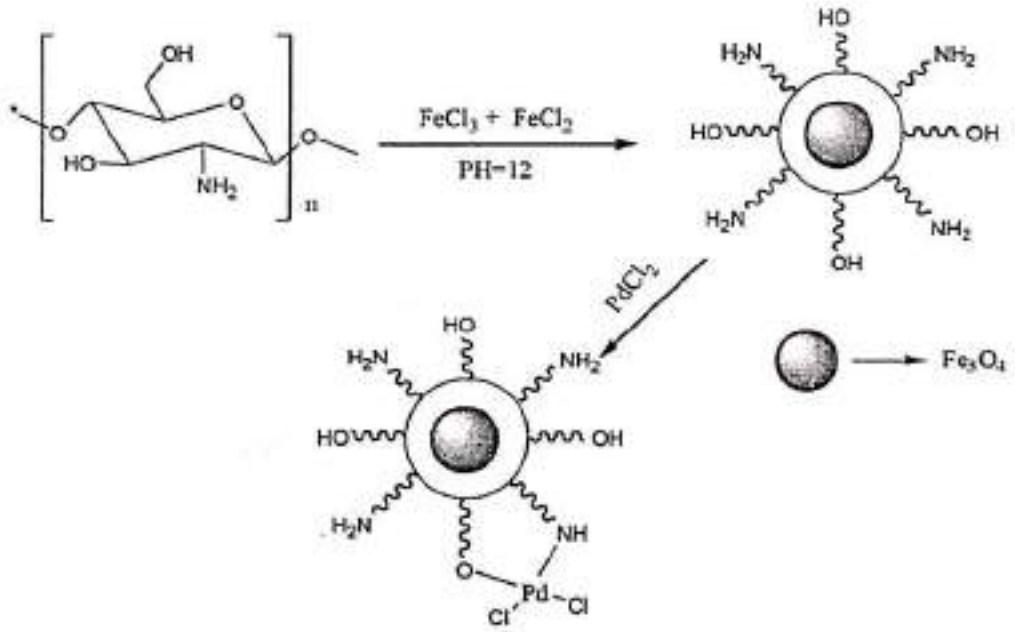


Fig-1: Scheme of the synthetic procedure for the preparation of CS-Fe_3O_4-Pd magnetic catalyst

[14] Reiser et al. deposited a series of Pd NPs with diameters ranging from 2.7 to 30.4 nm onto the surface of Co@C NPs using $Pd_2(dba)_3 \cdot CHCl_3$ as precursor under microwave irradiation. A trend to smaller Pd NPs as well as an increased dispersion by decreasing the Pd content in the nanocomposite was observed. Considering trans-stilbene as the test substrate they found a very high TOF (3845 h^{-1}) than any other reported Pd nanocatalysts, also commercial reagent like Pd/C catalyst. the catalytic activity was significantly enhanced adding 10% Et_2O[Fig-2]. [15] Uses of ionic liquids (ILs) significantly stabilize the Pd NPs, increase their recyclability and had minor metal leaching into the product. Notably, the activity of this catalyst increases with an enhanced Pd loading, contrasting related systems for which a decrease of

activity is observed due to agglomeration. Major loss of activity was not observed until 11-th run compare to previous catalysts effective up to 7-th runs.

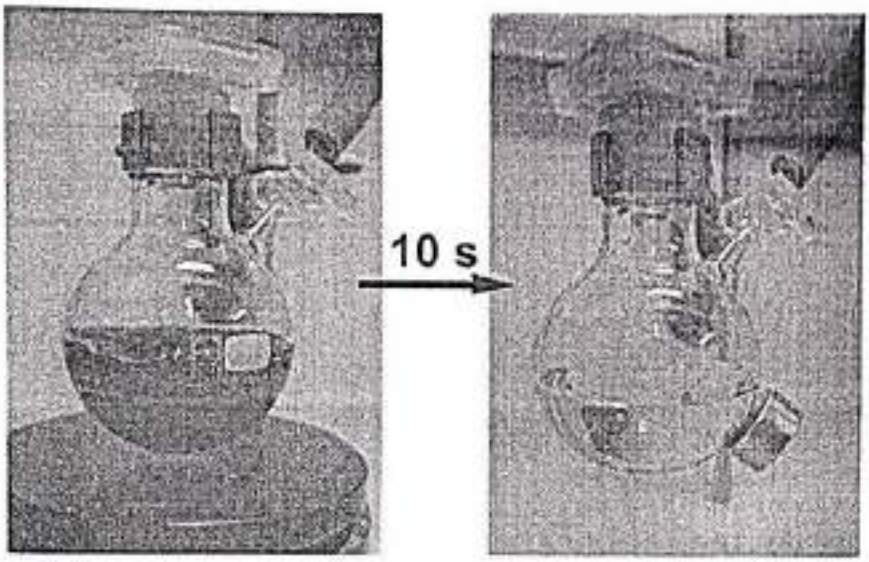


Fig-2: The Co@C-Pd catalyst can be recovered by an external magnet within seconds

[16] The aim of improving the stabilization of supported-palladium nanoparticles resulted to designing of a hybrid terpyridine ligand to functionalize a magnetic support constituted of magnetite cores surrounded by a silica shell. The stabilizing capability, dispersibility and catalytic activities are compared to other stabilizing group like amine, chlorine and also with non-functional MNP. TEM analysis conformed both non-functional and chloride functional catalysts formed large aggregates of Pd NPs onto the surface [Fig-3]. Amine functionalize MNPs and tpy functionalize MNPs displayed deposition of Pd NPs of narrow sizes at 1.8 ± 0.4 nm and 2.5 ± 0.6 nm respectively. The pre-activated catalyst upon reuse reached a TOF of 129000 h^{-1} for the hydrogenation of olefins using model substrates such as cyclohexene.

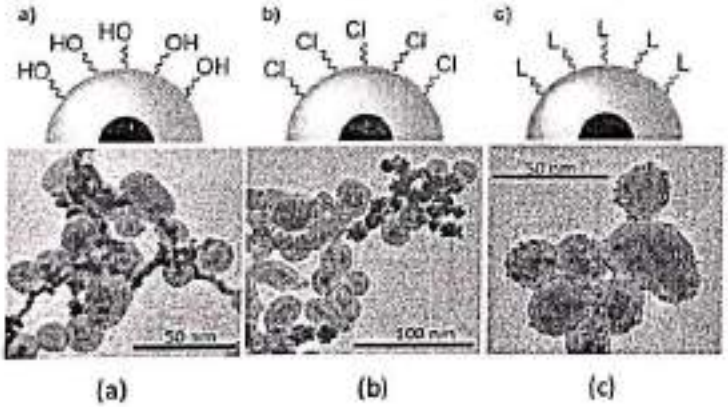


Fig-3: TEM micrographs of palladium deposited on the three different supports: (a) SPd, (b) S_OPd and (c) S_LPd (L=tpy)

A key challenge in developing hydrogenation reactions of alkynes is to stop the reaction at the alkene, further reaction will produce alkanes.[17] To address this problem, Hur. et al successfully synthesized a dual catalyst containing Pd and $CuFe_2O_4$ nanoparticles in a silica shell [Fig-4]. This SiO_2@$CuFe_2O_4$–Pd catalyst showed a higher percentage of conversion (98%) and selectivity (98%) than commercially used Lindler's catalyst (conversion 82% and selectivity 92%), taking phenyl acetylene as test substrate. Primary investigation suggested both the magnetic $CuFe_2O_4$ NPs and Pd NPs are responsible for the activity of the catalyst.

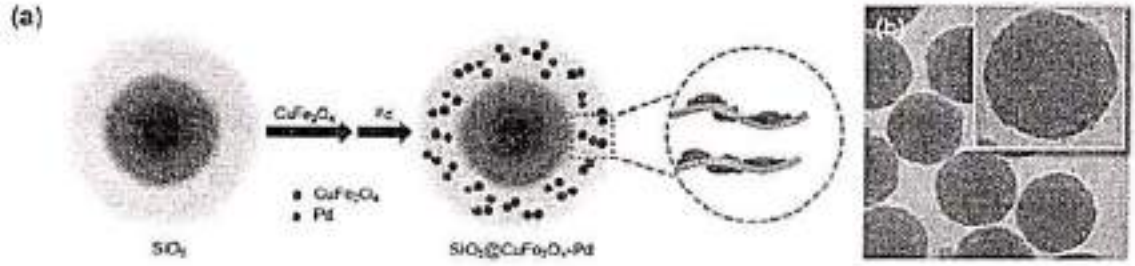


Fig-4: (a) Schematic procedure for the preparation of SiO_2@ $CuFe_2O_4$–Pd. (b) High-resolution TEM image of SiO_2@$CuFe_2O_4$–Pd. The inset is the enlarged view of the TEM image.

[18] Attempts had been taken for reduction of alkynol to enol, for the first time Rossi. et al reported reduction of 3-butyl-1-ol to 3-butene-1-ol using Fe_3O_4 NPs functionalize with –NH2 group as Pd NPs support. Competitive hydrogenation experiments showed preferential adsorption of the C-C triple bond over C-C double bonds.[19] Browstein. et al. exploited commercially available functional acids containing multiple double bonds such as linolenic (LLA) and linoleic (LEA) acids or pyridine moieties such as 6-methylpyridine-2-carboxylic acid(MPCA), iso-nicotinic acid(INA), 3-hydroxypicolinic acid(HPA), and 6-(1-

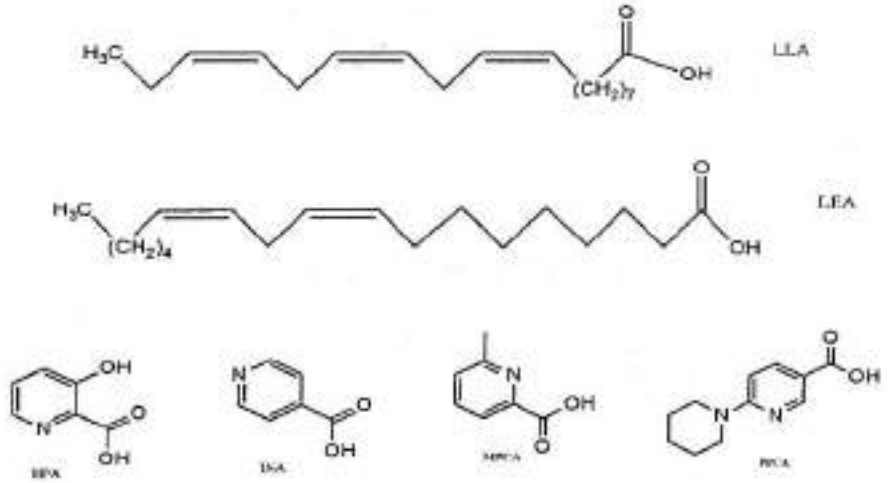


Fig-5: Formulas of Commercially Available Functional Acids

piperidinyl)pyridine-3-carboxlic acid (PPCA)[Fig-5]. Among them Fe_3O_4-LLA-$PdCl_2$, Fe_3O_4-LEA-$PdCl_2$ and Fe_3O_4-PPCA-$PdAc_2$ was found promising in terms of TOF (7.9 mol.s^{-1},7.4 mol.s^{-1} & 6.3 mol.s^{-1}) in the reduction of dimethylethynylcarbinol (DMEC) to dimethylvinylcarbinol (DMVC). Both Fe_3O_4-LLA-$PdCl_2$[Fig-6] and Fe_3O_4-LEA-$PdCl_2$ form aggregates, which allow fast magnetic separation. In the recyclability test, Fe_3O_4–LLA–Pd showed an excellent capability to be magnetically collected, a slightly increased selectivity, and only a marginally decreased TOF value in the second reaction cycle.

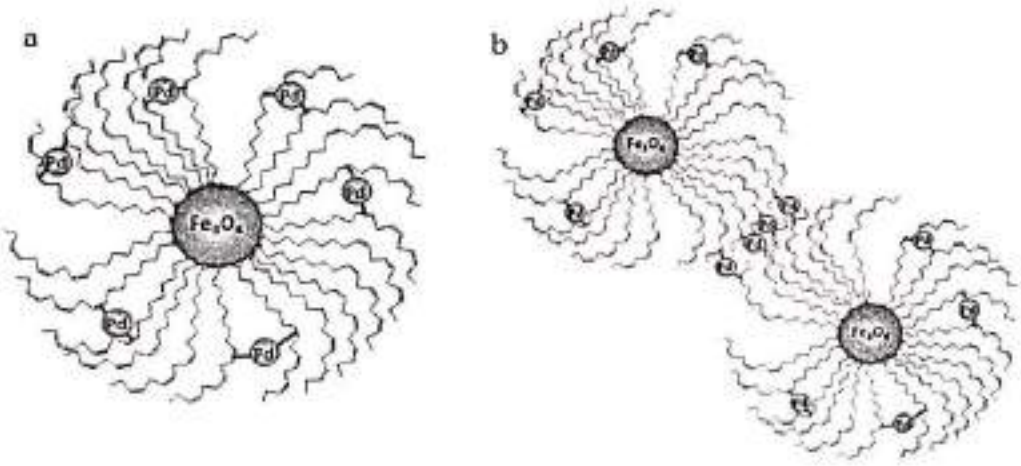


Fig-6: Schematic Representation of (a) Intraparticle and (b) interparticle Fe_3O_4-LLA-Pd Complexation

In recent years porous organic polymer (POP)-based materials got a significant attention owing to their high specific surface area, high chemical and thermal stability, and tunable pore size.[20] For the first time J Yang et al. successfully designed and synthesized a stable magnetic core–shell Fe_3O_4@PDA@POP

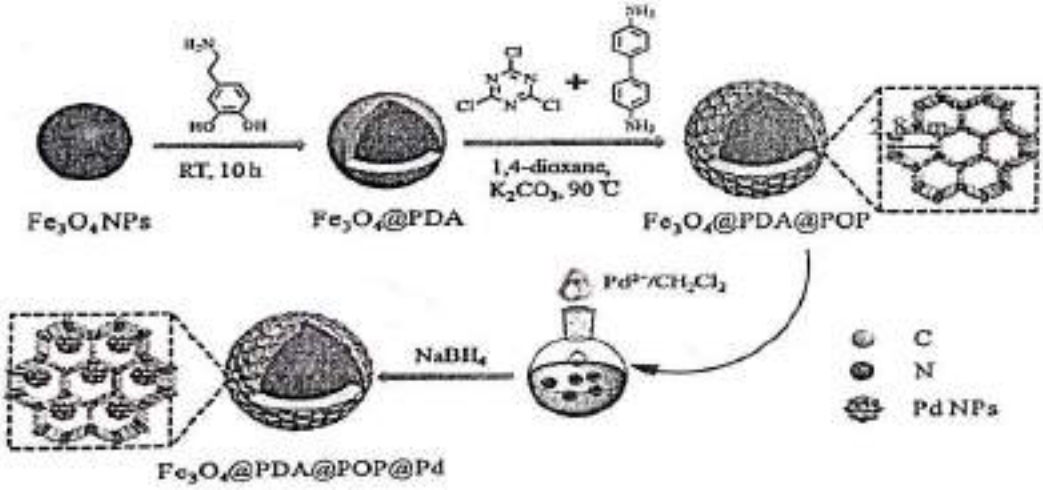


Fig-7: Schematic illustration for fabrication of Fe3O4@PDA@POP@Pd catalyst

material. The intermediate layer of dopamine (PDA) contains large number of amino groups, made it possible to cover POP on the surface of MNPs by providing stability in the solution. Fe_3O_4@PDA@POP-Pd catalyst with 3% Pd loading showed almost 100% selectivity and 100% conversion in hydrogenation of different olefins and alkynes.

[21] Xu et al. reported a noble Magnetically Recoverable Ni-CeO_{2-x}/Pd nanocatalyst, utilized CeO_2 having oxygen deficiencies, as support for noble metal nanoparticles. High magnetic property of Ni NPs and increased catalytic activities when combined with Pd NPs encourages to explore them in hydrogenation reactions of unsaturated group like olefins and nitroaromatics. Catalysts with different Ni and Pd loading were synthesizes, among them the 61 wt%Ni-CeO_{2-x}/3 wt% Pd catalyst exhibits outstanding catalytic and recycle performance in the hydrogenation of styrene. The TOF value is found to have 6827 $mol_{styrene}$.

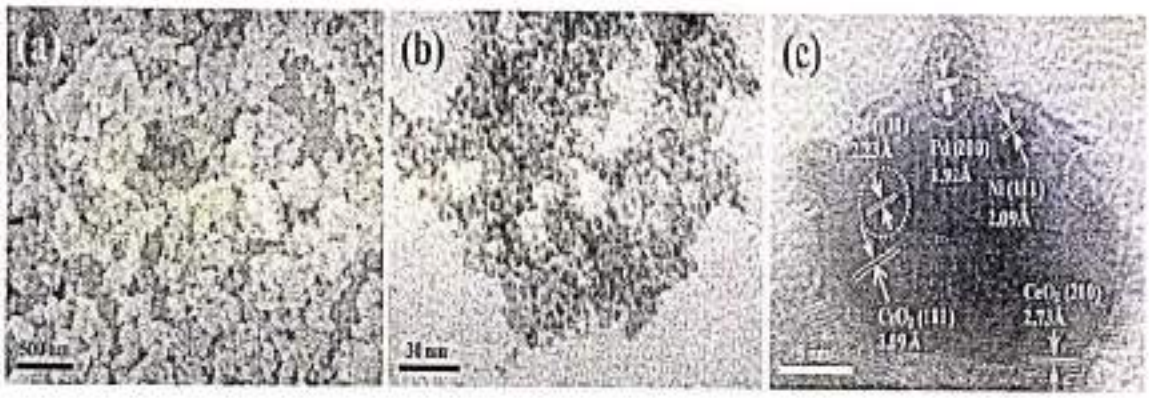


Fig-8: (a) SEM, (b) TEM, (c) HRTEM images of 61 wt%Ni-CeO_{2-x}/3 wt% Pd catalyst

.$mol_{Pd}^{-1}.h^{-1}$ and 2.43 $mol_{styrene}.h^{-1}.g_{catalyst}^{-1}$, which was even superior to many state-of-the art noble metal catalysts reported previously. The catalyst showed 100% conversion of styrene to ethyl-benzene within 30 min and can be recycled to eight times with negligible decline in activity. The excellent performance of Ni-CeO_{2-x}/Pd nanocatalyst can be mainly attributed to – (a) the strong metal-support interaction between Ni NPs, Pd NPs and oxygen deficient CeO_{2-x} support facilitates electron transfer during the hydrogenation reactions, (b) Ni species could form charge-transfer complex with benzene ring, which could strengthen the interaction between reactant and catalyst surface, thus promoting the hydrogenation performance of catalyst.

Metal-Organic frameworks (MOFs), consisting of metal clusters and bridging organic linkers could be used as support for noble metal nanoparticles due to their tunable porosity and adjustable chemical properties.[22] Bian et al. prepared core– shell-structured Fe_3O_4/Pd@ZIF-8 catalyst by sonication of Fe_3O_4/Pd microspheres in poly(styrenesulfonate, sodium salt) (PSS) aqueous solution. To understand the catalytic role of ZIF-8 having ordered microporous structure with pore size 3.4 Å, a series of experiment was conducted taking 1-Hexene (pore size 1.7Å), cyclohexene (pore size 4.2Å) and cyclooctene (pore size 5.4 Å). Fe_3O_4/Pd@ZIF-8 showed about 85% conversion of 1-Hehexene within 30 min. Due to mole-

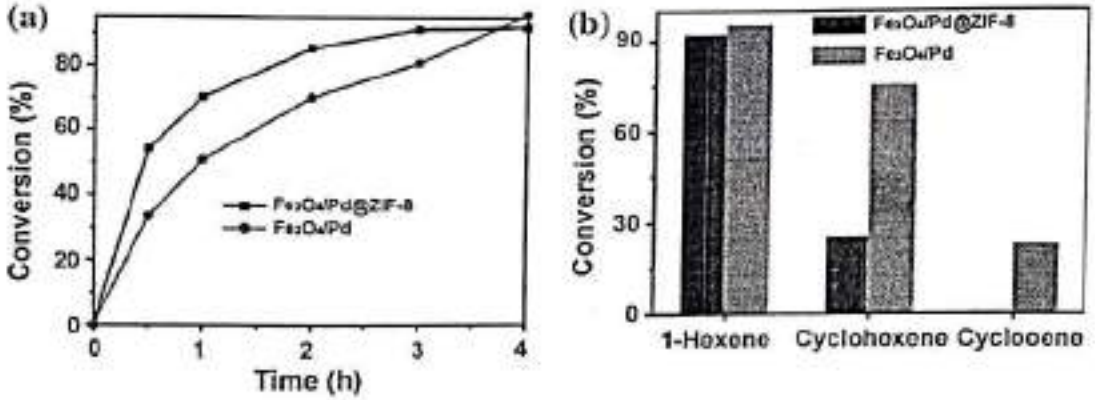


Fig-9: (a) Conversions of 1-hexene as a function of reaction time. (b) Catalytic performances of Fe_3O_4/ Pd@ZIF-8 and Fe_3O_4/Pd catalysts for the liquid hydrogenation of 1-hexene, cyclohexene and cyclooctene.

cular size of cyclohexene and cyclooctene than pores of ZIF-8, it shows very little conversion, demonstrated that the Fe_3O_4/Pd@ZIF-8 possesses good size selectivity in the liquid-hydrogenation of alkenes. Also, the catalyst performed more than 85% conversion even at its 4-th recycle, explained its recycling stability.

[13] Zhang and coworker's reported fabrication of magnetic Void nFe_3O_4@Pd/ZIF-8@ZIF-8 hollow nanospheres with double-shell structure using polystyrene-co-acrylic acid nanosphere as templets. Both Pd NPs and Fe_3O_4 NPs are incorporated into the inner ZIF-8 shell and the outer shell were used as protector to reduce Pd leaching and to achieve size selectivity. The catalyst showed 100% conversion of

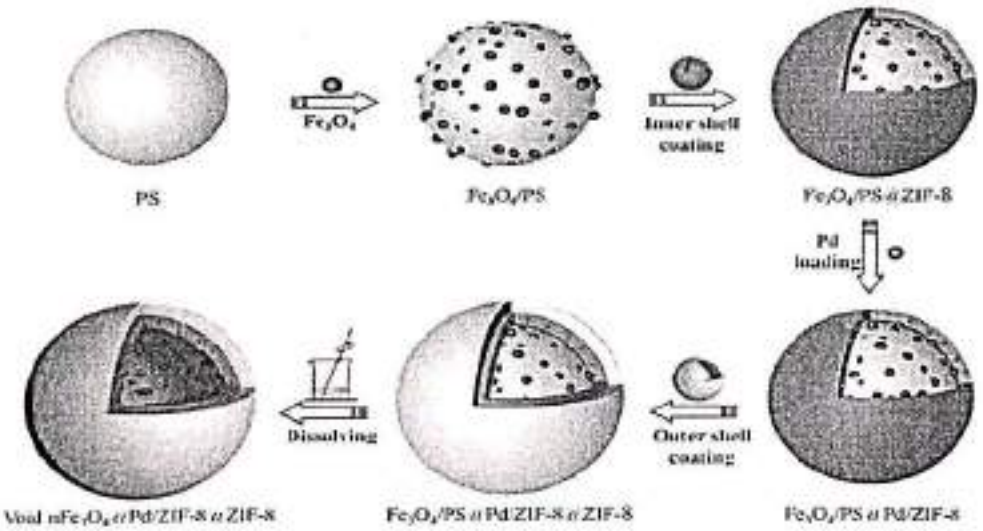


Fig-10: Schematic illustration for the Fabrication of Void nFe_3O_4@Pd/ZIF-8@ZIF-8

styrene in just 5 mins and 83.6% conversion of cis-stilbene in 6 hours. Remarkable recycling capability was achieved as around 85% of activity was retained by the catalyst at 20-th cycles. Excellent mass transfer accelerated by the big cavity and the hollow double shell structure were the responsible factor for the recyclability and high activity for the hydrogenation of styrene at room temperature.

3.2. Use of Pt Nanocatalyst:

Platinum is also widely employed as an active hydrogenation catalyst. Different Pt species can be supported on a series of magnetic materials to make them magnetically recoverable. [24] Jaciento et al. have prepared Pt NPs on the surface of amino modified silica-coated magnetite NPs (Fe_3O_4-SiO_2-NH_2) using a reverse micro-emulsion method [Fig-11]. These materials exhibited extraordinary catalytic activity in the hydrogenation of alkenes; a wide range of substrates reacted efficiently with full conversions and prominent TOF under mild conditions. Notably, all substrates were successfully converted to their completely saturated forms, even those containing aromatic rings. In the

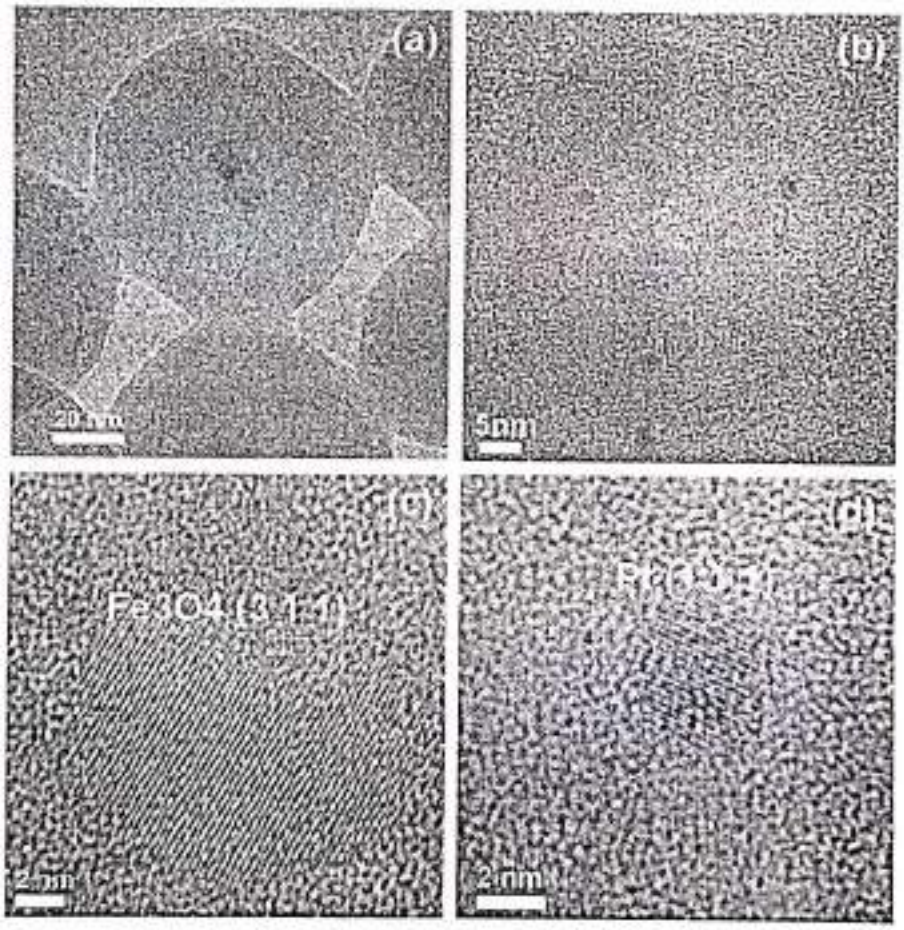


Fig-11: (a) TEM Image of the catalyst support, (b) TEM Image of the spent catalyst, (c) HRTEM image of the magnetic NPs and (d) HRTEM image of the Pt(0) NP.

Catalytic reduction of ketones to the corresponding alcohols, the reaction reached >99% conversion with a turnover number of 1200 h^{-1} for all substrates after a maximum reaction time of 2.2 h, with high TOF under mild conditions. This Pt catalyst could also be reused up to 7 and 14 times in the hydrogenation of benzene and 3-pentanone, respectively, without any significant loss in activity. These results account to a total accumulated TON of 8400 for benzene and 15 600 for the ketone. Meanwhile, the analysis of the product collected from all batches in the hydrogenation of 3-pentanone and benzene showed that only negligible Pt content was present in the organic phase (Pt < 0.01 ppm) for both hydrogenation reactions, indicating that there was no leaching of the active species under the investigated reaction conditions. This stability found for these Pt-based materials may be due to the amine binding sites anchored on the silica surface for metal retention.

Pt nanoparticle-based MSCs could also be extended to catalytic enantioselective hydrogenation reactions, providing an alternative for catalytic asymmetric synthesis. [25] This chirally active catalytic system was derived from a $Pt/SiO_2/Fe_3O_4$[Fig-13] matrix and Pt was supported on the surface of silica-coated Fe_3O_4 nanoparticles [Fig-12] through wet impregnation. The $Pt/SiO_2/Fe_3O_4$ was eventually chirally modified using cinchonidine(CHD)[Fig-13].This asymmetric catalytic system showed good catalytic

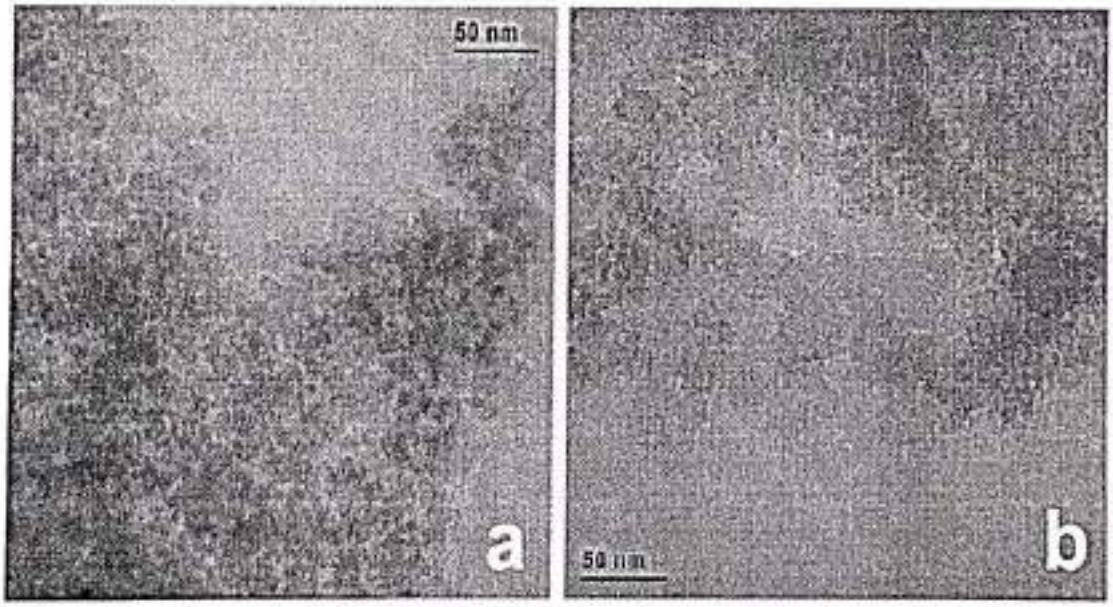


Fig-12: TEM images of (a) magnetite nanoparticles, (b) silica coated magnetite nanoparticles

performance in the hydrogenation of (R)-ketoesters and fluorinated ketones (exhibiting results similar to the commercial Pt/Al_2O3 catalyst). In the hydrogenation of ketopantolactone, the catalyst was magneti-

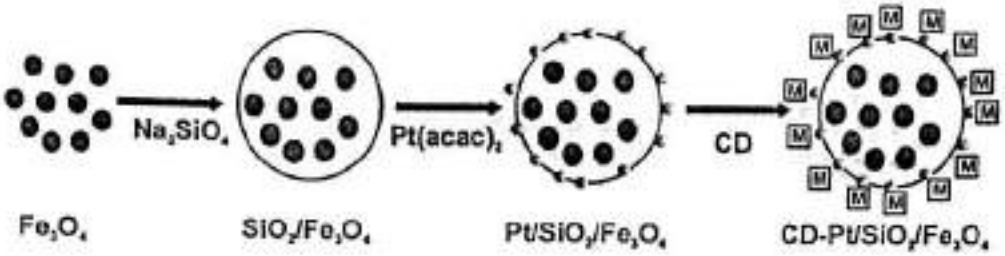


Fig-13: Preparation of the magnetic, chirally modified Pt/SiO₂/Fe₃O₄

cally separated from the solution after each reaction cycle, washed twice with toluene, and reused without further activation. The enantioselectivity only slightly decreased from ee = 57% (first run) to a final value of ee = 52% (after the eighth reaction cycle). Pt and Fe species were not detectable in solution during the reaction.

[26] Wang et el. successfully designed and synthesized a nanoscale porous organic polymer (POP) composite microspheres consisting of an Fe_3O_4 supraparticle as the core and micro-/mesoporous POP as the shell. Using Fe_3O_4@PS microspheres as template a series of Fe_3O_4@POP were synthesized [Fig-14] with varying ratios of VBC to DVB. Calculated by the Barrett–Joyner–Halenda (BJH) model, Fe_3O_4@POP

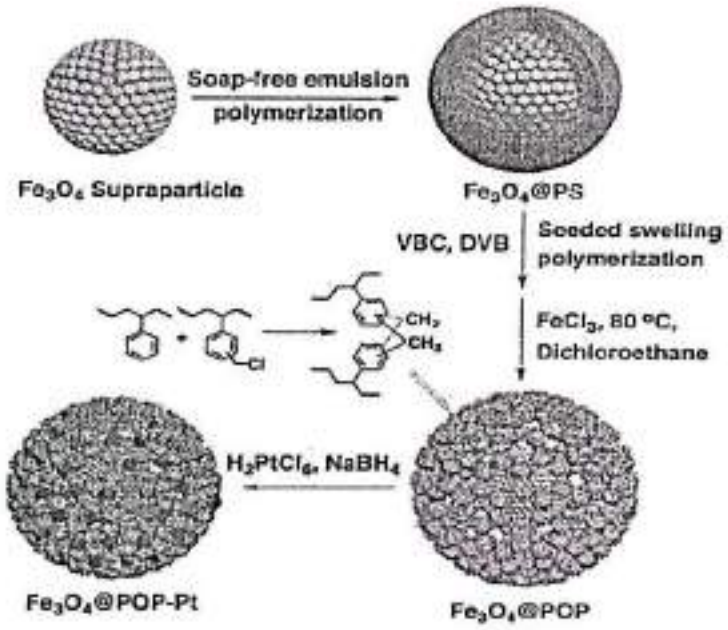


Fig-14: Schematic of the preparation of core–shell-structured Fe_3O_4@POP microspheres with the loaded Pt nanoparticles

with 30% wt (VBC to DVB) was found to have largest surface area of 477 $m^2 g^{-1}$ and the highest pore volume of 0.72 $cm^3 g^{-1}$. Pt nanoparticles impregnation was done by reducing adsorbed Pt^{4+} particle by strong oxidizing agent NaBH4, which renders nanocatalyst aggregation. In the hydrogenation reaction of

ethyl pyruvate to ethyl lactate a higher 99.9% conversion was observed with 80.7% enantioselectivity (R-ethyl lactate) compared to commercially used Pt/Al_2O_3(1% wt) catalyst showed 99.8% conversion with 54.9% enantioselective. The reusability experiment revealed almost 5% drop in enantioselectivity upon 6-th cycle.

3.3 Use of Ru Nanocatalyst:

Ruthenium complexes are very selective and shows excellent performance in asymmetric hydrogenation, especially for ketones. [27] The ruthenium(II) complex [Ru(BINAP)(DPEN)Cl_2] was modified by introducing phosphonic acids to link the complex to the magnetite NPs via a phosphorus group. This phosphonic acid- substituted BINAP [Ru(BINAP-PO_3H_2)(DPEN)Cl_2] was synthesized by treating [Ru(benzene)Cl_2]^2 with (R)-2,2'-bis(diphenylphosphino)-1,1'-binaphthyl-4-phosphonic acid (BINAP-PO_3H_2), followed by (R,R)-1,2-diphenylethylenediamine (DPEN) in DMF at elevated temperatures[Fig-16]]. The treatment of this complex with Fe_3O_4 by ultrasonication resulted in the [Ru(BINAP-PO_3H_2)(DPEN)Cl_2] moieties being chemically bonded to Fe_3O_4. This catalyst was then used for the hydrogenation of a wide range of aromatic ketones to their corresponding secondary alcohols and exhibited high reactivity and enantioselectivity. The enantiomeric excess (ee) values were significantly higher than those of the parent homogeneous catalyst [Ru(BINAP)(DPEN)-Cl_2] and were comparable to

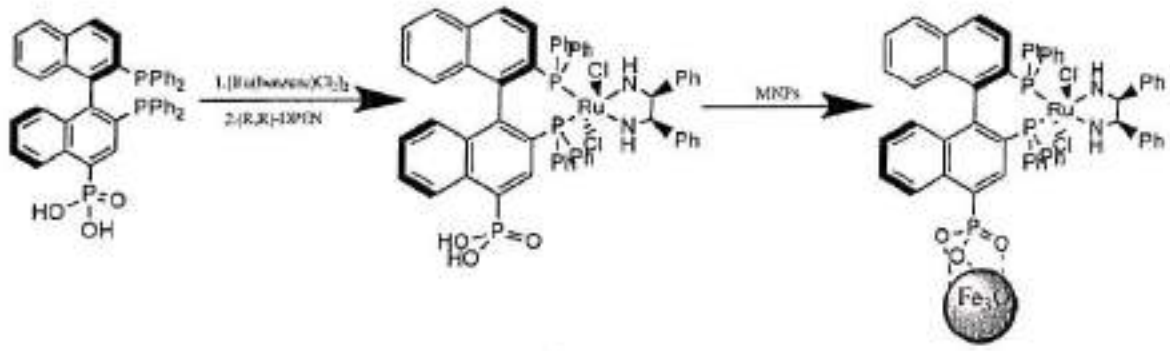


Fig-16: Immobilization of Chiral Ru Catalyst on Magnetite Nanoparticles

the values of its homogeneous counterpart. The stability of the recovered catalyst was investigated in the asymmetric hydrogenation of 1-acetonaphthone. In this reaction, the catalyst could be recycled 14 times with no decrease in conversion and/or enantiomeric excess. However, the MSCs tend to aggregate slightly, presumably because the [Ru(BINAP-PO_3H_2)(DPEN)Cl_2] moieties on the MNP surfaces are less effective in preventing the aggregation of the MNPs than that of widespread coating agents such as oleic acid.

[28] Verma et el. reported a one-pot synthesis of ruthenium nanoparticles on magnetic silica for transfer hydrogenation reactions of carbonyl compounds. MNPs-supported Ru NPs were readily prepared through tandem generation of Fe_3O_4@SiO_2 and immobilization of Ru NPs in one pot [Fig-17]. Hydrogenation of acetophenone was successfully achieved with over 99% yield using KOH as base in the presence of a catalytic amount of Fe_3O_4@SiO_2–RuNPs at 100 °C in isopropanol under MW irradiation

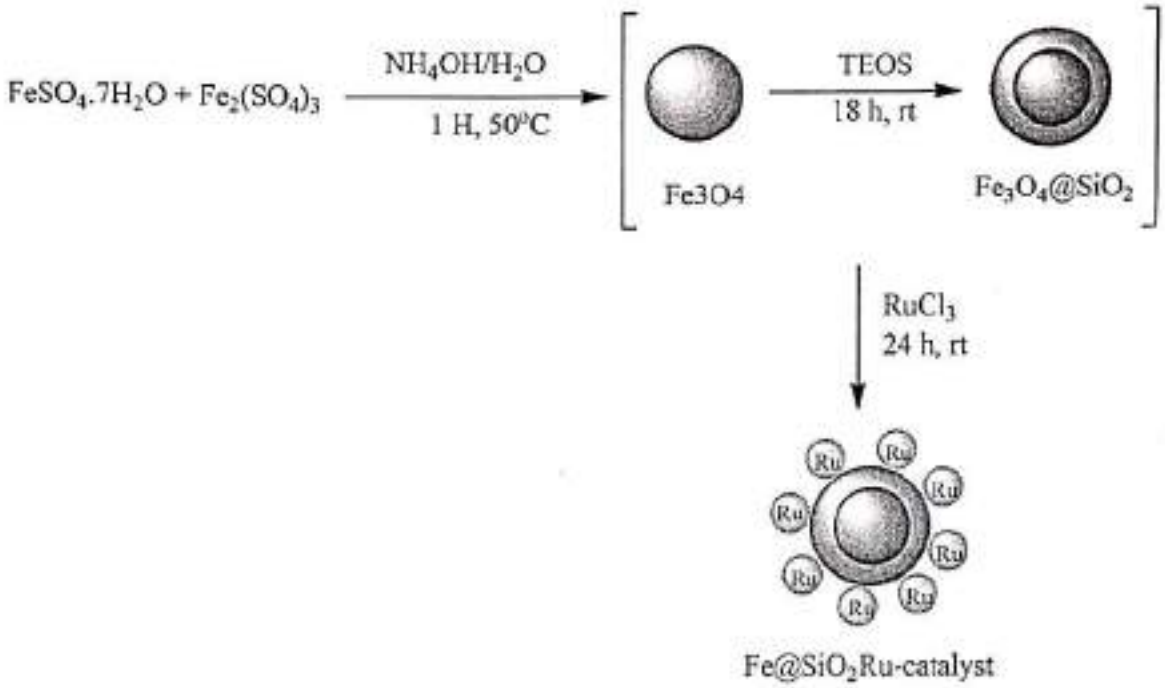
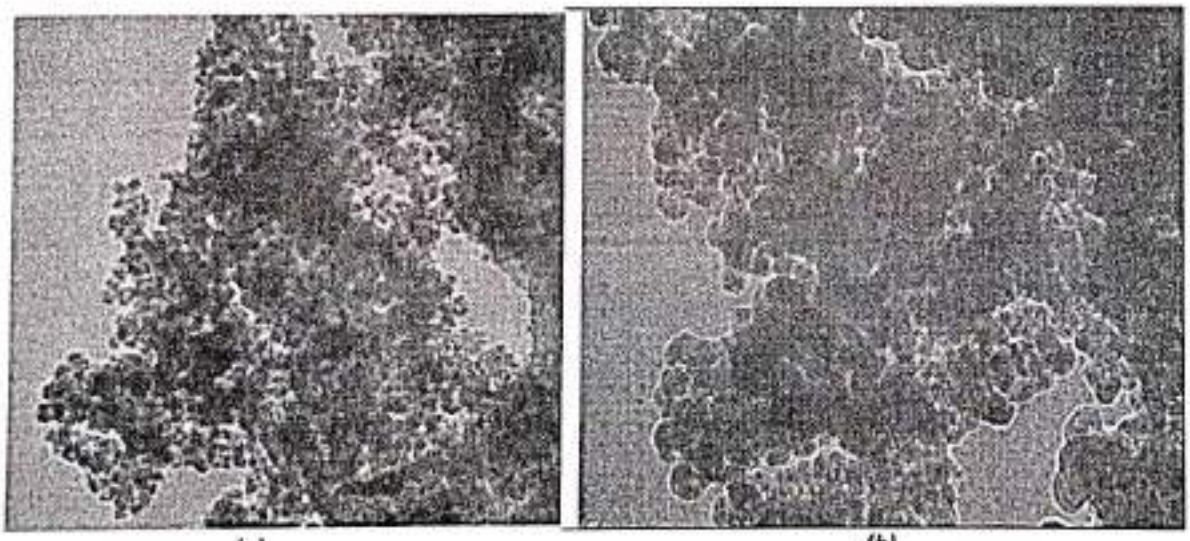


Fig-17: One pot Synthesis of Nano-Fe@SiO_2Ru Catalyst

within 30 min. A series of acetophenone derivative with different aromatic substituents was tested to investigate the scope of the catalyst and found to had 69-88% product yield. Fe_3O_4@SiO_2–Ru NPs [Fig-18] was magnetically collected and reused at least three times without a decrease of activity. Moreover, only 0.08% of Ru leached from initial catalyst after three reaction cycles.



(a) ***(b)***

Fig-18: TEM Image of (a) Fe_3O_4@SiO_2–Ru and (b) recycled catalyst

Another recoverable ruthenium catalyst for asymmetric hydrogenation was prepared by Li and colleagues.[20] This catalytic system was derived from a RuTsDPEN complex [TsDPEN = N-(p-toluenesulfonyl) 1,2-diphenylethylenediamine] that was immobilized onto a magnetic material. To prevent aggregation of the magnetic NPs (due to their small particle size), a siliceous mesocellular foam filled with magnetic Fe_2O_3 was used as a support for RuTsDPEN [Fig-19]. RuTsDPEN was grafted to the support via $SiCH_2CH_2$ links between the silica and the ligand. This heterogeneous catalyst afforded 97-99% conversion and an ee value of 94% in the asymmetric transfer hydrogenation of imines in a HCOOH-Et_3N system (Scheme 10). Furthermore, this heterogeneous catalyst can be consecutively reused at least nine times, with ee (enantiomeric excess) values ranging from 94% to 90%. However, the reaction time had to be extended from 1.5 to 7 h to achieve comparable initial activities (99%) in subsequent runs. ICP analysis showed that an 11 mol % of ruthenium leached from the catalyst after nine runs, which indicated that the catalyst was partly decomposed upon subsequent reuses.

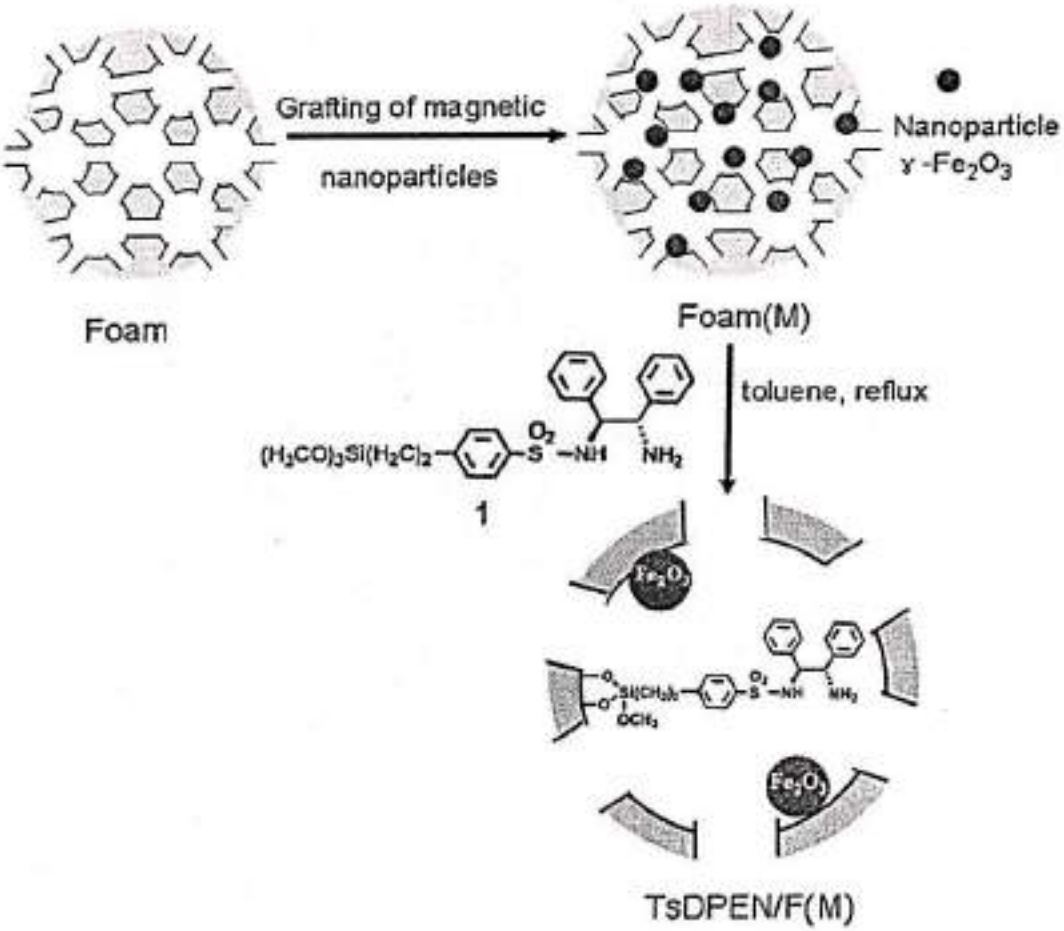


Fig-19: Schematic description of preparation of hybrid ligand TsDPEN

[30] C.J. Li, A Moores and co-workers prepared bimetallic Ru@FeCSNPs which was selective for ketones over aldehydes and nitroaromatics group. 2-propanol was used as the hydrogen transferring agent in

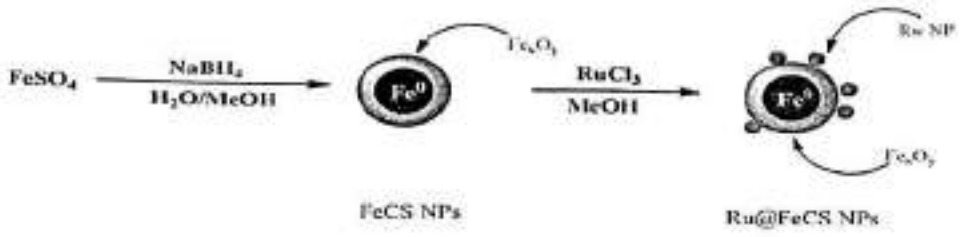


Fig-20: Synthesis of FeCS NPs and Ru@FeCS NPs by Galvanic Reduction

presence of base KOH. Temperature plays an important role in the hydrogenation reaction as yield was increased from 30% to 95% by increasing the temperature from 85°C to 100°C. Likewise, reaction with a series of substituted acetophenone derivative showed steric properties also slows the reaction rate. The catalyst was separated efficiently with an external magnet, only 1% decrease in yield was found upon 5-th cycle and also no NPs leaching was not found in the products.

3.4 Use of Rh Nanocatalyst:

Rhodium complexes are one of the early and widely used catalysts for transfer hydrogenation reactions, especially for carbon-carbon multiple bonds. Most of the catalysts are homogeneous required complex and time consuming method for product separation.[31] Immobilization of Rh(0) nanoparticles onto a magnetic NP was first reported by Jacinto et al. taking advantage of amino functionalized silica surface as stabilizer. The preparation of these catalysts was based on the uptake of Rh^{3+} by amino-functionalized

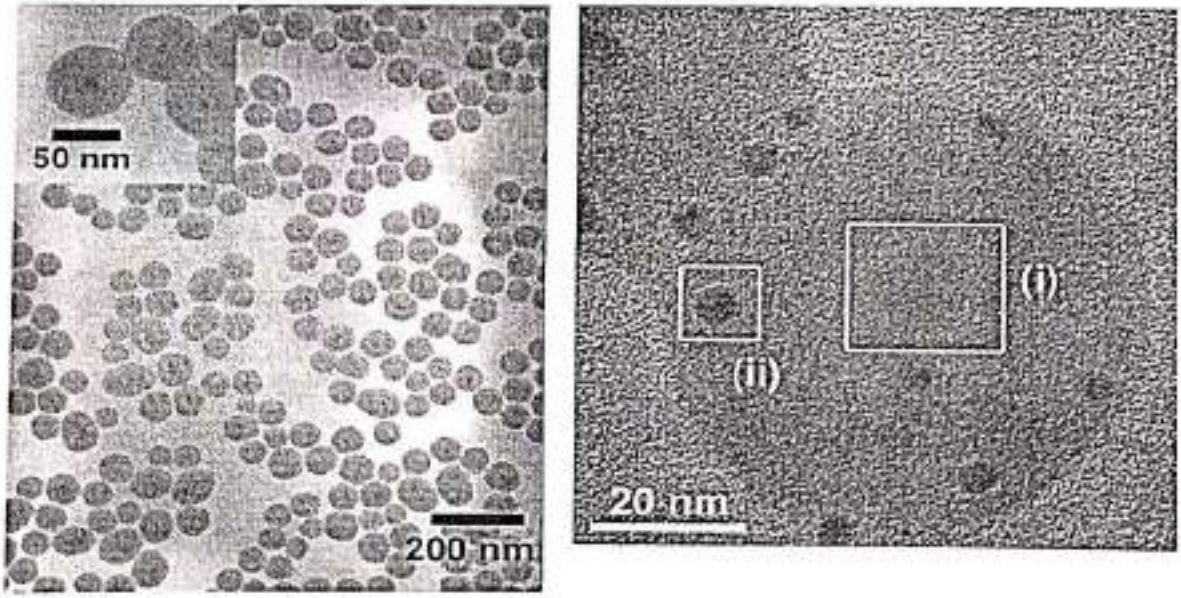


Fig-21: (a) TEM image of silica-coated magnetic particles (b) HRTEM image of the spent catalyst

silica-coated magnetic nanoparticles, followed by metal reduction under controlled H_2 conditions, leading to MNP formation [Fig-21]. Turnover frequencies (TOFs) as high as 40,000 h^{-1} and 1100 h^{-1} were obtained in the hydrogenation of cyclohexene and benzene at 75°C and 6 atm H_2 respectively. Also the magnetically separable catalyst could be reused for up to 20 successive batches without significant loss in catalytic activity, which resulted in a total TON of 180,000 and 11,550 for cyclohexene and benzene hydrogenation, respectively and leaching was found to <0.67 ppm after 20 successive batches.

[32] Immobilization of Rh(0) on silica coated magnetic NPs without any stabilizing group also achieved using surfactant-stabilized aqueous Rh^0 colloidal solution. The aqueous Rh^0 colloidal (Rh^0_{coll}) suspension was prepared by chemical reduction of an aqueous solution of rhodium chloride salt in the presence of water-soluble ammonium salts as stabilizing agents [Fig-22]. HEA16C gave the best metal loading as

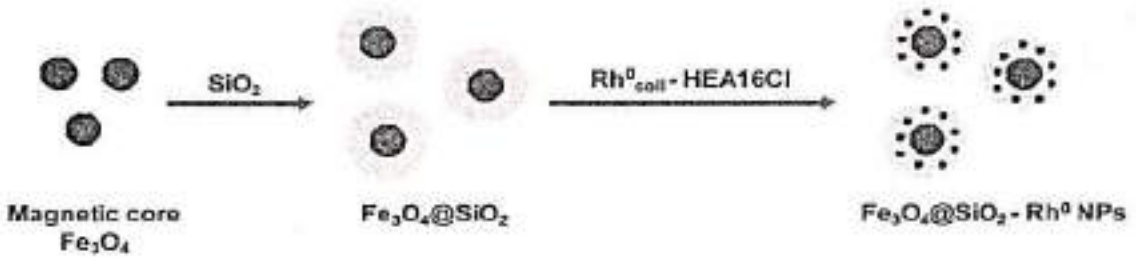


Fig-22: Preparation of Fe_3O_4@SiO_2-Rh^0 NPs

surfactant in the wet impregnation process. TOF of 143000 h^{-1} was found in the hydrogenation of cyclohexene within 0.3 h at 75°C and 6 bar of H_2. Various aromatic ring and olefins were hydrogenated within 6 h and with a high TOF.

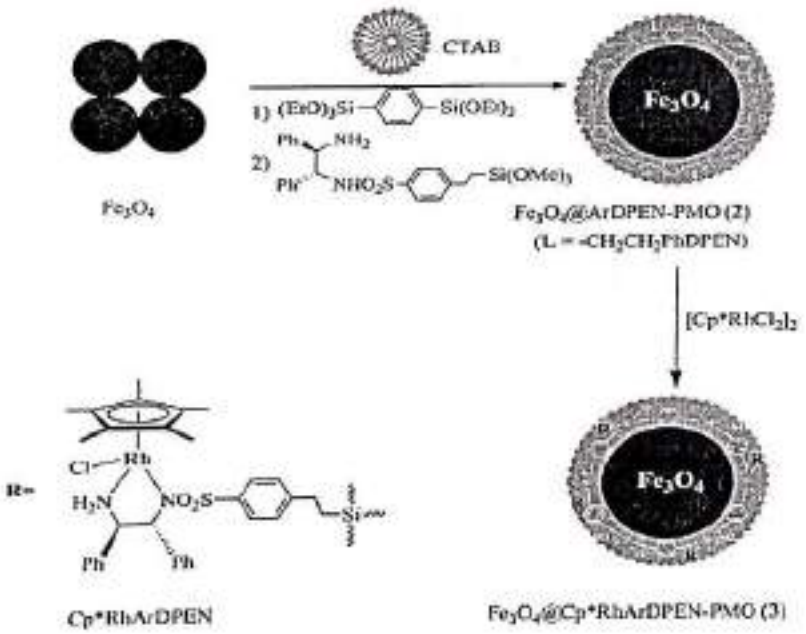
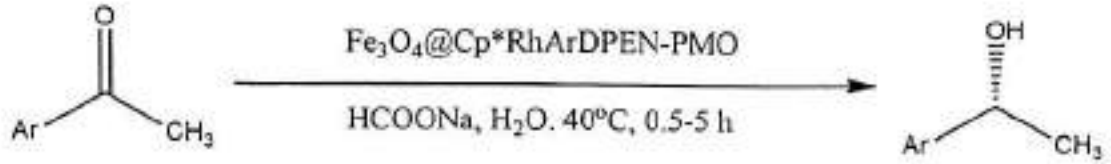


*Fig-23: Synthesis of the magnetic catalyst Fe_3O_4@Cp*RhArDPEN*

[23] Organo-rhodium-functionalized MNPs consisting of chiral 4-((trimethoxysilyl)ethyl)phenylsulfonyl-1,2-diphenylethylene-diamine, 1,4-bis(triethyoxysilyl)benzene, Cp*Rh fragment, and Fe_3O_4 NPs were designed and synthesized. The phenylene layer was then coated onto Fe_3O_4 by co-condensation of (S,S)-4-(trimethoxysilyl)ethyl)phenylsulfonyl-1,2-diphenylethylene-diamine and 1,4-bis (triethyoxysilyl) benzene by using cetyltrimethylammonium bromide (CTAB) as a template[Fig-23]. The catalytic behavior of the presented catalyst Fe_3O_4@Cp*RhArDPEN– PMO was examined by asymmetric transfer hydrogenation of aromatic ketones with different substituents. Reactions were conducted in presence of 50 equivalent of HCOONa in aqueous medium, providing the corresponding ethanol with quantitative conversion and high enantioselectivity (up to 96% ee). Taking acetophenone as test substrate, a



Entry	Ar	Conversion(%)	ee
1.	Ph	>99	96
2.	Ph	>99	96
3.	4-FPh	>99	94
4.	4-ClPh	>99	93
5.	4-BrPh	>99	93
6.	3-BrPh	>99	92
7.	4-MePh	>99	96
8.	4-OMePh	>99	95
9.	3-OMePh	>99	96
10.	4-CNPh	>99	86
11.	4-CF_3Ph	>99	93

Fig-24: Asymmetric transfer hydrogenation of aromatic ketones using Fe_3O_4@Cp*RhArDPEN-PMO

compared investigation showed that Fe_3O_4@Cp*RhArDPEN-PMO had a higher conversion than its homogeneous counterpart and comparable enantioselectivity. The high efficiency was attributed to the high hydrophobicity and the confined nature of the catalyst especially of the phenulene layer. In addition, after completion of the reaction, Fe_3O_4@Cp*RhArDPENPMO was easily separable using an external magnetic field and recycled for at least 10 runs without significant loss in activity toward conversion and enantioselectivity.

[34] Recently Kooti and Nasiri reported magnetic rhodium nanocatalyst for transfer hydrogenation reaction of ketones using Spinel ferrites like NPs $CoFe_2O_4$ the magnetic support. The nanocatalyst was synthesized by first fictionalization with 3-aminopropyltriethoxysilane of the $CoFe_2O_4$ nanoparticles then oxalyldihydrazide (ODH) was reacted followed by reduction of Rh^{3+} species to form the final catalyst $CoFe_2O_4$@Si-ODH-Rh [Fig-25,26]. The catalytic activity was investigated taking different acetophenone

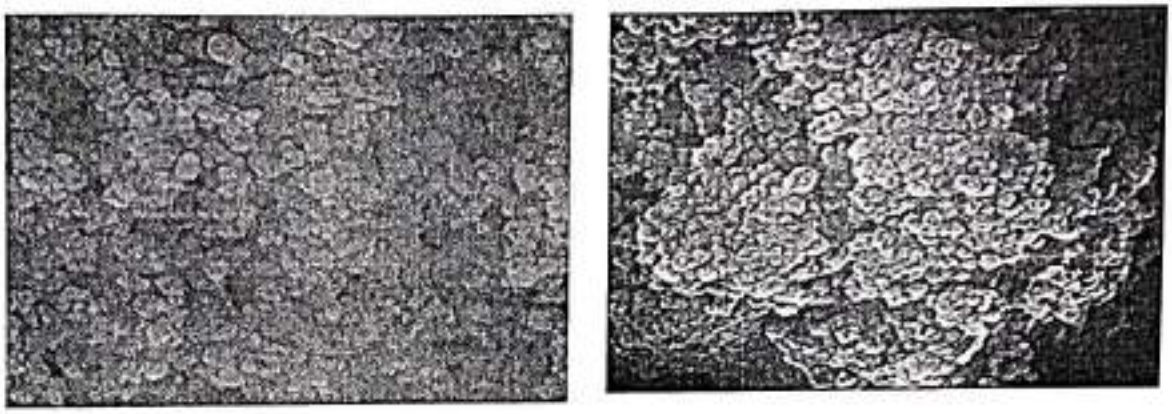


Fig-25: SEM Images of $CoFe_2O_4$ (A) and $CoFe_2O_4$@Si-ODH-Rh(B)

derivative was found to had a high yield in the range of 88-97%. Comparison with other available nanocatalysts showed $CoFe_2O_4$@Si-ODH-Rh took less time (1 h) to give a 95% yield at temperature 80°C,

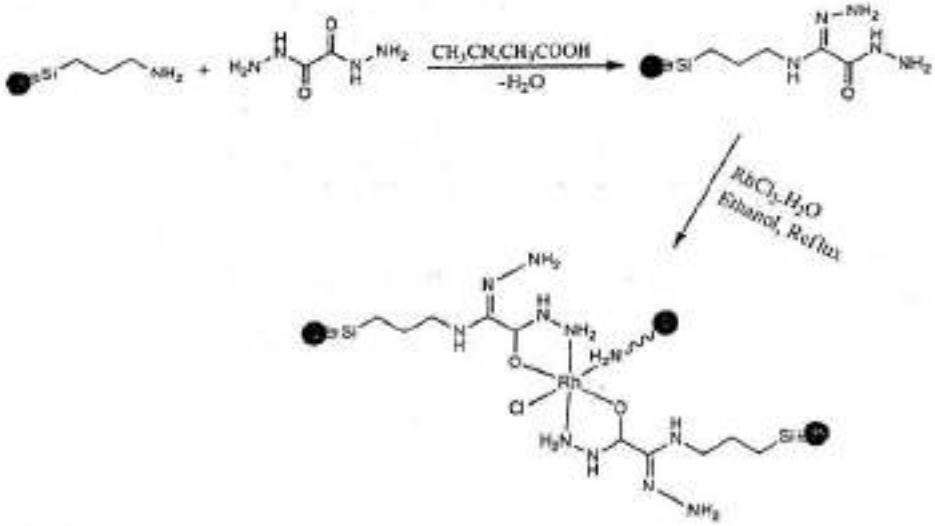


Fig-26: Synthesis of $CoFe_2O_4$@Si-ODH-Rh Nanocatalyst

in presence of base KOH and hydrogen transferring agent 2-propanol. Reusability is an important factor in the practical application of heterogeneous catalyst and should be considered. No significant decrease

in yield of the product was not found also only 0.34% Rh was lost after 5-th cycle, proved the efficient reusable property of the catalyst.

3.5 Use of Fe Nanocatalyst:

In industrial applications, the cost, toxicity, and potential depletion of noble metals have restricted their utilization as catalysts. Focus had been shifted to Fe NPs as a potential alternative. [35] Breit et al.

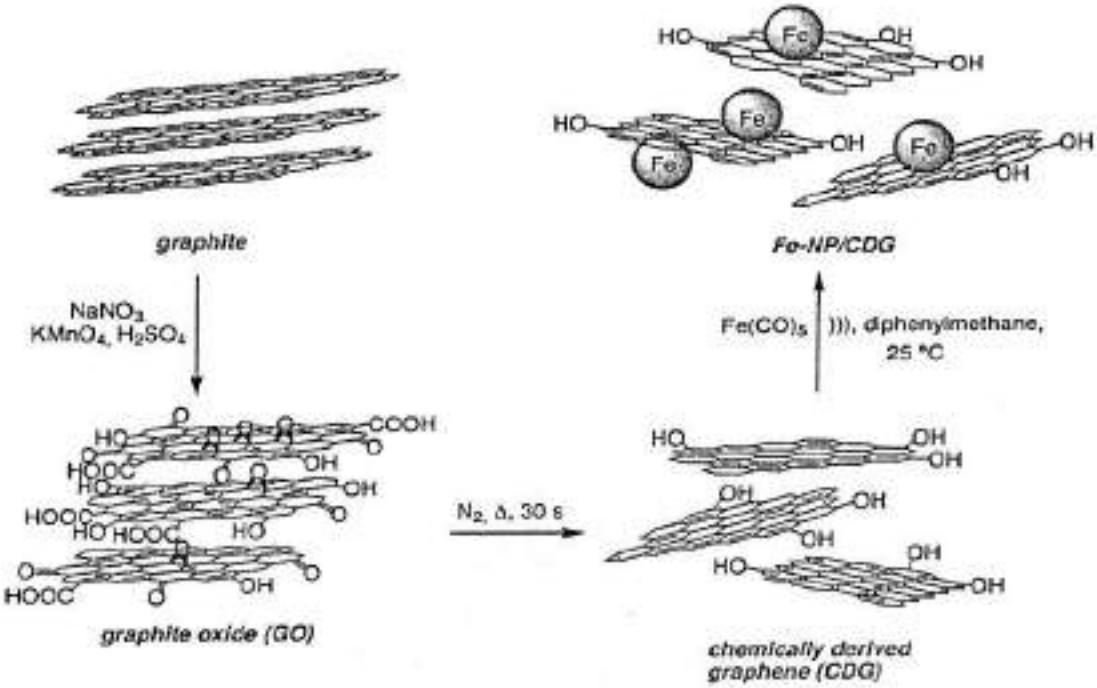


Fig-27: Synthesis of Fe-NP/CDG from graphite

synthesized and demonstrated iron nanoparticles supported on chemically-derived graphene (CDG) as hydrogenation catalyst [Fig-27]. The deposition of iron NPs on the functionalized graphene layers was achieved by sonochemical treatment of $Fe(CO)_5$ in a suspension of CDG in diphenylmethane at room temperature. Different olefinic substrate were reduced with a yield 73-100%. The catalyst was separated in an elegant manner by simple magnetic decantation and recycled without loss of activity.

[36] Magnetic Fe_3O_4 nanoparticles embedded in graphene oxide had been developed by A. Bhaumik and co-workers as a highly efficient and reusable heterogeneous nanocatalyst for alkene hydrogenation in EtOH at 80°C temperature using hydrazine hydrate as the hydrogen source [Fig-28]. Magnetically recoverable nanocatalysts Fe_3O_4@GO bearing 5 and 15 nm Fe_3O_4 particle sizes have been synthesized using a one-step hydrothermal process using graphene oxide and anhydrous $FeCl_3$ at 200°C for 4 h and 10 h reaction times, respectively.

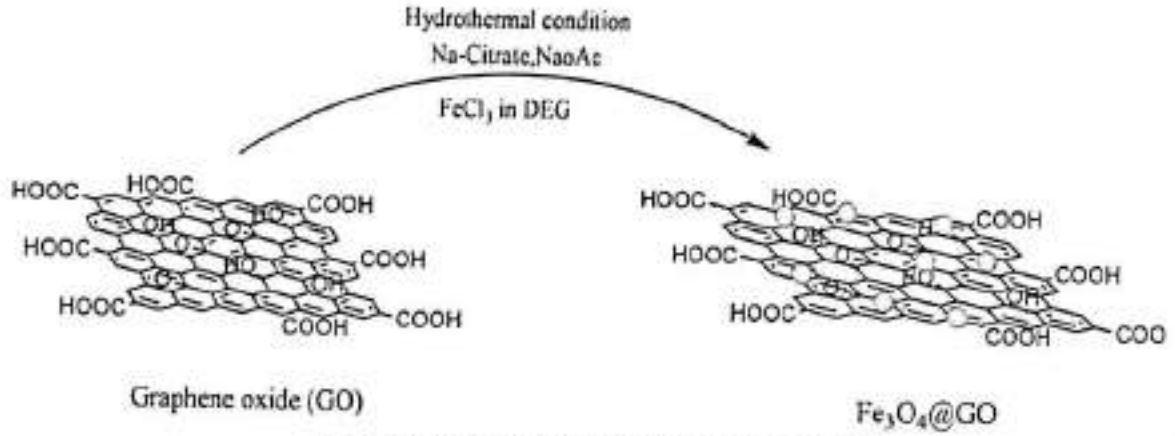


Fig-28: Synthesis of the Fe_3O_4@GO nanocatalyst .

[37] Moores et al. synthesized iron-iron oxide core–shell nanoparticles (Fe CSNPs) and tested for different alkenes and alkynes. The iron core consists of zero valent iron had an average diameter of 44 ± 8.3 nm and the iron oxide shell thickness was 6 ± 2 nm. 88-100% of conversion of the substrate to product was

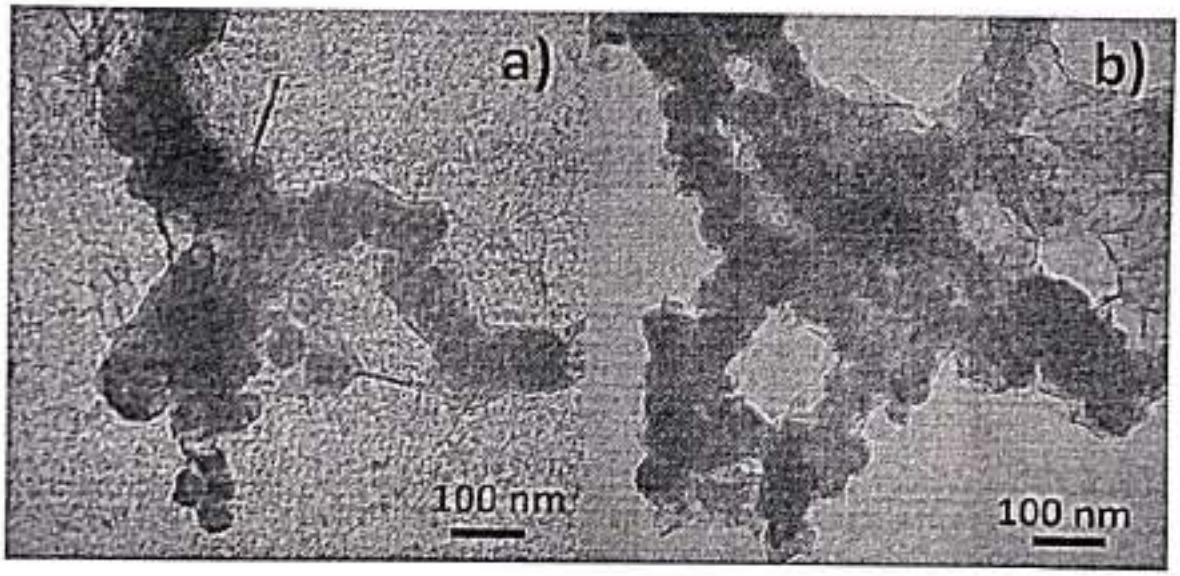


Fig-29: TEM pictures of Fe CSNPs (a) before catalysis, (b) after 10 cycles

obtained by Fe CSNPs under 40 bar H_2 at 80°C temperature taking ethanol as solvent. The catalyst was particularly selective towards carbon-carbon multiple bonds as no carbonyl and aromatic groups hydrogenation product was not found. At the same time oxidants like oxygen was found to decrease the activity of the catalyst with time as a thick layer of FeO was formed at the surface of NPs [Fig-29]. The proposed alkene hydrogenation mechanism involved zerovalent Fe NPs core as the real catalytic species. The iron oxide shell provided a substrate access to the surface of the core; the magnetic property was

provided by both the shell and the core. Investigation of the recyclability proved that the Fe CSNPs maintained the capability of promoting quantitative transformation of styrene to ethylbenzene in eight successive cycles.

[38] Graphitic carbon nitride($g\text{-}C_3N_4$) as a solid for Fe NPs in the hydrogenation reactions of olefins was first explored by N. Nadagouda et al. with the motive to use the most sustainable energy source: visible light. The photocatalyst was synthesized by immobilization of iron oxide (FeO) nanoparticle (reduction of grafted ferrous sulfate) inside the cage of graphitic carbon nitride (Graphitic carbon nitride has been synthesized without the generation of any hazardous product in pure form) [Fig-30]. Hydrazine hydrate was used as hydrogen source instead of H_2 as it offers easy handling and generates inert nitrogen gas as a sole byproduct. The stoichiometric ratio of iron oxide and $g\text{-}C_3N_4$ support was found to had significant

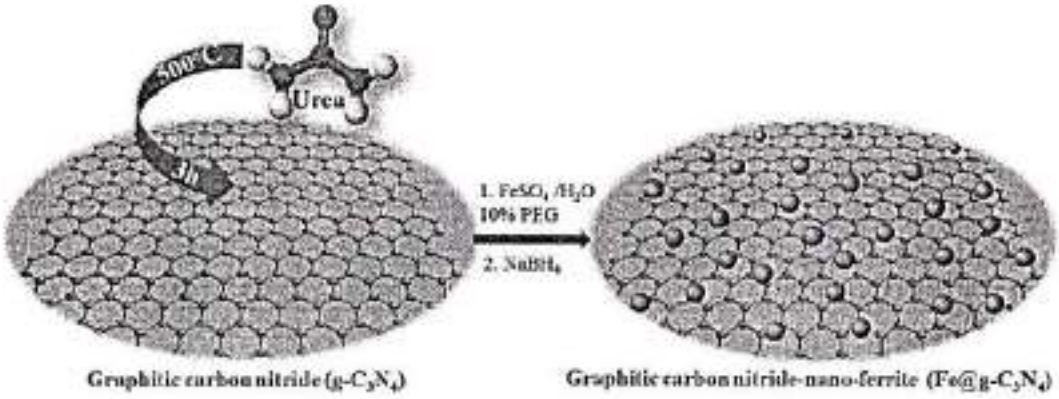


Fig-30: Synthesis of Fe@g-C_3N_4

influence in product yield. Catalyst with 10% Fe gave 98% yield, reduction from styrene to ethyl benzene taking 25 mg of Fe@g-C_3N_4 in water, and hydrazine hydrate under visible light irradiation. The general reactivity and substrate scope were explored with different alkenes and alkynes, most of the phenylacetylene derivatives were reduced to their corresponding alcohol with a yield of 94-97%. Except cyclooctene, all the alkenes including aliphatic and aromatic alkenes are reduced to alkanes with a higher yield. It was found that Fe@g-C_3N_4 could be recycled at least 10 times without losing its activity. The iron concentration is reduced only by 0.02 % after 10-th cycle provided low metal leaching property of the as-synthesized catalyst.

6. CONCLUSIONS

Catalysis is of vital importance for the development of society by providing a sustainable way to convert raw materials into valuable chemicals and fuels in an economical, efficient, and environmentally benign manner. Although nanoscale technology has many applications, the use of nanomaterials as catalysts is perhaps the most fascinating. There has been an increasing recent trend of the use of magnetically recoverable nanomaterials to develop more efficient and green chemical processes. This review has provided an overview on the applications of magnetic nanocatalysts in hydrogenation reactions of carbon-carbon multiple bonds and carbonyl group.

These catalysts are very promising as enantioselective catalysts, which are used extensively for the synthesis of medicines, drugs, and other bioactive molecules. By functionalizing these materials using chiral ligands, a series of chiral nanocatalysts can be designed, offering great potential to reuse these otherwise expensive catalyst systems.

7. ACKNOWLEDGEMENT

I owe my heartiest and humble thanks and gratitude to my project supervisor Dr. Dipanwita Saha, Head of the Department of Chemistry, Vivekananda Mahavidyalaya, for her invaluable guidance and suggestions. A special thanks to all the teachers of The Department of Chemistry, Vivekananda Mahavidyalaya and The Department of Chemistry, The University of Burdwan for their valuable pieces of advices and proper guidance to complete this work.

I am grateful to The Department of Chemistry, Vivekananda Mahavidyalaya and The University of Burdwan to giving me this opportunity.

I am also thankful to my parents, classmates for their constant support and heartly co-operation throughout my work.

Rishov Mondal

6. REFERENCES:

1. Kate, A., Sahu, L.K., Pandey, J., Mishra, M. and Sharma, P.K., 2022. Green catalysis for chemical transformation: The need for the sustainable development. *Current Research in Green and Sustainable Chemistry*, *5*, p.100248.

2. Bhaduri, S. and Mukesh, D., 2014. *Homogeneous catalysis: mechanisms and industrial applications*. John Wiley & Sons.

3. Ross, J.R., 2011. *Heterogeneous catalysis: fundamentals and applications*. Elsevier.

4. Cole-Hamilton, D.J., 2003. Homogeneous catalysis--new approaches to catalyst separation, recovery, and recycling. *Science*, *299*(5613), pp.1702-1706.

5. Collis, A.E. and Horvath, I.T., 2011. Heterogenization of homogeneous catalytic systems. *Catalysis Science & Technology*, *1*(6), pp.912-919.

6. Michalska, Z.M. and Webster, D.E., 1974. Supported homogeneous catalysts. *Platinum Metals Review*, *18*(2), pp.65-73.

7. Zhu, Y., Stubbs, L.P., Ho, F., Liu, R., Ship, C.P., Maguire, J.A. and Hosmane, N.S., 2010. Magnetic nanocomposites: a new perspective in catalysis. *ChemCatChem*, *2*(4), pp.365-374.

8. Lu, A.H., Salabas, E.E. and Schüth, F., 2007. Magnetic nanoparticles: synthesis, protection, functionalization, and application. *Angewandte Chemie International Edition*, *46*(8), pp.1222-1244.

9. Akbarzadeh, A., Samiei, M. and Davaran, S., 2012. Magnetic nanoparticles: preparation, physical properties, and applications in biomedicine. *Nanoscale research letters*, *7*, pp.1-13.

10. Palmer, A.M. and Zanotti-Gerosa, A., 2010. Homogenous asymmetric hydrogenation: Recent trends and industrial applications. *Current opinion in drug discovery & development*, *13*(6), pp.698-716.

11. Heveling, J., 2012. Heterogeneous catalytic chemistry by example of industrial applications. *Journal of Chemical Education*, *89*(12), pp.1530-1536.

12. Nishimura, S., 2001. *Handbook of heterogeneous catalytic hydrogenation for organic synthesis* (pp. 213-215). New York: Wiley.

13. Zhou, J., Dong, Z., Yang, H., Shi, Z., Zhou, X. and Li, R., 2013. Pd immobilized on magnetic chitosan as a heterogeneous catalyst for acetalization and hydrogenation reactions, *Applied surface science*.

14. Kainz, Q.M., Linhardt, R., Grass, R.N., Vilé, G., Pérez-Ramírez, J., Stark, W.J. and Reiser, O., 2014. Palladium Nanoparticles Supported on Magnetic Carbon-Coated Cobalt Nanobeads: Highly Active and Recyclable Catalysts for Alkene Hydrogenation. *Advanced Functional Materials*.

15. Linhardt, R., Kainz, Q.M., Grass, R.N., Stark, W.J. and Reiser, O., 2014. Palladium nanoparticles supported on ionic liquid modified, magnetic nanobeads–recyclable, high-capacity catalysts for alkene hydrogenation. *RSC Advances*, *4*(17), pp.8541-8549.

16. Guerrero, M., Costa, N.J., Vono, L.L., Rossi, L.M., Gusevskaya, E.V. and Philippot, K., 2013. Taking advantage of a terpyridine ligand for the deposition of Pd nanoparticles onto a magnetic material for selective hydrogenation reactions. *Journal of Materials Chemistry A*.

17. Lee, K.H., Lee, B., Lee, K.R., Yi, M.H. and Hur, N.H., 2012. Dual Pd and CuFe 2 O 4 nanoparticles encapsulated in a core/shell silica microsphere for selective hydrogenation of arylacetylenes. *Chemical Communications*, *48*(37), pp.4414-4416.

18. da Silva, F.P. and Rossi, L.M., 2014. Palladium on magnetite: magnetically recoverable catalyst for selective hydrogenation of acetylenic to olefinic compounds. *Tetrahedron*, *70*(20), pp.3314-3318.

19. Gage, S.H., Stein, B.D., Nikoshvili, L.Z., Matveeva, V.G., Sulman, M.G., Sulman, E.M., Morgan, D.G., Yuzik-Klimova, E.Y., Mahmoud, W.E. and Bronstein, L.M., 2013. Functionalization of monodisperse iron oxide NPs and their properties as magnetically recoverable catalysts. *Langmuir*, *29*(1), pp.466-473.

20. Yang, J., Zhu, Y., Fan, M., Sun, X., Wang, W.D. and Dong, Z., 2019. Ultrafine palladium nanoparticles confined in core–shell magnetic porous organic polymer nanospheres as highly efficient hydrogenation catalyst. *Journal of colloid and interface science*, *554*, pp.157-165.

21. Jiang, Y.F., Yuan, C.Z., Xie, X., Zhou, X., Jiang, N., Wang, X., Imran, M. and Xu, A.W., 2017. A novel magnetically recoverable Ni-CeO2-x/Pd nanocatalyst with superior catalytic performance for hydrogenation of styrene and 4-nitrophenol. *ACS Applied Materials & Interfaces*, *9*(11), pp.9756-9762.

22. Liu, P., Liu, S. and Bian, S.W., 2017. Core–shell-structured Fe3O4/Pd@ ZIF-8 catalyst with magnetic recyclability and size selectivity for the hydrogenation of alkenes. *Journal of Materials Science*, *52*(20), pp.12121-12130.

23. Zhong, Y., Mao, Y., Shi, S., Wan, M., Ma, C., Wang, S., Chen, C., Zhao, D. and Zhang, N., 2019. Fabrication of magnetic Pd/MOF hollow nanospheres with double-shell structure: toward highly efficient and recyclable nanocatalysts for hydrogenation reaction. *ACS applied materials & interfaces*, *11*(35), pp.32251-32260.

24. Jacinto, M.J., Landers, R. and Rossi, L.M., 2009. Preparation of supported Pt (0) nanoparticles as efficient recyclable catalysts for hydrogenation of alkenes and ketones. *Catalysis Communications*, *10*(15), pp.1971-1974.

25. Panella, B., Vargas, A. and Baiker, A., 2009. Magnetically separable Pt catalyst for asymmetric hydrogenation. *Journal of Catalysis*, *261*(1), pp.88-93.

26. Xu, S., Weng, Z., Tan, J., Guo, J. and Wang, C., 2015. Hierarchically structured porous organic polymer microspheres with built-in Fe 3 O 4 supraparticles: construction of dual-level pores for Pt-catalyzed enantioselective hydrogenation. *Polymer Chemistry*, *6*(15), pp.2892-2899.

27. Hu, A., Yee, G.T. and Lin, W., 2005. Magnetically recoverable chiral catalysts immobilized on magnetite nanoparticles for asymmetric hydrogenation of aromatic ketones. *Journal of the American Chemical Society*, *127*(36).

28. Baig, R.N. and Varma, R.S., 2013. Magnetic silica-supported ruthenium nanoparticles: an efficient catalyst for transfer hydrogenation of carbonyl compounds. *ACS Sustain. Chem. Eng.*

29. Li, J., Zhang, Y., Han, D., Gao, Q. and Li, C., 2009. Asymmetric transfer hydrogenation using recoverable ruthenium catalyst immobilized into magnetic mesoporous silica. *Journal of Molecular Catalysis A: Chemical*.

30. Hudson, R., Chazelle, V., Bateman, M., Roy, R., Li, C.J. and Moores, A., 2015. Sustainable synthesis of magnetic ruthenium-coated iron nanoparticles and application in the catalytic transfer hydrogenation of ketones. *ACS Sustainable Chemistry & Engineering*.

31. Jacinto, M.J., Kiyohara, P.K., Masunaga, S.H., Jardim, R.F. and Rossi, L.M., 2008. Recoverable rhodium nanoparticles: synthesis, characterization and catalytic performance in hydrogenation reactions. *Applied catalysis A: general*.

32. Pélisson, C.H., Vono, L.L., Hubert, C., Denicourt-Nowicki, A., Rossi, L.M. and Roucoux, A., 2012. Moving from surfactant-stabilized aqueous rhodium (0) colloidal suspension to heterogeneous magnetite-supported rhodium nanocatalysts: Synthesis, characterization and catalytic performance in hydrogenation reactions. *Catalysis today*.

33. Gao, X., Liu, R., Zhang, D., Wu, M., Cheng, T. and Liu, G., 2014. Phenylene-Coated Magnetic Nanoparticles that Boost Aqueous Asymmetric Transfer Hydrogenation Reactions. *Chemistry–A European Journal*.

34. Koosi, M. and Nasiri, E., 2019. Synthesis of a novel magnetic nanocatalyst based on rhodium complex for transfer hydrogenation of ketone. *Applied Organometallic Chemistry*.

35. Stein, M., Wieland, J., Steurer, P., Tölle, F., Mülhaupt, R. and Breit, B., 2011. Iron nanoparticles supported on chemically-derived graphene: Catalytic hydrogenation with magnetic catalyst separation. *Advanced Synthesis & Catalysis*, *353*(4), pp.523-527.

36. Mondal, J., Nguyen, K.T., Jana, A., Kumiawan, K., Borah, P., Zhao, Y. and Bhaumik, A., 2014. Efficient alkene hydrogenation over a magnetically recoverable and recyclable Fe 3 O 4@ GO nanocatalyst using hydrazine hydrate as the hydrogen source. *Chemical Communications*, *50*(81), pp.12095-12097.

37. Hudson, R., Riviere, A., Cirtiu, C.M., Luska, K.L. and Moores, A., 2012. Iron-iron oxide core–shell nanoparticles are active and magnetically recyclable olefin and alkyne hydrogenation catalysts in protic and aqueous media. *Chemical Communications*, *48*(27), pp.3360-3362.

38. Baig, R.N., Verma, S., Varma, R.S. and Nadagouda, M.N., 2016. Magnetic Fe@ g-C3N4: a photoactive catalyst for the hydrogenation of alkenes and alkynes. *ACS Sustainable Chemistry & Engineering*, *4*(3), pp.1661-1664.

17/8/23

Project Title:

Status of Education & Income in Orgram Village in Purba Bardhaman

VIVEKANANDA MAHAVIDYALAYA

6TH SEMESTER

PAPER: FIELD SURVEY & PROJECT REPORT (CC-14)

SUBMITTED BY:

SWAPNANIL DASGUPTA
ROLL NO- 200312200158
REG NO -202001015324 OF 2020-21

SABYASACHI MONDAL
ROLL NO -200312200095
REG NO-201901013821 OF 2019-20

SAHIL HALDER
ROLL NO-200112200237
REG NO -202001014262 OF 2020-21

Under the Supervisionof

Dr. Animesh Debnath, Associate Prof.

Dr. Tanushree De, Assistant Prof.

Department of Economics Vivekananda Mahavidyalaya, Burdwan

Table of Contents

ACKNOWLEDGEMENT

We would like to extend our sincere gratitude and appreciation to the following individuals for their valuable support in the successful completion of our project, "Status of Education and Income in Orgram Village in Purba Bardhaman District."

First and foremost, we would like to express our heartfelt thanks to our principal, **Dr. Sibprasad Rudra**, for providing us with the golden opportunity to undertake this remarkable project. His unwavering support and guidance have been instrumental in our journey.

Our utmost gratitude extends to our Head of Department (HOD), **Prof. Subhendu Bag**, and also we are especially indebted to our professors, **Prof. Gautam Sarkar, Dr. Animesh Debnath** & **Dr. Tanushree de** who have been like caring parent to us throughout this project. Their unfailing support, tireless efforts and genuine care have helped us overcome challenges, broaden our horizons, and achieve our goals. We are truly grateful for the opportunity to explore new insights and knowledge through this project, and we owe our heartfelt thanks to all those mentioned above for their immeasurable contributions to our success.

Date: 19/07/2023

Swapnanil Dasgupta

Sabyasachi Mondal

Sahil Halder

Economics Department, 6th Semester

Vivekananda Mahavidyalaya, Burdwan

INTRODUCTION

India is a country with a 138 crore (1.38 billion) population which is further divided into two sections: urban and rural. The rural population of India represents 65% of the total population, around 88 crore (880 million). As of 2021, the literacy rate in rural India was around 73.5%. This includes 81% male and 65% female literacy in rural section of India. As the rural economy currently contributes to 25-30% of the country's GDP, literacy in these parts is important for the Indian economy.

As per the census of 2011 about 90 percent of total populations of India reside in villages. The sustainable development of these villages is the prime factor towards the economic growth of the nation. Since independence the Government has launched many programmes for the development of rural areas and the people residing in villages in terms of their education and income.

Between years 2003 to 2014, the rural literacy grew at a CAGR of approximately 3.42%. And to further increase the literacy and growth rate, the government of India has launched many initiatives such as Samagra Shiksha, Jahawar Navodaya Vidyalaya, mid-day meal schemes, digital initiatives etc. The goal of these initiatives is to increase the enrolment rate and also to encourage the already enrolled students to attend regularly.

Agriculture sector is the driving force of India. A large number of the Indian population is involved in the agriculture and allied industries' business. Similarly, there are many sectors originating out of the rural society driving the economy. With education, the rural population can apply new knowledge and implement better technology and practices into their businesses. This will even help in bringing the per capita income of the country up and reducing poverty.

Micro, Small and Medium Enterprises (MSME) sector is a huge contributor to the Indian economy making up about 30% of the country's GDP. The share of MSME related products in total exports from India was 48% during 2018-19. Out of about 63.4 million MSME's in India, 51.25% i.e. 32.5 million MSME's are in the rural areas. With the sector employing about 50 million people in rural India, it is one of the most important sectors in the rural economy. Hence, education is important for the growth of the MSME sector.

Rural Education and Income are inter connected to each other we have seen a trend as the education of rural population increases we see the growth in their income resulting in overall development of the rural communities.

Various researches, studies, survey reports have been formulated by many people on the status of education and income on various villages, rural areas and communities. Realizing the importance of education and income of the village people in the country's development, a case study has been undertaken to assess the status of education and income in a small but beautiful village of Orgram. Orgram village is located in Bhatar subdivision of Barddhaman district in West Bengal, India. It is situated 24.1km away from sub-district headquarter Bhatar. Barddhaman is the district headquarter of Orgram village. As per 2009 stats, Sahebganj II is the gram panchayat of Orgram village. The total geographical area of village is 2938.76 hectares. Orgram has a total population of 13,554 peoples, out of which male population is 6,854 while female population is 6,700. Literacy rate of Orgram village is 60.23% out of which 67.25% males and 53.06% females are literate. There are about 3,229 houses in Orgram village.

REVIEW OF LITERATURE

There are different studies on public expenditure on education in recent years that majorly focusing on trends and pattern but very few studies have focused on the outcomes. However, these all studies are important for further analysis therefore in this segment we have reviewed some earlier studies.

Anuradha De and Tanuka Endow (2008) examined the level and composition of public expenditure on education and the mechanisms of resource sharing, allocation and utilization, in aggregate as well as separately for the **centre and the states in India**. The analysis found out that the centre has been playing an increasingly important role in state education finance. Centrally sponsored schemes, which are partly funded by external aid, have been a critical part of centre-to-state transfers. Expenditure trends in seven states were studied to explore the possible impact of expenditure on education outcomes. It indicated that for the **less developed states recent changes in education expenditure have improved access, but retention and learning achievements remain very low**.

Araf Tasleem (2016) studied the level, trends, growth and intra-sectoral allocation of Public expenditure on education in **all states of India.** Findings indicated that quantum of expenditure on education has increased significantly since 2001, But still the actual amount of money spend on education sector is less than the required amount. The paper also explored the trends of public expenditure on education, like, trends on planned and Non planned expenditure, Revenue and Capital expenditure. The paper also throws light on trends in intra sect oral allocation public expenditure i.e. expenditure on primary, secondary, higher education and technical education. Trends also found in expenditure incurred by State government and central government.

Analysis showed that **percentage share of State government has decline and the share of central government has increased**.

Deepti Singh and Shruti Shastri (2020) examined the nexus among public expenditure allocated to education, educational attainment at secondary level and unemployment rate in **India** for the period **1987–2017**. The empirical results indicated that **educational attainment proxied by gross enrolment ratio at secondary level of education negatively affects unemployment rate in long run as well as in short run**. However, public expenditure on education is ineffective in influencing both educational attainment and unemployment rate.

Anindita Chakrabarti and Rama Joglekar (2006) examined patterns and changes in the allocation of government funds for education, particularly higher education, over a span of two decades, before and after the introduction of the new economic policies in **15 major states of India.** State real per capita income, with elasticity less than one, is found to significantly enhance educational expenditure at the aggregate, elementary, secondary and higher levels. Moreover, contrary to general perceptions, education expenditure at all levels has been significantly lower after liberalisation vis-à-vis the pre-economic reform era. This is particularly detrimental for the vulnerable sections of the population, i e, for females and backward social groups. It is evident that even **after controlling for the economic reform process, privatisation exerts a negative significant impact on expenditure on higher education**.

Jandhyala B. G.(2004) reviewed the recent trends in public expenditures on education in **India**, and the available estimates on the rates of subsidy and cost recovery. It has been shown that **the level of subsidies in education in India is not particularly high**, nor is the rate of cost recovery particularly low, in comparison with other developed

and developing countries. It has also been found that some of the **specific subsidies in education are fairly progressively distributed**.

Geetanjali Patel and Annapoorna M. S.(2019) analyse the relationship between spending by the Government on education and improvement in quality of Human resource, Granger Causality Test is applied. The results of the study show the influence of Public education expenditure on Human Resource Development in **India**.The findings revealed that there is the absence of bidirectional relationship between the variables. **The unidirectional relationship is observed in case of cause-and-effect relationship of public education expenditure by education department and by education and other departments as per cent of GDP with HDI**. In this case, HDI is found to be causing public education expenditure. However, there is a unidirectional relationship observed in case of public education expenditure as per cent of total public expenditure with HDI.

Plabita Bhattacharyya (2019) examined the causal relationship between public expenditure on education and the economic growth of **28 states of India**. The result of the study indicated that there exists **a long-run relationship between public expenditure on education and economic growth**. A unidirectional causality between Gross State Domestic Product (GSDP) and public expenditure on education is found in the long run. The meaning is that as growth takes place in the Indian states it pushes the government to increase its activities which stimulate an increase in public expenditure.

Waseem Khan, Mohammed Jamshed, Sana Fatima and Aruna Dhamija (2020) investigates the determinants of diversified income sources in farm households in **Uttar Pradesh, India**. This study analyzed the effect of farmers' characteristics, farm characteristics, institutional factors, and perceived climate risk on income sources diversification adopted by farm households. The findings revealed **that education, family size,**

land size, proper infrastructure for livestock, adequate production technology, information sources, access to market, and climatic risk are significant variables affecting diversification. The implication of the study suggests that farm household needs to adopt a concentric strategy which requires policy intervention on focused research, knowledge dissemination, infrastructural development, and agricultural technical institutions setups to improve livelihood.

Pratap S. Birthala, Digvijay S. Negi, Awadesh K. Jha and Dhiraj Singh (2014) examined farm households' access to different income-generating activities, and their impact on income distribution using data from a nationally representative large-scale survey in **India**. The analysis showed that, as against the common perception of agriculture being the dominant source of income for farm households, these households earn close to half of their income from non-farm activities. **Small landholdings, low agricultural productivity and surplus labour force the farm households to diversify their income portfolio towards non-farm activities**. The non-farm income sources are accessible to a small proportion of farm households and have un-equalizing effect on income distribution. Nevertheless, non-farm sources are positively correlated with the total income.

Waseem Khan, Shazia Tabassum and Saghir Ahmad Ansari (2017) examined the question 'Can diversification of livelihood sources increase the income of farmers?' through a case study conducted on 151 farm households in the districts of **Moradabad and Aligarh in Uttar Pradesh.** The study has observed a significant difference between the incomes of diversified and undiversified farm households. The **determinants of income sources of farm households identified in the study are age, education level, use of ICT, access to credit, input supply and market**. The study has suggested that to increase farmers' income, policies should focus on the development of livestock sector to motivate them for rearing of animals for commercial purposes.

T. Ranganathan (2015) estimated and analysed incomes of farm households **in India** using data from the **70th round of National Sample Survey (NSS)** conducted in January to December 2013. This study estimates the incomes of farm households in India. For this purpose, the study used the most recent survey that assesses the situation of farmers in India. The data 70th round of National Sample Survey (NSS) conducted from January 2013 to December 2013 was used for the analysis. The survey included various aspects of farming and pertains to the period from July 2012 to June 2013. The report primarily focused on aspects related to incomes of the farmers and particularly income derived from various components – **incomes from cultivation, incomes from livestock, incomes from nonfarm business and income from wage or salaried employment**.

Birthal, P. S., Negi, D. S. and Devesh Roy (2017) identified who within **Indian agriculture** constitute the poor or low-income farmers, where they are located and what their characteristics are. The findings showed that **70% of the farmers in India have annual per capita income less than Rupees 15000.** Only 10% of them earn more than Rupees 30000. Land size appears an important correlate of income, as more than three-fourths of the low-income farmers (<15000 rupees) are marginal farmers who cultivate landholdings measuring less than or equal to one hectare.

R. Bhakar, K.N.S. Banafar, N.P. Singh and A.K. Gauraha (2007) examined the income and employment pattern in the state of **Chattisgarh, India**. The study revealed **that farm and non-farm activities are the main sources of income and employment** and off-farm activity (agricultural labour) contributes only a negligible portion. The smallholders as well as landless households during the slack agricultural season depend on rural non-farm activities as the source of earning. A wide disparity in economy of farm and non-farm households has been observed. The income has been found higher under farm than

non-farm households, but on per capita basis, no significant difference has been observed between farm and non-farm households. Within farm households, there are wide disparities between marginal and large farmers.

A. Narayanamoorthy (2017) brought out the state of farm income in **India** and also to unravel some of the myths associated with it. The study revealed that many hold the **myth that the income of the farmers can be increased by augmenting the productivity of the crops**. There is no doubt that any increase in productivity of crops would definitely benefit the farmers. However, augmenting productivity of crops is only a necessary but not a sufficient condition to increase the farm income. Without adopting new technologies in crops cultivation, productivity of crops cannot be increased significantly. Farmers would hesitate to adopt the new technologies unless they are capable of generating increased income with reduced cost.

OBJECTIVES

The objectives of this project are as follows:

i. To obtain the demographic status like Population, education and standard of living of this village.
ii. To obtain the Education status like Education and sex wise population, current school going and school type status.
iii. To obtain the Occupation status like Diversification of occupation and Sex wise occupation status of the village.
iv. To obtain the Income status i.e., individual income of the people of the village and also study about the income of surveyed families all together of the village.
v. To analyse the relation between the education and income of the people of the village.

DATA AND METHODOLOGY

This study is purely based on primary data. For this purpose, a village named Orgram has been selected which is situated under Katwa-I block in Purba Bardhaman. 30 families has been surveyed. Total sample population of this survey was 154. Out of 30 family, 19 family belong to APL and 11 family belong to BPL. Out of 154 family member, 79 members are male and rest of the members are female.

Methodology: Tabulation calculation are used to describe the objectives related to demographic and Rural Education and income status. Diversification in occupation pattern is also pointed out with the help of tabulation. The whole calculation has been done with the help of Ms-Excel application.

ANALYSIS :

Demographic Status:

Demographics are the characteristics of a population that have been categorized by distinct criteria- such as age, gender and income- as means to study the attributes of a particular group. Demographic change can influence the underlying growth rate of economy, structural

productivity growth, living standards, savings rates, consumption and savings. The direct method of collecting demographic data involve tracking and researching official records of births, marriages, divorces, deaths and migrations. Business may conduct consumer polls to gather data about what people buy, why they have specific shopping preference and how much they spend on average. Now-a-days, online demographic data collection is becoming common. From demographic information marketing strategies, economic analysis, government policies are determined. So, the study of demography is essential for scientific uses of human resources.

Table: 1- Gender wise Population status. (In percentage)

Types	Eco Stat		Religion				Caste			
Gender	**APL**	**BPL**	**Hindu**	**Muslim**	**Christian**	**Others**	**General**	**SC**	**ST**	**OBC**
Male	47.95(47)	57.14(32)	50.47(53)	50(19)	0(0)	63.63(7)	48.8(41)	52.94(9)	63.63(14)	48.38(15)
Female	52.04(51)	42.85(24)	49.52(52)	50(19)	0(0)	36.36(4)	51.19(43)	47.05(8)	36.36(8)	51.61(16)

SOURCE: FIELD SURVEY 2023

In the Religion wise distribution of male and female we find that:

- In the Hindu Community 50.47 percent population is male and 49.52 percent population is female.
- In the Muslim community 50 percent population is male and 50 percent population is female.
- In the others community 63.63 percent population is male and 36.36 percent population is female.

In the Caste wise distribution of male and female we find that:

- In the General Caste Community 48.8 percent population is male and 51.19 percent population is female.
- In the SC Caste Community 52.94 percent population is male and 47.05 percent population is female.

- In the ST Caste Community 63.63 percent population is male and 36.36 percent population is female.
- In the OBC Caste Community 48.38 percent population is male and 51.61 percent population is female.

Table: 2- Age group and sex wise Population status. (In percentage)

Age Group	Female	Male
0-6	6.66(5)	12.65(10)
7-14	8(6)	10.12(8)
15-25	20(15)	22.78(18)
26-40	30.66(23)	21.51(17)
41-60	25.33(19)	26.58(21)
above 60	9.33(7)	6.32(5)
Grand Total	100(75)	100(79)

SOURCE: FIELD SURVEY 2023

We have divided the male and female population in various age groups to study the age group and sex wise population status of the village as shown in the above table.

In case of age group wise sex population data, there is a high child sex ratio. At the age group of 0-6 years, 7-14 years, 15-25 years and 41-60 male percentage are higher than the female percentage. In case of 26-40 years age group and above 60 years age group, female percentage goes higher than of male percentage.

Suggestion: The village people must be aware about family planning and population control which are very important in today's society. Provide equal opportunities to male and female child without any gender discrimination as seen in many backward areas.

Table: 3 – House/Toilet/Source of Drinking water, fuel and Light (In Percentage)

	HOUSING TYPE			TOILET TYPE				SOIRCE OF DRINKING WATER				
CASTE	KACHHA	PACCA	SEMI PACCA	KACHHA	PACCA	SEMI PACCA	NO FACILITY	TAP	TUBE WELL	WELL	POND	TUBE WELL, TAP
GENERAL	25(4)	56.25(9)	18.75(3)	0(0)	93.7(15)	6.3(1)	0(0)	31.25(5)	37.5(6)	0(0)	12.5(2)	18.75(3)
SC	66.6(2)	0(0)	33.3(1)	33.3(1)	33.3(1)	0(0)	33.3(1)	66.6(2)	33.3(1)	0(0)	0(0)	0(0)
ST	75(3)	0(0)	25(1)	50(2)	25(1)	25(1)	0(0)	25(1)	25(1)	0(0)	50(2)	0(0)
OBC	28.5(2)	71.4(5)	0(0)	28.5(2)	71.4(5)	0(0)	0(0)	42.8(3)	14.2(1)	0(0)	0(0)	42.8(3)

LIGHT			FUEL					
KEROSENE	ELECTRICITY	BOTH	FC	LPG	FC & KEROSENE	FC & COAL	FC & LPG	FP & LPG
0(0)	100(15)	0(0)	6.25(1)	50(8)	12.5(2)	6.25(1)	6.25(1)	18.75(3)
0(0)	100(3)	0(0)	0(0)	0(0)	0(0)	0(0)	100(3)	0(0)
0(0)	100(4)	0(0)	75(3)	0(0)	0(0)	25(1)	0(0)	0(0)
0(0)	87.5(7)	12.5(1)	28.5(2)	57.14(4)	0(0)	0(0)	14.28(1)	0(0)

SOURCE: FIELD SURVEY 2023

Table 3 shows that among the total surveyed village families, 16 families fall under general category among which 25%, 56.25% and 18.75% families live in kachha, pacca and semi pacca house respectively. 66.6% and 33.3% families under the SC category live in kachha and semi pacca house respectively among the 3 SC families. In the ST category of the 4 ST families 75% families live in kachha houses and 25% families live in semi pacca houses. Among the 7 OBC category families, 28.5% families live in kachha houses and 71.4 % families live in semi pacca houses.

In table 3 under the column of toilet type we see that among the total surveyed village families, 16 families fall under general category among which 93.7% families have pacca toilets, 6.3% have semi pacca toilets. 33.3% families have kachha toilets, 33.3% families have pacca toilets and 33.3% families have no toilets in their home, in the 3 SC category families. 50%, 25% and 25% families among the 4 ST families have kachha, pacca and semi pacca toilets respectively in their home. Under the 7 OBC category families 28.5% families have kachha toilets, 71.4% families have pacca toilets.

In table 3 under the column of source of drinking water we see that among the total surveyed village families,16 families fall under the general category among which 31.25% families have tap, 37.5% families have tube well, 12.5% families use ponds as their source of drinking water apart from these 18.75% families have both tube well and tapas their source of drinking water in their home. 66.6% and 33.3% families have tap and tube well respectively in their home as a source of drinking water, in the 3 SC families. 25% families have tap and tube well each while 50% families use pond as their source of drinking water in their home among the 4 ST families. Under the OBC families 42.8%

families have tap, 14.2% families have tube well and 42.8% families have both tap and tube well in their home as source of drinking water.

Suggestion: The village people must have a clean and pure source of drinking water so that they remain safe from water-borne diseases and also stay healthy.

In table 3 under the column of source of light we see that among the total surveyed village families 100% families use electricity as their source of light fall under the General families, SC families, ST families. 87.5% and 12.5% families use electricity and both(electricity+kerosene) as their source of light respectively fall under the 7 OBC families.

In table 3 under the column of source of fuel we see that among the total surveyed village families

6.25%, 50%, 12.5%, 6.25%, 6.25% and 18.75% use fuelwood collected, LPG, combination of fuelwood collected & kerosene, combination of fuelwood collected & coal, combination of fuelwood collected & LPG, combination of fuelwood purchased & LPG, as their source of fuel fall under the General category. 100% families among the 3 SC families in the village use combination of fuelwood collected & LPG as their source of fuel. 75% and 25% families use fuelwood collected and a combination of fuelwood collected & coal as their source of fuel respectively, fall under the ST category. 28.5%, 57.14% and 14.28% of the total surveyed families of the village use fuelwood collected, LPG and combination of fuelwood collected & LPG as their source of fuel respectively fall under the OBC category.

Suggestion: The village people must slowly shift towards LPG as it will make their life easier and will also save the time required in fuelwood collection.

_

Table: 4- ICDS status (In percentage)

TYPE OF SERVICES	IMMUNISATION DURING PREGNANCY	IRON FOLIC TABLET	BIRTH AT GOVT	DELIVERED BY TRAINED PERSON	POST DELIVERY CHECKUP	IMMUNISATION OF CHILD	ICDS HELP
YES	100(6)	100(6)	100(6)	100(6)	83.33(5)	100(6)	33.33(2)
NO	0(0)	0(0)	0(0)	0(0)	16.66(1)	0(0)	33.33(2)

SOURCE: FIELD SURVEY 2023

The above mentioned table provides us information about various medical maternity requirements during child birth like Immunisation of the pregnant mother, providing iron folic tablets, whether Birth at Govt institution or not, Delivery By trained individual or not, post-delivery check-up of the mother and the child, Immunisation of the new born etc., which are mostly provided by the government through government health centres.

We see that 100 percent of the concerned population was provided with immunisation during pregnancy, Iron Folic tablet, birth at govt institution, and delivery by a trained person. But the post-delivery check-up was provided only to 83.33 percent of the concerned population. Immunisation of the new born babies is also 100 percent which shows that all the new born babies are provided with immunisation in the village.

Suggestion: The village people must also be the serious about the post delivery check-up, and ICDS help too for the betterment of both mother and the child.

EDUCATION STATUS :

To study the Education status of the village we consider two major tables.

1. Education and sex wise population status.
2. School Type wise current school going status.

Table: 5- Education and sex wise Population status. (In percentage)

Years of Schooling	Female	Male
Illiterate	28(21)	18.98(15)
1-4	9.33(7)	12.65(10)
5-8	30.66(23)	26.58(21)
9-10	14.66(11)	13.92(11)
11-12	13.33(10)	11.39(9)
13-15	4(3)	13.92(11)
16	0(0)	2.53(2)
Grand Total	100(75)	100(79)

SOURCE: FIELD SURVEY 2023

To study the Education and sex wise population status we have taken Years of schooling as a reference point as shown in the above table.

Here we see that 28 percent of the total female population and 18.98 percent of the total male population is Illiterate. We notice a trend from the above table that maximum population whether male or female have left their education after 5-8 years of schooling. Only 4 percent female and 13.92 percent male have completed their graduation degree and it is very disheartening to know that only 2.53

percent male have pursued for post graduation degree but no female have studied further after their graduation degree in the village.

Suggestion: The village people must understand the importance of education and must encourage and motivate younger generations to complete their education and get a good life rather than staying illiterate or dropping out after few years of studies.

Table: 6- School type wise current school going status. (In percentage)

Type of school		
GENDER	**MALE**	**FEMALE**
GOVT	84.21(16)	70.58(12)
PRIVATE	15.79(3)	11.76(2)
MADRASA	0(0)	17.64(3)

SOURCE: FIELD SURVEY 2023

The above table classifies the current school going male and female population into the types of school they pursue their education.

We find that 84.21 percent male and 70.58 percent female population among the current school going population pursue their education in government schools, rest 15.79 percent male and 11.76 percent female population go to private schools and only 17.64 percent female population go to madrasa whereas no male population among the current school going population go to madrasa.

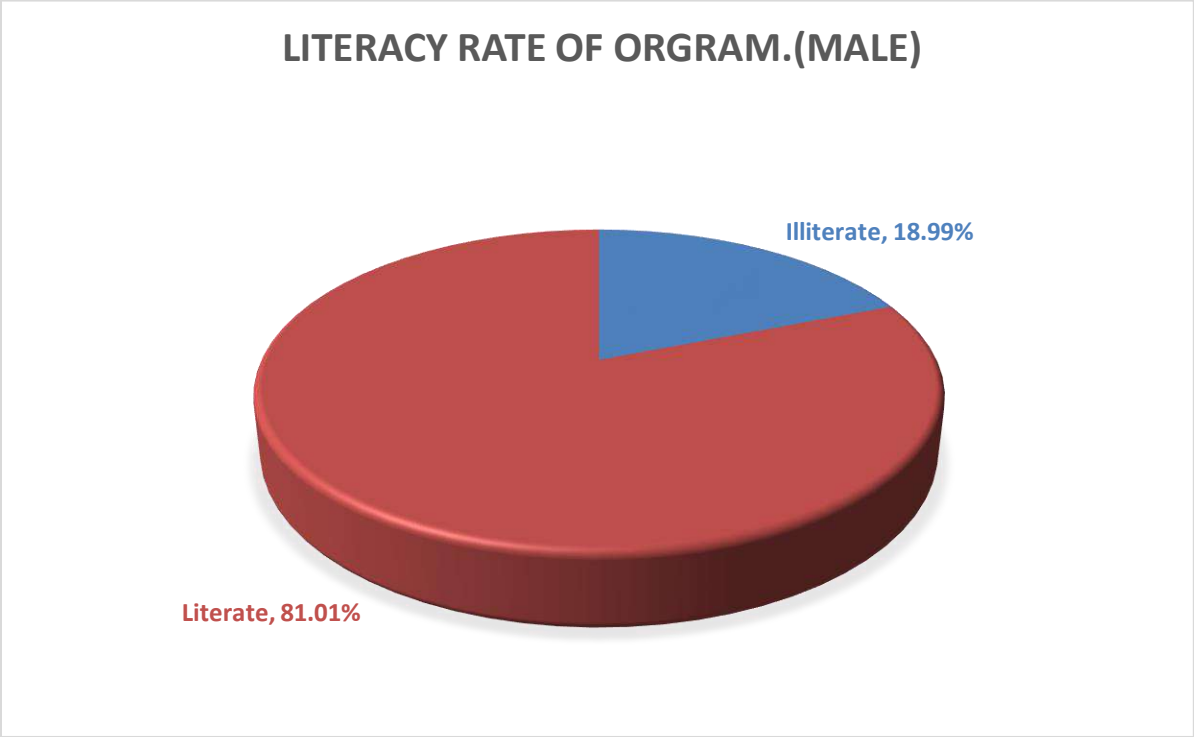
A Brief Study on literacy Rate of India, West Bengal and Purba Bardhaman District.

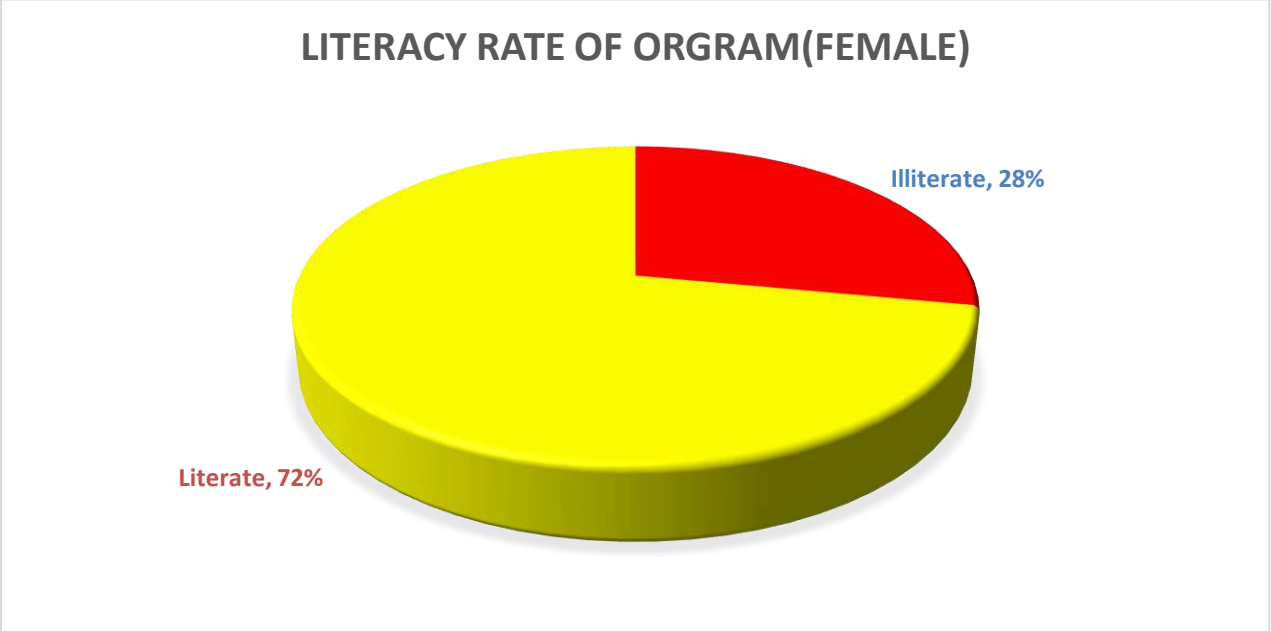
India still has lower levels of literacy than many other nations, though, the literacy rate is 77.70%, with literate males at 84.70% and literate females at 70.30%

Literacy rate in **West Bengal** has seen upward trend and is 76.26% as per latest population census. Of that, male literacy stands at 81.69% while female literacy is at 70.54%.

Average literacy rate of **Purba Bardhaman** district in 2021 were 84.53 %, of which male and female literacy were 88.72 and 79.77 respectively.

Literacy rate of **Orgram village** is 76.63% out of which 81.01% males and 72% females are literate.





SOURCE: FIELD SURVEY 2023

OCCUPATION STATUS :

To study the occupation status of the village we consider two major tables.

1. List of Occupation status.
2. Diversity of Occupation.
3. Sex wise occupation status.

Table: 7- List of Occupation status. (In percentage)

Occupation	Frequency
BUSINESS	14.56(15)
HOUSEWIFE	39.80(41)
SERVICE	10.67(11)
AGG. LABOUR	17.47(18)
NON AGG. LABOUR	4.85(5)
CULTIVATOR	12.62(13)

SOURCE: FIELD SURVEY 2023

The above given Table points out the various occupation performed by the various people in the village with their corresponding percentage with respect to total population.

We see that Agricultural Sector has a significant share of 30.09 percent distributed in two parts, first the Agricultural farmers with a share of 12.62 percent and the second is Agricultural Labour with a share of 17.47 percent.

A majority of population is under the Housewife occupation with a percentage share of 39.80 percent in the total population. 14.56 percent of population in engaged in Business and 10.67 percent in the service sector.

<u>Suggestion</u>: More people must be engaged in business as it is always a great opportunity in rural areas for people to grow their income by engaging in various business.

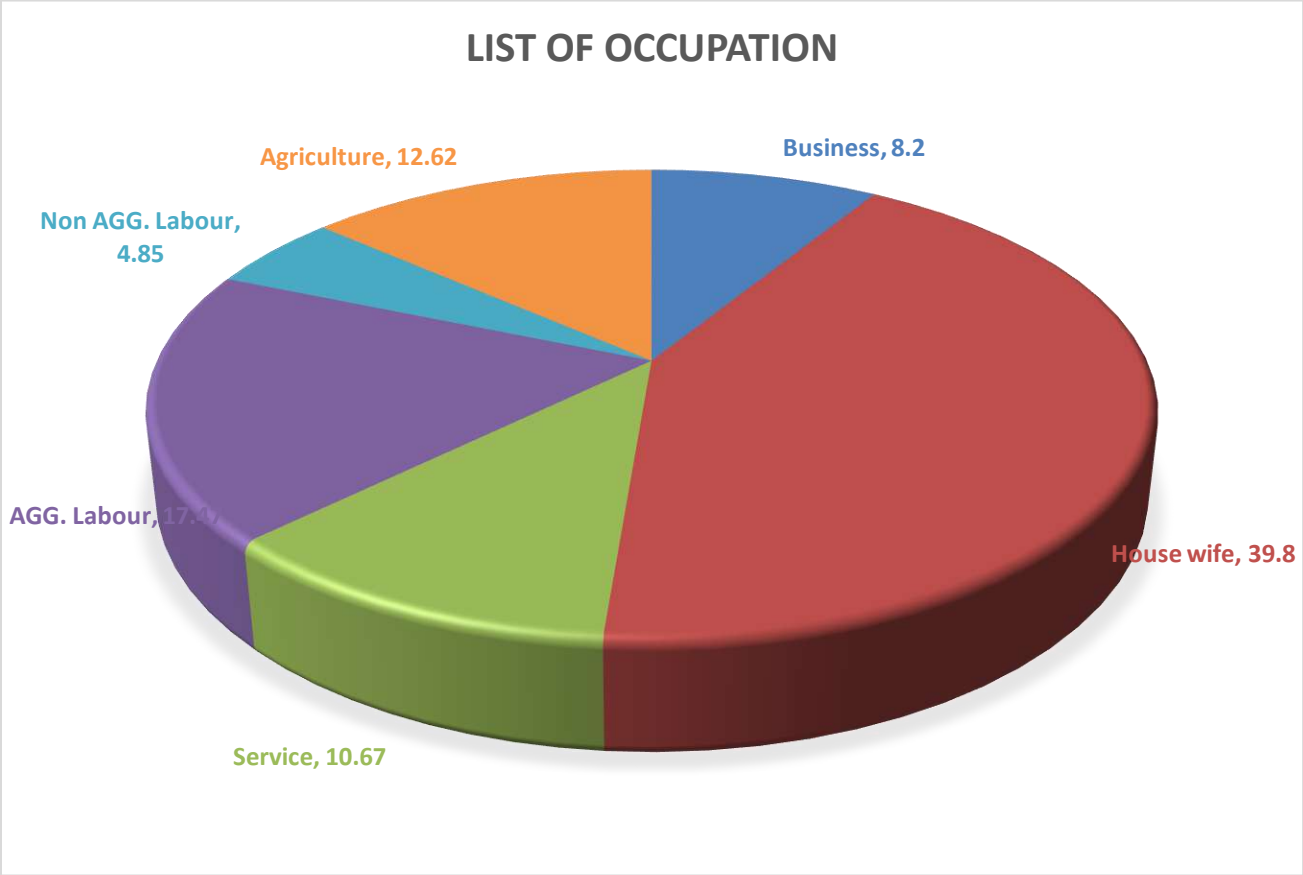


Table: 8- Diversification of Occupation status. (In percentage)

Diversity in Income generation	Male	Female
Only Agriculture	28.57(14)	46.15(6)
Agro +1 Non-Farm Job	16.33(8)	23.08(3)
Agro +2 Non-Farm Job	6.12(3)	0
Non-Farm Job	46.94(23)	23.08(3)
2 Non-Farm Job	2.04(1)	7.69(1)

SOURCE: FIELD SURVEY 2023

In table:9, Most of the male population relates to their work with non farm-based jobs i.e., 46.94% male and 23% female participate in this kind job. 28.57% male and 46.15 % female working population is employed in agriculture which is majority of women. Agriculture and Non-farm related jobs are both crucial for these villagers. 16.33% of male and 23.08% of the people are employed in agriculture as well as one other non-farm job. Only a few percent of male, 6.12% work under agriculture along with two types of non-farm jobs. Only around 2% of male and 7.69% of female have two types of non-farm jobs. Agriculture is the second highest place of jobs for male as well as 17.65%. There is huge lack of women who are involved in economic activities more than half of women population is dependent on their families and govt for allowances. 23 of women correspondents reported to be benefitting from govt. allowances.

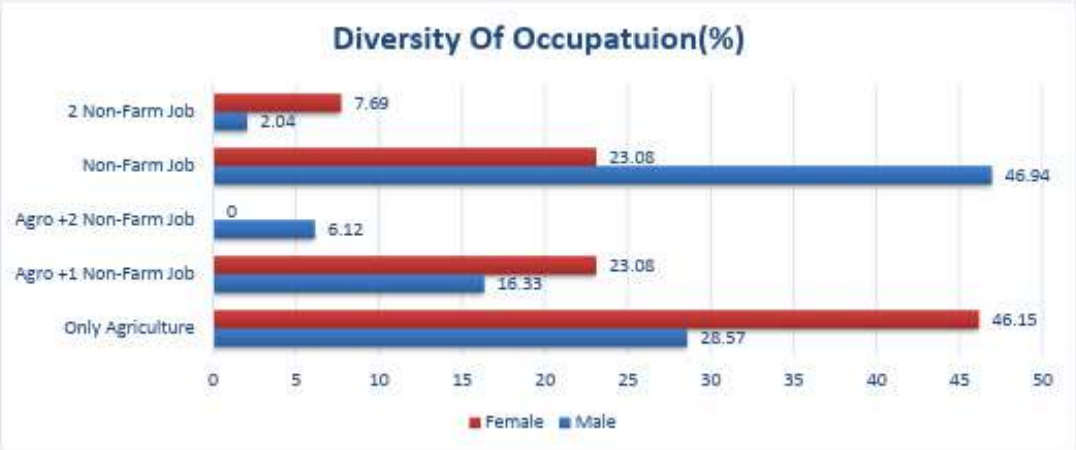


Table: 9- Sex wise Occupation status. (In percentage)

Occupation	Male	Female
BUSINESS	26.53(13)	3.7(2)
HOUSEWIFE	0(0)	75.92(41)
SERVICE	18.36(9)	3.7(2)
AGG. LABOUR	20.4(10)	14.81(8)
NON AGG. LABOUR	10.2(5)	0(0)
CULTIVATOR	24.49(12)	1.85(1)

SOURCE: FIELD SURVEY 2023

The above given Table represents sex wise occupation status of the village in percentage term.

We find that most of the male population is engaged in Agriculture sector in two forms Farming i.e., 24.49 percent and Agriculture labour i.e., 20.4 percent. Besides agricultural sector, Business is the second occupation with a male population of 26.53 percent. The male population is also scattered in other occupation in few percentages as shown in the above table.

It is surprising to note that a majority of female population are not engaged in any income generating occupation. 75.92 percent of the female population are housewife, Only 24.06 percent generate income among the female population.

Suggestion: Even the housewives must engage themselves in an income generating work after their daily household chores so that they become financially independent and can also support the family financially at times.

INCOME STATUS :

To study the income status of the village we consider the following:-

1. Personal Income Table.
2. Family Income Table.

Table: 10- Personal Income Table. (In percentage)

	GENDER	
PERSONAL INCOME	**MALE**	**FEMALE**
UNEMPLOYED	40.50(32)	53.33(40)
<25000	6.32(5)	34.66(26)
25000-50000	11.3(9)	6.66(5)
50000-100000	13.92(11)	1.33(1)
100000-200000	12.65(10)	1.33(1)
200000-300000	7.59(6)	1.33(1)
300000-400000	5.06(4)	1.33(1)
>400000	2.53(2)	0(0)

SOURCE: FIELD SURVEY 2023

The above given table shows the personal income of the male and female population separately under distinct groups of income.

We see that 40.50 percent and 53.33 percent of male and female population are unemployed respectively.6.32 percent and 34.66 percent of the male and female population respectively have annual income less than 25000. 11.3 percent and 6.66 percent of the male and female population earn between 25000-50000 annually. As we increase the income group the percentage of population falling under the particular income group decreases. Only 2.53 percent of male

population have annual income above 4lakhs. No female from the surveyed population earns above 4 lakhs annually.

Suggestion: The people must constantly upskill themselves and find ways to grow their income so that they become more financial stable resulting in upliftment of lifestyle of the village people in overall.

Table: 11- Family Income table. (In percentage)

TOTAL FAMILY INCOME	
INCOME	**NO. OF FAMILY**
<50000	6.66(2)
50000 - 100000	16.66(5)
100000-200000	20(6)
200000-300000	26.66(8)
300000-400000	13.33(4)
400000-500000	3.33(1)
>500000	13.33(4)

SOURCE: FIELD SURVEY 2023

The above given table shows the family income of the surveyed families under distinct groups of income.

We see that 26.66 percent families fall under the 2lakhs-3lakhs income group which is the highest percentage as shown in the above table. 6.66 percent families earn extremely low i.e., below 50 thousand annually, only 13.33 percent families fall under the income group of above 5 lakhs which is a decent income to lead a stable life in today's world.

Suggestion: In a family every adult must try to earn to his/her full potential so that the total family income increases significantly.

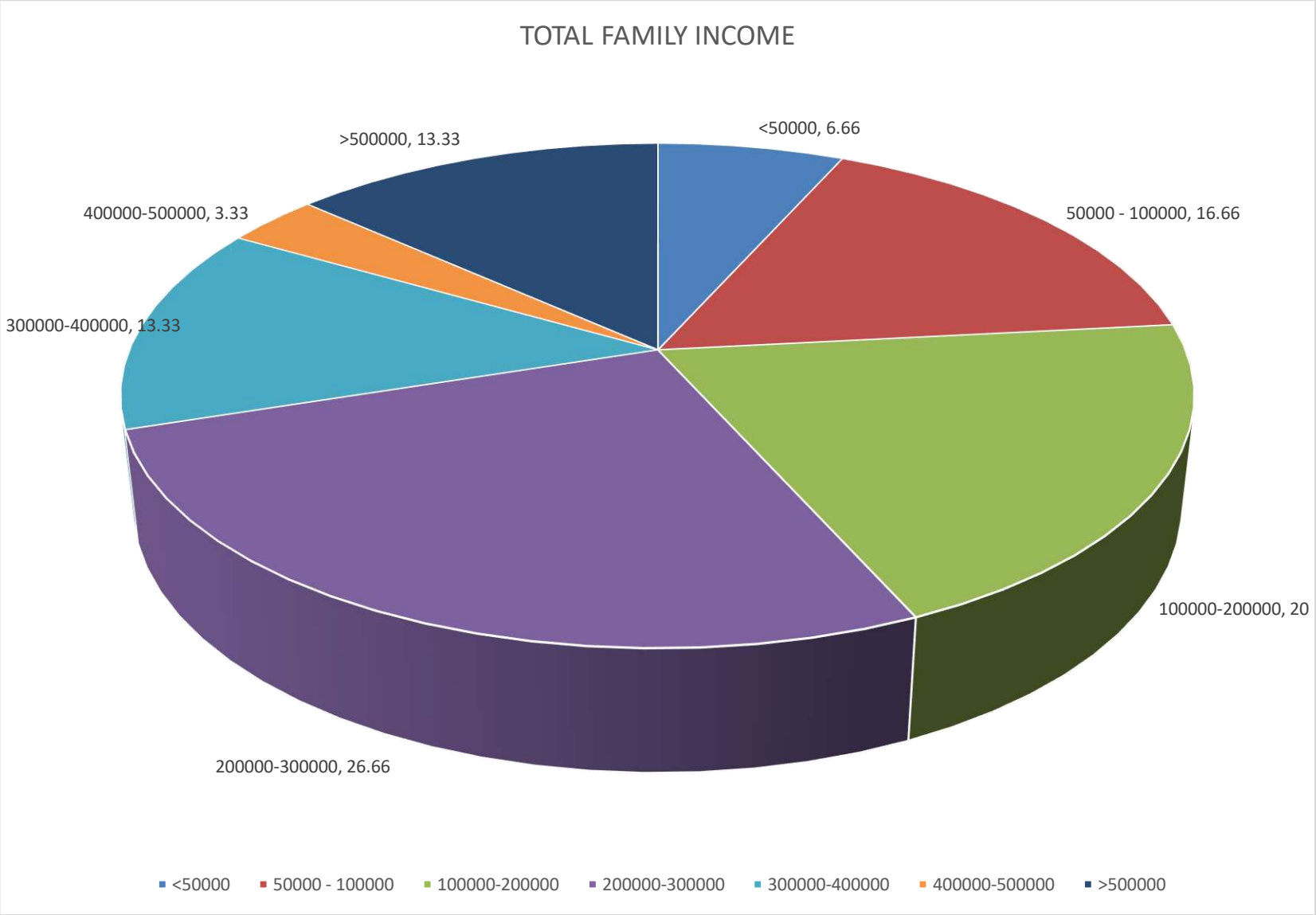

TOTAL FAMILY INCOME
<50000, 6.66
50000 - 100000, 16.66
100000-200000, 20
200000-300000, 26.66
300000-400000, 13.33
400000-500000, 3.33
>500000, 13.33
<50000
50000 - 100000
100000-200000
200000-300000
300000-400000
400000-500000
>500000

Table: 12- Relation between Education and Income. (In percentage)

INCOME GROUP	UNEMPLOYMENT		<25000		25000-50000		50000-100000	
YEAR OF SCHOOLING	M	F	M	F	M	F	M	F
ILLITERATE	0.9(1)	4.5(5)	1.8(2)	9(10)	1.8(2)	1.8(2)	0.9(1)	0.9(1)
1 TO 4	0(0)	2.7(3)	0(0)	0.9(1)	1.8(2)	0(0)	0.9(1)	0(0)
5 TO 8	0.9(1)	6.3(7)	1.8(2)	7.2(8)	2.7(3)	2.7(3)	3.6(4)	0(0)
9 TO 10	2.7(3)	4.5(5)	0(0)	2.7(3)	0.9(1)	0(0)	1.8(2)	0(0)
11 TO 12	0.9(1)	1.8(2)	0.9(1)	2.7(3)	0.9(1)	0(0)	1.8(2)	0(0)
13 TO 15	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0.9(1)	0(0)
16 TO AVOBE	0.9(1)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)

100000-200000		200000-300000		300000-400000		>400000	
M	F	M	F	M	F	M	F
0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
0.9(1)	0(0)	1.8(2)	0(0)	0(0)	0(0)	0(0)	0(0)
2.7(3)	0.9(1)	1.8(2)	0(0)	1.8(2)	0(0)	0(0)	0(0)
0(0)	0(0)	0.9(1)	0.9(1)	0(0)	0(0)	0(0)	0(0)
0.9(1)	0(0)	0.9(1)	0(0)	1.8(2)	0(0)	0(0)	0(0)
3.6(4)	0(0)	0(0)	0(0)	0(0)	0.9(1)	1.8(2)	0(0)
0.9(1)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)

SOURCE: FIELD SURVEY2023

From the above table 12 we see that the only highly educated male and female are in the high income group of the village. Majority of Illiterate people are either unemployed or earning below 25000 annually. We see a trend of majority of population of the village dropping out after either secondary or higher secondary, very few opt for graduation and only 0.9% of the total surveyed population who are in earning age have pursued their post-graduation. Among the graduated population 0.9% males, 3.6% males, 0.9% females and1.8% males earn between 50,000- 1,00,000 ; 1,00,000-2,00,000 ; 3,00,000-4,00,000 and above 4 lakhs annually respectively.

We find that lesser the education lesser the income of the people of the surveyed population.

CONCLUSION :

Education is most important parameter for the progress of the society. It is essential part of human being that's improve at present their quality of life and individual development and also education is one of the great opportunities for female development and it has been considered as a human rights. So it is important for the improvement of women with skills, values identity and their quality of life, it is the mainly interrelated to the society. So its national property and development of people's that means education is the foundation of development in the society but continuing gap of gender in education between the male and female as well as backward communities and non-backward communities in the society. In which every person must give the highest priority to the education policies. There is large influence of economic condition of the society on the education. Now, the literacy is an interrelated to the society, In-fact the educational development has depends upon literacy rate as well as occupation among the total population of economy in the each area at present, but it's possible that the physical features in those areas, their impact on educational structure of people's. An educated person not only gets a degree but also develops the idea to identify various sources of income which results in raising his/her income and also the overall living standard of the whole family. It is very much required for rural people to increase their income to establish a developed nation.

Following are few points found out from the above survey report which must be taken care of for the betterment of education and income status of the village people.

1. The village people must practise family planning as poor family planning leads to more poverty and downfall of the family and village community as a whole.
2. No discrimination on the basis of gender should be there in the village. Every female child must be provided with the same opportunities as male child because females are the backbone of the family and society depriving them of opportunities means hindering the growth of the village and the society.
3. Every house of the village must have a toilet facility and a clean and pure source of drinking water as these two are the basic needs of cleanliness to keep the people healthy and safe from various diseases.
4. The village people must be aware of the various medical services provided by the nearby government health centres and hospitals and also they must not miss any free health check-up camp in the village.
5. The village people must encourage the younger generation to complete their education and not stay illiterate or drop out in the course of their education.
6. The village people must try to diversify their income source so that their income increases, helping them to lead a better life.
7. Even the housewives must engage themselves in an income generating work after their daily household chores so that they become financially independent and can also support the family financially at times.
8. In a family every adult must try to earn to his/her full potential so that the total family income increases significantly.

BIBLIOGRAPHY:

1. Primary data collected from field survey held by Economics department, Vivekanada Mahavidyalaya in the year 2023
2. Google map of Orgram village
3. De Anuradha, Endow Tanuka; “Public expenditure on education in India: recent trends and outcomes” ; Research Consortium on Educational Outcomes and Poverty (RECOUP); 2008; 51
4. Araf Tasleem; “Trends, Growth and Changing Patterns of Public Expenditure on Education in India”; Journal of Global Economics; 2016
5. Tilak Jandhyala B G; “PUBLIC EXPENDITURE ON EDUCATION IN INDIA: A Review of Trends and Emerging Issues”; NIEPA; 2004; 3-54
6. Singh Deepti, Shastri Shruti; “Public expenditure on education, educational attainment and unemployment nexus in India: an empirical investigation”; International Journal of Social Economics; Volume 47 Issue 5; 2020
7. Chakrabarti Anindita, Joglekar Rama; “Determinants of Expenditure on Education: An Empirical Analysis Using State Level Data”; Economic and Political Weekly; Volume 41, No. 15; 2006; 1465-1472
8. Patel Geetanjali, Annapoorna M. S.; “Public Education Expenditure and Its Impact on Human Resource Development in India: An Empirical Analysis”; South Asian Journal of Human Resources Management; 2019; 97–109
9. Bhattacharyya Plabita; “PUBLIC EXPENDITURE ON EDUCATION AND ECONOMIC GROWTH: A STATE-LEVEL ANALYSIS IN INDIA”; Humanities & Social Sciences Reviews ;Volume 7, No 6; 2019; 533-539

10. Waseem Khan, Shazia Tabassum and Saghir Ahmad Ansari; “Can Diversification of Livelihood Sources Increase Income of Farm Households? — A Case Study in Uttar Pradesh”; Agricultural Economics Research Review; Vol. 30; 2017 ;27-34
11. T. Ranganathan; “FARMERS’ INCOME IN INDIA: EVIDENCE FROM SECONDARY DATA”; AGRICULTURAL ECONOMICS RESEARCH UNIT (AERU);2015
12. Birthal, P. S., Negi, D. S. and Devesh Roy; “Enhancing farmers' income: who to target and how?”; National Centre for Agricultural Economics and Policy Research; 2017
13. R. Bhakar, K.N.S. Banafar, N.P. Singh and A.K. Gauraha; “Income and Employment Pattern in Rural Area of Chhattisgarh: A Micro View”; Agricultural Economics Research Review; Vol. 20; 2007; 395-406
14. Narayanamoorthy; “Farm Income in India: Myths and Realities”; Indian Journal. of Agricultural Economics; Vol.7; No.1; 2017

Project Title:

Status of NREGA in Orgram Village in Purba Bardhaman

VIVEKANANDA MAHAVIDYALAYA

6TH SEMESTER

PAPER: FIELD SURVEY & PROJECT REPORT (CC-14)

SUBMITTED BY:

SK MUNTAZIR
ROLL NO: 2003122000092
REG. NO: 202001015261 OF 2020-21

GAYTRI SHARMA
ROLL NO: 200312200035
REG. NO: 202001010052 OF 2020-21

SK INJAMUL HAQUE
ROLL NO: 200312200124
REG. NO: 201901001274 OF 2019-20

Under the Supervision of

Dr. Animesh Debnath, Associate Prof.

Dr. Tanushree De, Assistant Prof.

Department of Economics

Vivekananda Mahavidyalaya, Burdwan

ACKNOWLEDGEMENT

We would like to extend our sincere gratitude and appreciation to our respected teachers for their invaluable support in the successful completion of our project, "Status of NREGA in Orgram village in Purba Bardhaman district."

First and foremost, we would like to express our heartfelt thanks to our **Principal**, **Dr. Sib Prasad Rudra**, for providing us with the golden opportunity to undertake this remarkable project. His unwavering support and guidance have been instrumental in our journey.

Our utmost gratitude extends to our Head of Department (HOD), **Assistant prof. Subhendu Bag**, and the esteemed faculty members who have nurtured us with their wisdom and knowledge continuous encouragement, insightful inputs, and valuable feedback throughout the project. Their expertise and wisdom have greatly contributed to our understanding and achievement.

We are especially indebted to our professors, **Assistant prof. Dr. Animesh Debnath, Assistant prof. Dr. Tanushree de** and **Associate prof. Goutam Sarkar** who have been like caring parents to us throughout this project. Their unfailing support, tireless efforts, and genuine care have helped us overcome challenges, broaden our horizons, and achieve our goals. We are truly fortunate to have had their nurturing guidance and wisdom throughout this incredible journey. Furthermore, we extend our deepest thanks to our friends who have been an incredible source of assistance and encouragement during the finalization of this project. We are truly grateful for the opportunity to explore new insights and knowledge through this project, and we owe our heartfelt thanks to all those mentioned above for their immeasurable contributions to our success.

Date:

SK Muntazir, Gaytri Sharma and Sk. Injamul Haque

VI semester, Economics Department

Vivekanada Mahavidyalaya Burdwan

Table of Contents

INTRODUCTION

Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) is considered as a **"Silver Bullet"** for eradicating rural poverty and unemployment, by way of generating demand for productive labour force in villages. Rural poverty and unemployment in India have grown in an unprecedented manner during the last few decades. There is a growing incidence of illiteracy, blind faith, hungry people, malnourished children, anaemic pregnant women, farmer suicides, starvation deaths, migration resulting from inadequate employment, poverty, and the failure of subsistence production during droughts. In order to make solution of these problems and to provide livelihood security to rural unemployed, Government of India (GOI) enacted the National Rural Employment Guarantee Act (NREGA) in 2005.

As per the census of 2011 about 90 percent of total populations of India reside in villages. The sustainable development of these villages is the prime factor towards the economic growth of the nation. Since independence the Government has launched many programmes for the development of rural areas and the people residing in villages. MNREGA is landmark legislation in this direction. The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) is a flagship welfare program under the **Ministry of Rural Development**, Government of India which provides **100 days of employment** for all households in rural areas in manual work, if demanded. This Act for the first time brings the role of the state as provider of livelihood within the reach of participants/ beneficiaries themselves. MGNREGA being a demand driven rural employment scheme, higher wages may prompt higher utilization of the scheme. By design it is different from any employment generation scheme that was implemented in the past.

In the rural areas such program has great significance because employment opportunity is very limited with meagre wages. The arid area is no exception to it where a large segment of rural population is underemployed and vulnerable to drought and other weather aberrations. In **West Bengal**, the state government has implemented the **MGNREGA**

program with the goal of improving the livelihood and standard of living of the rural population. The West Bengal Rural Employment Guarantee Scheme, introduced in 2006, covers a wide range of works divided into categories such as watershed management, agricultural activities, rural infrastructure development, and environmental conservation. The focus areas in West Bengal include creating durable assets, increasing soil fertility, ensuring groundwater availability, promoting afforestation, and generating livelihood opportunities through convergence with other programs. **The implementation of MGNREGA in West Bengal** aims to empower rural communities, make them self-sustainable, and improve their overall well-being.

The **World Bank (2009)** believes the **National Rural Employment Guarantee Scheme** (NREGS) now renamed as **MGNREGA** is an important safety net program that provides livelihood security to the poorest of the poor in rural areas of India. Realizing the importance of this program and its potentiality in mitigation of drought, vulnerability and drudgery of life in the western region of west Bengal, especially through employment and various development activities, a case study has been undertaken to assess the impact of MGNREGA in socioeconomic conditions in a small but beautiful village of Orgram. **Orgram** is a village in Bhatar CD block in Bardhaman Sadar North subdivision of Purba Barddhaman district in **West Bengal, India**. Barddhaman is the district headquarter of Orgram village. As per 2009 stats, Sahebganj II is the gram panchayat of Orgram village. The total geographical area of village is 2938.76 hectares. Orgram has a total population of 13,554 peoples, out of which male population is 6,854 while female population is 6,700. Literacy rate of Orgram village is 60.23% out of which 67.25% males and 53.06% females are literate. There are about 3,229 houses in Orgram village.

LITERATURE SURVEY

Prianka Sengupta (2022) in her New Opportunity and Performance Analysis of MGNREGA During Covid-19 Case Study of Purulia District tried to find that there is no financial and physical progress made by MGNREGA in the Purulia District. To evaluate the progress only three years data i.e., from 2018-19 to 2020-21 and from 230 total respondents was assessed. The programme was successful in terms of **mobilising the funds** and **creating social assets**. Apparently, physical performance of MGNREGA increased by 135 percent and financial performance by 36 percent in the year 2018-2021. Compound annual growth rate shows a **positive trend** in terms of physical and financial performance.

Singh S.P. and Nauriyal (2009) observed that only 4.23 percent villagers could get 100 days of job under MGNREGA in the selected **Districts of Uttrakahand.** Many of the workers reported that they did not know that MGNREGA promises 100 days of work to a rural household, as a matter of right. The study revealed that there are demand-side and supply-side limitations in confirming 100 days occupation guarantee. Lack of interest of Sarpanch and Government officials, insufficient and less trained staff and lack of effective participation in Gram Sabha meetings were the supply-side constraint. The demand-side limitations come from the **lack of awareness among workers** about the scheme.

Arya Narayanan (2017)'s objective of the study MGNREGA and Rural Development was to analyse how MGNREGA scheme was implemented in the **Choondal Grama Panchayat**, it was also intended to observe whether it enabled the creation of productive assets, protection of the environment and the empowerment of women in the rural area. Discussion method is used to collect the information from the local representatives and Panchayat authorities. It showed that the total number of households that got employment and families that got 100

days of employment increased but the same time the participation of **man showed decline, women participation increased.**

Rajesh Sharma and Dr. Manish Didwania (2013) in their studies "Performance Analysis of MGNREGA: A Case Study of District Jind" Intended to measure the financial and physical progress of MGNREGA under Panchayati Raj System in the District Jind, Haryana. The data was collected from responses of the respondents, namely, elected representatives and non-elected Gram Sabha members in the selected Blocks. The study showed that the income and expenditure increased by 36 and 26 percent respectively. 70 percent of India's population resides in villages and the majority of them are poor, MGNREGA has become a life line for them.

D.K. Saha, Soma Srivastava and Khem Chand (2012) have also showed in their study Impact of MGNREGA: A Case Study in the Arid Village of **Bhacharna, Rajasthan** that MGNREGA has provided employment not only to disadvantageous group of populations, but also to others who have limited **employment opportunity** in the village and its adjoining areas. Primary data were collected during the year 2010-11 through a specially designed interview schedule, observations, case studies, focused group discussions. Analysis of primary data indicated that overall, 12.14% of the total income was derived from MGNREGA. **Migration** tendencies among the households had **dropped by 18%,** irrespective of the size of their land holding.

Shamsher Alam (2015) conducted a survey on the topic of 'Ground Realities and Inhibitions in Execution of MGNREGA' and that current survey had been carried out in the **Bajpur panchayat** in the **Ratu block**, **Jharkhand**. The study examined the impact of MGNREGA on villagers' livelihoods, income and expenditure, scheme awareness, migration patterns, work quality, asset creation, credit access, and savings. However, it revealed numerous issues

impeding MGNREGA's effectiveness: household identification, registration problems, substandard work, wage and unemployment allowance issues, limited capacity building and awareness, low participation in decision-making, and communication gaps due to illiteracy.

Ms. Rekha & Dr. Rekha Mehta (2019) conducted the case study in the **Jodhpur district of Rajasthan**, has examined the socio-economic "impact of MGNREGA on the rural poor" who are mainly comprised of landless, small, and marginal farmers. The study is based on a random sample of 240 respondents. Data were collected through structure interview schedule and data were analysed by using simple mean, percentages etc. Only 1.25per cent of the beneficiaries completed high school education and majority of 73.75 per cent of the beneficiaries were illiterate. It exposed that most of the respondents did not have sufficient education knowledge therefore they preferred this manual work. Out of 240 samples respondent's 72 percent of the respondents belonged to the age group 31 to 50 years shows that the need of employment in rural area. It also shows that the farmers having large landholdings were not much interested in participating in MGNREGA. The study has revealed that the socio-economic condition of the households regularly working under the MGNREGA scheme is considerably poor in the rural area.

"The rural women have made civil society inward Looking caste religious and kingship networks are activated within the community. All networks are executing development projects which would benefit their stake groups." **[Kavitha A. and Nagaraj G.H. (2012)18, Effect of Employment Guarantee Programme for Rural Women"]**

"The Gram Panchayats and Gram Sabhas would decide type of work to be undertaken in the villages and use the funds earmarked under the scheme for women development. Since the scheme call for Significant involvement of local people particularly women folk and PRIs it is absolutely essential to

impart comprehensive training for transferring various skills." **[Patel Amrit (2006)26, "Role of Panchayati Raj institutions in Implementing Rural Employment Guarantee Scheme"]**

"The National Rural Employment Guarantee Act (NREGA), is a landmark legislation. It is clear that the NREGA, with its Rights Based framework, is a paradigm shift from all other development programmes that were traditionally supply led. Centrally funded entirely through domestic resources, the implementation of this law is supported by a budget based on Demand for Employment." **[Jawed Akhtar M., Abdul Azeez N.P. and Mansoor Md., (2011)15, "Towards Millennium Development Goals and the Role of MGNREGA"]**

Dey.S and Bedi S.A (2010), **examined NREGS (February 2006 – July 2009)** in **Birbhum district**, West Bengal. This study shows about the good awareness of this scheme and well maintaining of information related NREGS. According to this study, less jobs days and payment delay are the problem. But their problems improve day by day.

Alha. A and Yonzon. B (2011), shows that this scheme is very helpful for females in rural sector. But, in recent past, **male migration** has become common. Specially agriculture sector has undergone a vast change in recent past partly for MGNREGS. A well **shortage of farm labour** and as an effect of an upward push of wages in agricultural sectors observed. This study has suggested that this is the **high time to implement MGNREGA** and other public workers with a high push to improve agricultural sector all over the country.

Rout. G (2013), reveals about the significant potential of MGNREGA. This scheme is truly demand driver. **MoRD** is increasing its monitoring at the gram panchayat level for strengthening on gender equality and empowering women. This scheme provide security to the rural women workers and give them financial independence. Increasing number of

women in participating in participating in various meeting and speaking out there is a good sign.

Objectives

The objectives of this project are as follows:

- To obtain the demographic status like Population, sex, caste, religion and standard of living in Orgram.
- To obtain the distribution of ownership of resources among household members.
- To obtain the diversity of occupation among the population (sex wise).
- To obtain the status of NREGA implementation and benefits derived from it.
- To obtain women's awareness of the NREGA programs.

Data and Methodology:

This study is based solely on primary data collected from the village of Orgram, located in Purba Bardhaman district of West Bengal. The survey included 30 number of families, with a total sample population of 154 individuals. Among the surveyed families, 19 belonged to Above Poverty Line (APL) category, while 11 belonged to Below Poverty Line (BPL) category. Out of the 154 family members, 79 were male and 75 were female. The population composition consisted of 55% general category members, 11% Scheduled Caste (SC) members, 14% Scheduled Tribe (ST) members, and 20% Other Backward Classes (OBC) members.

Methodology: Tabulation calculations have been used to describe the objectives related to demographic and NREGA status. Diversification in job patterns has also been pointed out with the help of tabulation. The whole calculation has been done with the assistance of the MS Excel application.

Orgram village, Purba Bardhaman, West Bengal:

Source: Google maps

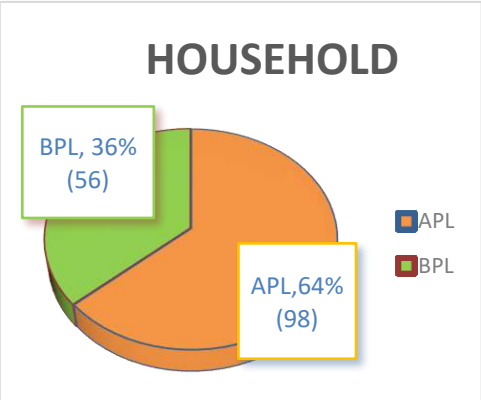
Findings and Analysis

Demographic Status:

Demographics are the characteristics of a population that have been categorized by distinct criteria- such as age, gender and income- as means to study the attributes of a particular group. Demographic change can influence the underlying growth rate of economy, structural productivity growth, living standards, savings rates, consumption and savings. The direct method of collecting demographic data involve tracking and researching official records of births, marriages, divorces, deaths and migrations. Business may conduct consumer polls to gather data about what people buy, why they have specific shopping preference and how much they spend on average. Now-a-days, online demographic data collection is becoming common. From demographic information marketing

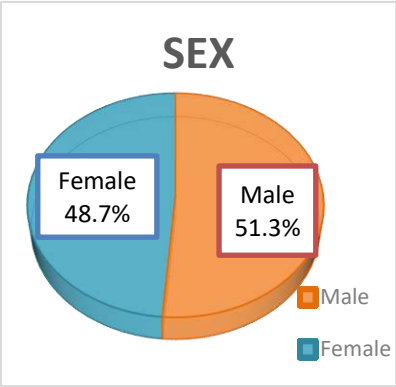
strategies, economic analysis, government 12 policies are determined. So, the study of demography is essential for scientific uses of human resources.

Table:1- Population W.r.t Economic Status And Sex (in Percentage)



ECO. STAT	PERCENTAGE
APL	63.64 (98)
BPL	36.36 (56)

SEX	PERCENTAGE
Male	51.3 (79)
Female	48.7 (75)



SOURCE: FIELD SURVEY 2023

As we can see in Table:1, 63.64 percent people are in APL category and 36.36 percent people are in BPL category, among them male population is 51.3 percent, and female population is 48.7 percent. The male to female ratio in the village of Orgram indicates a relatively balanced distribution between the genders.

Table:2- Religion wise population Status (in percentage)

RELIGION	POPULATION
HINDU	68.18 (105)
MUSLIM	24.68 (38)
CHRISTAN	0
OTHERS	7.14 (11)
TOTAL	100 (154)

SOURCE: FIELD SURVEY 2023

The above table describes the religious status in Orgram village. From that table, it is observed that there are 68.18 percent Hindu, 24.68 percent Muslim and 7.14 percent families belonging to other religions. Which makes it a fairly diverse village for our survey.

Table:3- Caste wise population (in percentage)

CASTE	POPULATION
GENERAL	54.55 (84)
SC	11.04 (17)
ST	14.29 (22)
OBC	20.13 (31)

SOURCE: FIELD SURVEY 2023

The table indicates the caste distribution in the surveyed population of Orgram village. According to the data, 54.55 percent of the population belongs to the general caste, 11.04 percent to the Scheduled Caste (SC), 14.29 percent to the Scheduled Tribe (ST), and 20.13 percent to the Other Backward Classes (OBC). These figures reflect the representation of different castes within the surveyed population.

Table:4- House/Toilet/Source of drinking water/Source of Fuel/Source of light with respect to economic status (in percentage)

Econ stat.	House Type			Toilet Type				Source Of Light		
	Kaccha	Pacca	Semi Pacca	Kaccha	Pacca	Semi Pacca	No Facility	Kerosene	Electricity	Others (K+E)
APL	10.53(2)	68.42(13)	21.05(4)	0	94.74(18)	5.26(1)	0	0	100(19)	0
BPL	81.82(9)	9.09(1)	9.09(1)	45.45(5)	36.36(4)	9.09(1)	9.09(1)	0	90.91(10)	9.09(1)

Econ stat.	Source of Fuel		Source Of Drinking Water			
	One Type	Two Type	Municipal Tap	Tube Well	Pond	Tube Well, Tap
APL	57.89(11)	42.11 (8)	42.11(8)	31.58(6)	5.26(1)	21.05(4)
BPL	63.64 (7)	36.36 (4)	27.27(3)	36.36(4)	18.18(2)	18.18(2)

SOURCE: FIELD SURVEY 2023

Above table shows the distribution of housing conditions, sanitation facilities, lighting sources, fuel sources, and drinking water sources among surveyed individuals.

Regarding the APL category, 10.53 percent live in kaccha houses, 68.42 percent live in pacca houses, and 21.05 percent live in semi-pacca houses. In the BPL category, 51.82 percent live in kaccha houses, 9.09 percent live in pacca houses, and 9.09 percent live in semi-pacca houses. Notably, the majority of individuals in the APL category reside

in pacca houses, while in the BPL category, the majority reside in kaccha houses.

When it comes to toilet facilities, 94.74 percent of people in the APL category have pacca toilets, whereas in the BPL category, 81.82 percent have kaccha or semi-kaccha toilets.

In terms of lighting sources, electricity is the primary source for 100 percent of individuals in the APL category, with no other sources being used. In the BPL category, 90.91 percent of people use electricity as their main lighting source, while 9.09 percent use a combination of kerosene and electricity.

Regarding fuel sources, there is a variety of practices. Around 57.89 percent of individuals in the APL category use a single type of fuel source, such as fuel wood, purchased fuel, kerosene, coal, or LPG. Meanwhile, 42.11 percent use a combination of two types of fuel sources. In the BPL category, 63.64 percent rely on a single type of fuel source, while 36.36 percent use two types of fuel sources.

Moving on to drinking water sources, among those in the APL category, the majority (42.11 percent) use municipal tap water. Tube wells are used by 31.58 percent, ponds by 18.18 percent, and tap water by 18.18 percent. In the BPL category, the primary source of water is tube wells (36.36 percent), followed by municipal tap water (27.27 percent), ponds (18.18 percent), and a combination of tube wells and taps (18.18 percent).

Table:5- Benefits Provided By P.D.S. With Respect To Econ. Status (In Percentage)

PDS BENEFIT NO.	APL	BPL
FOOD GRAIN	57.89(11)	0
KEROSENE, SUGAR, FOOD GRAIN	0	90(9)
KEROSENE, FOOD GRAIN	42.11(8)	10(1)

SOURCE: FIELD SURVEY 2023.

In the above table, we can see that most of the people under APL get only food grains (57.89 percent), and some of them get the combination of kerosene and food grains (42.11 percent) which mainly consisted of wheat/flour and rice. Among the BPL most of the people get the combination of kerosene, food grain and sugar (90 precent) and some get the combination of kerosene and food grain (10 percent). The P.D.S. here is working as desired by the Govt. which is to provide sustenance food and ration supply to the poor and marginalised people of our state.

Table:6- Ownership status with respect to population (in percentage)

OWNERSHIP	MEN	WOMEN	ALL HOUSEHOLD MEMBERS	OTHERS JOINT OWNERSHIP
RESIDENCE	79.31(23)	13.79(4)	0	6.9(2)
AGRICULTURE LAND	83.33(15)	5.56(1)	5.56(1)	5.56(1)
LIVESTOCK	52.63(10)	21.05(4)	21.05(4)	5.26(1)
JEWELLERY	0	80.95(17)	19.05(4)	0
VEHICLE	74.07(20)	0	11.11(3)	14.81(4)
CELL PHONE	42.31(11)	0	57.69(15)	0

SOURCE: FIELD SURVEY 2023

According to the above table the ownership of residence, Agriculture Land, Livestock, Vehicle, Cell Phone are mainly distributed to the men at a percentage of percent 79.31 percent, 83.33 percent, 52.63 percent, 74.07 percent, 42.31 percent respectively. 80.95 percent women handle the ownership of the jewellery. Here, all household memberships hold at livestock, vehicles, cell phones respectively at 21.05 percent, 11.11 percent, 57.69 percent respectively. Joint ownership is an important factor w.r.t vehicles, residence and agriculture at 14.81 percent , 6.9 percent, 5.56 percent respectively. For women empowerment and to maintain equality in society, ownership of the factors by women needs a dramatic increase and to overcome the traditional sense of ownership which women are mostly limited to that is Jewellery.

Table:7- Mobility of women W.r.t. Economic status (in_percentage)

Mobility of Women	APL: Allowed	APL: Not Allowed	BPL: Allowed	BPL: Not Allowed
Allowed to go out alone	73.68 (14)	26.32 (5)	81.82 (9)	18.18 (2)
Allowed to go to market	73.68 (14)	26.32 (5)	54.55 (6)	45.45 (5)
Allowed to visit health care facilities	89.47 (17)	10.53 (2)	81.82 (9)	18.18 (2)
Allowed to go outside village	63.16 (12)	36.84 (7)	0	100 (11)

SOURCE: FIELD SURVEY 2023

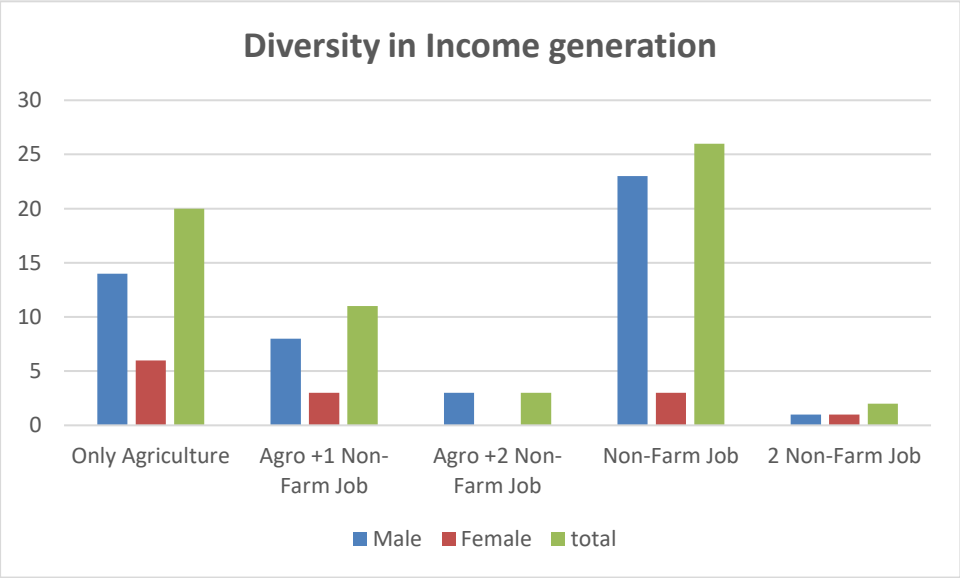
In the above table, it can be observed that in APL (Above Poverty Line) families, women are allowed to go out alone, to markets, to healthcare facilities, and outside of the village in the following percentages: 73.68%, 73.68%, 89.47%, and 63.16%, respectively. However, shockingly, in the BPL (Below Poverty Line) families, although women are allowed to go out alone, to markets, and to healthcare facilities in percentages of 81.82%, 54.55%, and 81.82% respectively, no women in the BPL category seem to be permitted to leave the village.

Occupation Status:

Occupation status refers to an individual's current employment situation or the nature of their job. It provides insight into their professional activities and the role they play in the workforce. Occupation status can be categorized into various classifications, including employed, unemployed, self-employed, or retired. Being employed indicates that an individual has a job and is actively working for an organization or company. On the other hand, unemployment refers to a situation where an individual is without a job but is actively seeking employment opportunities. Unemployment status is often associated with efforts to secure suitable employment and can have various reasons such as economic conditions, industry changes, or personal circumstances. Occupation status serves as a key indicator of an individual's current engagement in the workforce, providing insights into their professional life, income source, and stage of career or life journey.

Table:8- Diversity of Occupation W.r.t. Sex

Diversity in Income generation	Male	Female
Only Agriculture	28.57(14)	46.15(6)
Agro +1 Non-Farm Job	16.33(8)	23.08(3)
Agro +2 Non-Farm Job	6.12(3)	0
Non-Farm Job	46.94(23)	23.08(3)
2 Non-Farm Job	2.04(1)	7.69(1)



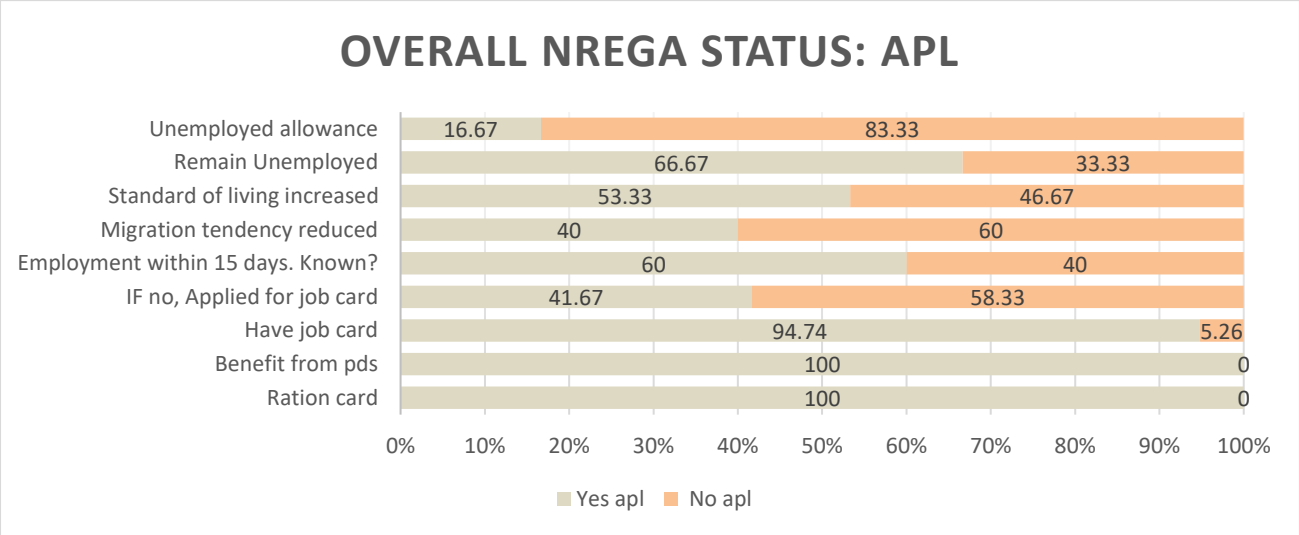
SOURCE: FIELD SURVEY 2023

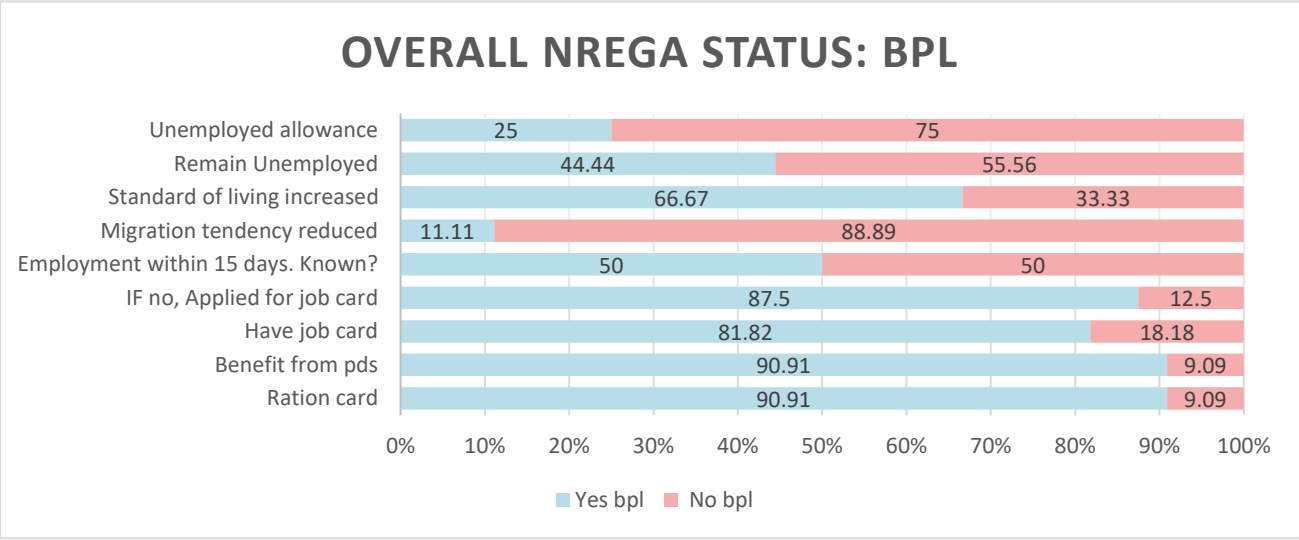
In the above table, most of the male population relates to their work with non-farm-based jobs i.e., 46.94% male and 23% female participate in this kind job. 28.57% male and 46.15 % female working population is employed in agriculture which is majority of women. Agriculture and Non-farm related jobs are both crucial for these villagers. 16.33% of male and 23.08% of the people are employed in agriculture as well as one other non-farm job. Only a few percent of male, 6.12% work under agriculture along with two types of non-farm jobs. Only around 2% of male and 7.69% of female have two types of non-farm jobs. Agriculture is the second highest place of jobs for male and first highest for women at 28% and 46% approx. There is huge lack of women who are involved in economic activities more than half of women population is dependent on their families and govt for allowances. 23 of women correspondents reported to be benefitting from govt. allowances.

NREGA Status:

Table:9- Overview Of NREGA Status In Orgram Village (In Percentage)

QUESTIONS	YES		NO	
	APL	BPL	APL	BPL
RATION CARD	100(19)	90.91(10)	0	9.09(1)
BENEFIT FROM P.D.S	100(19)	90.91(10)	0	9.09(1)
HAVE JOB CARD	94.74(18)	81.82(9)	5.26(1)	18.18(2)
IF NO JOB CARD, HAS APPLIED FOR JOB CARD	41.67(5)	87.5(7)	58.33(7)	12.5(1)
AWARENESS OF EMPLOYMENT WITHIN 15 DAYS	60(9)	50(4)	40(6)	50(4)
MIGRATION TENDENCY REDUCED	40(6)	11.11(1)	60(9)	88.89(8)
STANDARD OF LIVING INCREASED	53.33(8)	66.67(6)	46.67(7)	33.33(3)
REMAIN UNEMPLOYED	66.67(10)	44.44(4)	33.33(5)	55.56(5)
UNEMPLOYMENT ALLOWANCE	16.67(2)	25(2)	83.33(10)	75(6)





SOURCE: FIELD SURVEY 2023

In the above table, almost all the people from APL and BPL have ration card and they derive various benefits that are associated to it. Only a handful of BPL people (9.09 percent) don't have ration card and don't enjoy the benefits. Under APL category 94.74 percent people have job card and 81.82 percent BPL people have job card. Among them 60 percent APL people got job within 15 days, and 50 percent BPL people got job within 15 days. Because of job card migration tendency of APL people reduced approximately 40 percent and of BPL people reduced by just 11.11 percent. Which shows that for BPL category it did not help much in reducing migration. Standard of living of APL (53.33 percent) increased less than that of BPL (66.67 percent). While doing the survey we got to know that almost from 2 yrs. the work process of NREGA has been stopped due to the pandemic, which led most of them to find them new jobs, among the APL still 66.67 percent people remain unemployed and among them only 16.67 percent people get unemployed allowance and under BPL category 44.44 percent people remain unemployed and among them 25 percent people are getting unemployment allowance.

Table:10- Type of work in Nrega With Respect to Economic Status (In Percentage)

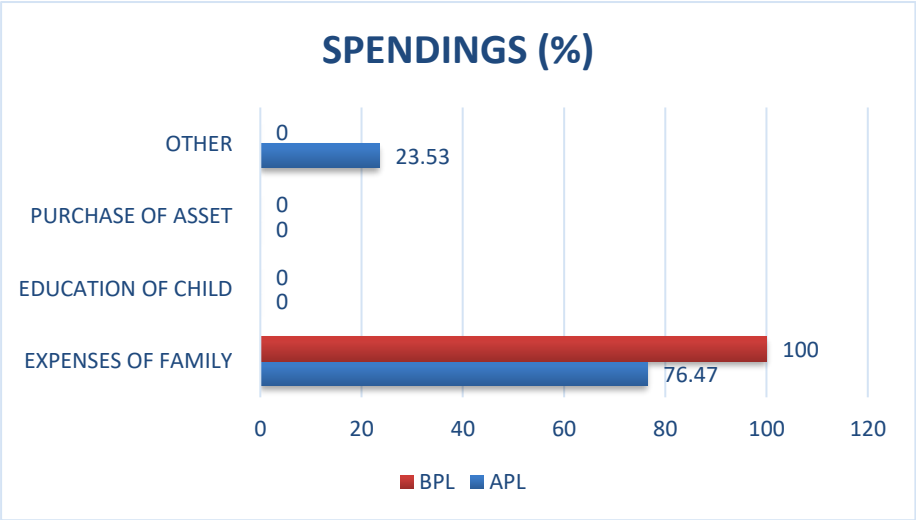
Types of work done under NREGA	APL	BPL
DIG POND	6.67(1)	0
DRAINAGE	0	11.11(1)
DRAINAGE, MAKING ROAD	0	11.11(1)
DIG POND, MAKING ROAD, PLANTATION, DRAINAGE	13.33(2)	11.11(1)
DIG POND, PLANTATION, DRAINAGE, MAKING ROAD, OTHER	0	11.11(1)
DIG POND, MAKING ROAD, DRAINAGE	13.33(2)	11.11(1)
DIG POND, PLANTATION, DRAINAGE	20(3)	0
DIG POND, PLANTATION, DRAINAGE, OTHER	6.67(1)	0
DIG POND, DRAINAGE	26.67(4)	33.33(3)
DRAINAGE, OTHER	0	11.11(1)
MAKING ROAD, PLANTATION, DRAINAGE	6.67(1)	0
NO WORK	6.67(1)	0

SOURCE: FIELD SURVEY 2023.

This scheme provides various types of non-technical manual jobs in the village. According to the sample data, under APL category, 6.67 percent people of sample relates only with digging pond, 13.33 percent people relates with digging pond, making road and plantation, 13.33 percent people with digging, making road and drainage and 20 percent people with digging, plantation and drainage, 6.67 percent people with digging, plantation, drainage and others, 26.67 percent people with digging pond and drainage, some (6.67 percent) with making road, plantation and drainage. Rest of the APL category (6.67 percent) do not participate in any work. Under the BPL category people do drainage (11.11 percent), drainage and making road (11.11 percent), digging pond, making road, plantation and drainage (11.11 percent), digging pond, making road and drainage (11.11 percent), digging pond and drainage (33.33 percent), drainage and other works (11.11) and some people (11.11 percent) do all the works provided under this scheme.

Table:11- Spending Aspects of women from NREGA earnings With Respect To Economic Status (In %)

SPENDINGS	APL	BPL
EXPENSES OF FAMILY	76.47(13)	100(8)
EDUCATION OF CHILD	0	0
PURCHASE OF ASSET	0	0
OTHER	23.53(4)	0



SOURCE: FIELD SURVEY 2023.

The data shows that earning from NREGA work is spent mostly on running family expenses by both APL women and BPL women in this village. Under APL category people around 76.47 percent people uses the earnings for the expenses of the family and some (23.53 percent) people uses the earnings in other purposes. Under the BPL category 100 percent people uses these earnings for the expenses of family. So, we see that, the earning of NREGA works acts as an important medium for women to continue their livelihood.

Table:12- Type Of Benefit From NREGA With Respect To Economic Status (In Percentage)

TYPE OF BENEFIT	APL	BPL
TIME SAVING	22.22(2)	25(1)
POLLUTION CLEARING	11.11(1)	25(1)
FISH, IRRIGATION	0	25(1)
FISH, IRRIGATION, TIME SAVING	11.11(1)	0
IRRIGATION, TIME SAVING	11.11(1)	0
TIME SAVING, POLLUTION CLEARING	44.44(4)	0
TIME SAVING, POLLUTION CLEARING, GREENING AMBIENCE	0	25(1)

SOURCE: FIELD SURVEY 2023.

As per Table 10, fish, irrigation, pollution clearing, greening ambience and time saving are the benefits that the respondents get by the scheme of NREGA works. 22.22 percent from APL and 25 percent people from BPL sample gets the benefit of time savings. Most benefits for the APL category people in the sample is a combination of time saving, and pollution clearing (44.44 percent). For BPL category people combination of time saving, pollution clearing, greening ambience (25 percent) and combination of fish and irrigation (25 percent) are equal. And rest 25 percent points out pollution clearing as the benefiting part of it. Thus, we see that, this scheme-oriented work culture ensures better usage of land and water resources of the rural regions of the country.

Table:13- Days Of Getting NREGA Job And Payment With respect to Economic Status (In Percentage)

ECON. STAT	GETTING JOB		GETTING PAYMENT		
	WITHIN 15 DAYS	AFTER 15 DAYS	WITHIN 15 DAYS	AFTER 15 DAYS	VARIES
APL	57.14(8)	42.86(6)	13.33(2)	46.67 (7)	40(6)
BPL	75(6)	25(2)	33.33(3)	44.44(4)	22.22(2)

SOURCE: FIELD SURVEY 2023.

In table 11, it is observed that, under APL category, around 57.14 percent people get job within 15 days after applying, and around 42.86 percent people get job 15 days after applying. under BPL category, 75 percent people get job after applying within 15 days and 25 percent people get job after applying beyond 15 days. In terms of payment, under APL category, around 13.33 percent people get payment after job within 15 days and around 46.67 percent people get their payment after 15 days, and according to 40 percent people of APL category, getting payment varies from 15 days to 1 month. Under BPL category, around 33.33 percent people get their payment within 15 days, 44.44 percent people get their payment beyond 15 days and in case of 22.22 percent people, getting payment varies. So, the payment with specific time does not occur harmonically.

Table:14- Facilities Provided In NREGA Worksite With Respect To Economic Status (In Percentage)

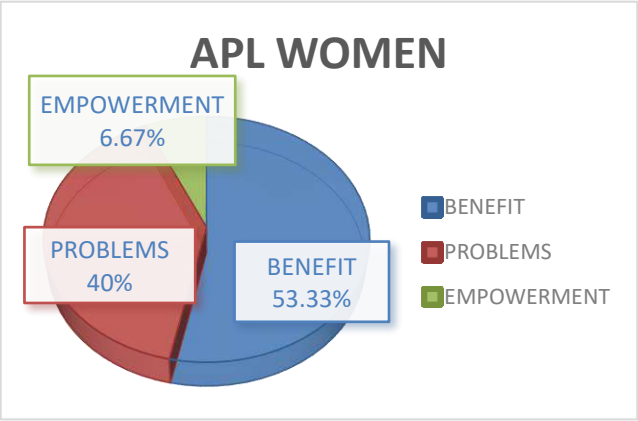
WORK SITE FACILITIES	APL	BPL
DRINKING WATER	6.67(1)	22.22(6)
DRINKING WATER, FIRST AID	40(6)	66.67(6)
DRINKING WATER, FIRST AID, CHILD CARE	40(6)	11.11(1)
NOT AWARE	13.33(2)	0

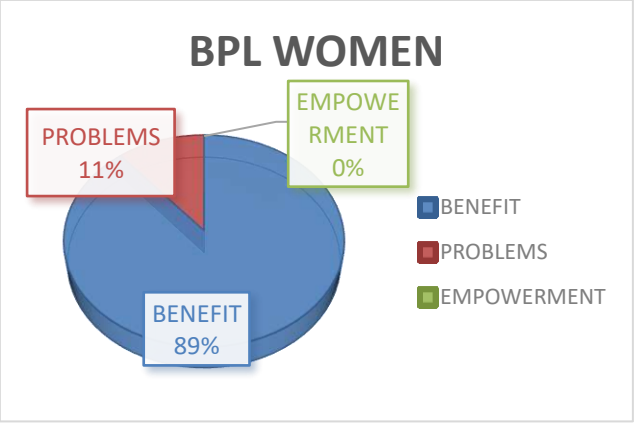
SOURCE: FIELD SURVEY 2023.

In the NREGA worksite, drinking water, first aid facilities and child care facilities are required to be provided in general. Although as we can see in the above table that Under APL category 6.67 percent people get only the facility of drinking water, 40 percent people get drinking water and first aid, 40 percent people get facilities like drinking water,

first aid and child care and rest of the people (13.33 percent) don't know about the facilities provided there. Under the BPL category 22.22 percent people get facility of drinking water, most of the BPL people (66.67 percent) get the facilities like drinking water and first aid. Almost 11.11 percent of people get the facilities of drinking water, first aid and child care. Almost all of BPL population knows about the facilities provided on the worksite yet in reality are not met with the same. These findings suggest a discrepancy between the reported provision of facilities and the actual implementation.

Table:15- View of NREGA as a Women W.r.t. Economic Status (In %)





Women's View	APL	BPL
BENEFICIAL	53.33(8)	88.89(8)
PROBLEMATIC	40(6)	11.11(1)
EMPOWERMENT	6.67(1)	0

SOURCE: FIELD SURVEY 2023.

Next, we tried to talk to the women of the APL households about their thoughts on the benefits they get. From the observed data we found that 53.33% of them think of that scheme to be beneficial for them, according to some 40% it is problematic for them and some 6.67% think it is necessary for women empowerment. Among the BPL women most of them 88.89% think this scheme to be beneficial, around 11.11% thinks it to be problematic. No women from BPL households seem to find the scheme empowering for them.

Table:16- Awareness of women about NREGA with respect to population (in percentage)

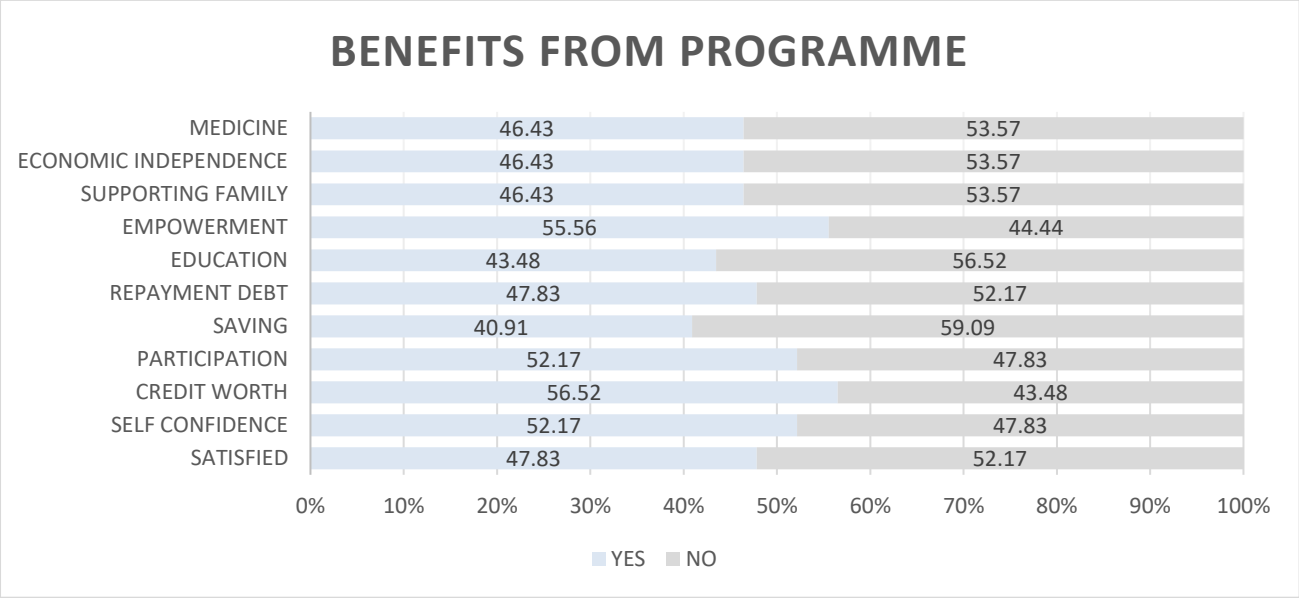
AWARENESS OF WOMEN	YES	NO
TAKEN PART	55.56(15)	44.44(12)
PROVISION MAX 100 DAYS WORK	46.43(13)	53.57(15)
MIN WAGES	46.43(13)	53.57(15)
EQUAL WAGES	46.43(13)	53.57(15)
WAGE PAID WITHIN 15 DAYS	14.29(4)	85.71(24)
WORK WITHIN 5KM	35.71(10)	64.29(18)
1/3RD WOMEN WORK	32.14(9)	67.86(19)

SOURCE: FIELD SURVEY 2023.

According to the data in the table, 55.56 percent of women participate in various manual jobs. Among them, 46.43 percent agree with the provision of a maximum of 100 days of work. In terms of wages, 46.43 percent of women are aware of the concept of minimum wages and believe in equal pay. Additionally, only 14.29 percent of women receive their payment within 15 days. When it comes to proximity, 35.71 percent of women have work opportunities within a 5 km radius from their residence. Interestingly, only 32.14 percent of women support the implementation of a one-third women worker policy. It is crucial to improve awareness among women for their development, as less than half of them are familiar with the provisions of the scheme.

Table:17- Various factors related to the NREGA Scheme with respect to population (in percentage)

PROGRAMME	YES	NO
SATISFACTION	47.83(11)	52.17(12)
SELF CONFIDENCE	52.17(12)	47.83(11)
CREDIT WORTHINESS	56.52(13)	43.48(10)
PARTICIPATION	52.17(12)	47.83(11)
SAVING	40.91(9)	59.09(13)
REPAYMENT DEBT	47.83(11)	52.17(12)
EDUCATION	43.48(10)	56.52(13)
EMPOWERMENT TO MEET BANK OFFICIALS	55.56(15)	44.44(12)
SUPPORTING FAMILY	46.43(13)	53.57(15)
ECONOMIC INDEPENDENCE	46.43(13)	53.57(15)
MEDICINE	46.43(13)	53.57(15)



SOURCE: FIELD SURVEY 2023.

According to the Table, the survey results show that 47.83 percent of the respondents are satisfied with the NREGA program. Additionally, 52.17 percent of the people agree that their self-confidence has increased as a result of the scheme. Furthermore, significant percentages of respondents consent to various benefits and positive outcomes from the program: 56.52 percent agree with the increment of creditworthiness, 52.17 percent with increased participation, 40.91 percent with improved savings, 47.83 percent with better repayment of family debt, 43.48 percent with enhanced education, 55.56 percent with increased empowerment to meet bank officials, 46.43 percent with support for their families, 46.43 percent with improved economic independence, and 46.43 percent with better access to medicine.

These findings indicate that approximately half of the population enrolled in the NREGA program is experiencing tangible benefits and satisfaction. However, it is important for the government to implement and closely monitor the functioning of the NREGA schemes to address any challenges or shortcomings identified in the survey

Conclusion

This project has provided valuable insights into various socio-economic aspects related to NREGA and the overall economic status in Orgram Village. It highlights the need for increased awareness of the NREGA scheme, particularly among women. The study identifies several issues that the government needs to address, including delayed payments, job availability within the specified time frame, Limited awareness among beneficiaries about their entitlements, leakages in the implementation process, inadequate monitoring and accountability mechanisms, inequitable distribution of benefits among marginalized sections of society (Women, SC/ST). and the non-receipt of unemployment allowances. Surprisingly, despite the legal mandate, 53% of the women respondents did not receive or were unaware of the minimum 100 days of employment.

The study also reveals that women in the village are not actively engaged in economic production, indicating the persistence of traditional thinking as a common obstacle. Additionally, the research sheds light on the various struggles faced by villagers in their challenging lives. Despite these hardships, many poor villagers hold aspirations for a better future for themselves and their children. Recognizing these aspirations emphasizes the importance of inclusive development strategies that empower and uplift marginalized communities.

The govt. needs to take a step forward to improve the implementation of NREGA (National Rural Employment Guarantee Act) and address the existing issues, for which the following steps can be taken:

Awareness and Outreach: According to the findings Table 16, of the survey, it is evident that a significant percentage of women respondents approximately 61% were not aware of the benefits provided by the NREGA scheme. This highlights the urgent need to

increase awareness about the program, particularly among the rural population and marginalized communities, with a special emphasis on women. To address this issue, it is crucial to conduct regular campaigns, workshops, and awareness programs. By improving awareness, individuals can fully avail themselves of the benefits and opportunities provided by the program, contributing to their socio-economic development and empowerment.

Timely Payment: As per the data presented in Table 13, it is observed that approx. 50% of the respondents attributed the delay in receiving wages to the government, while approximately 37% expressed uncertainty about whom to blame. These findings indicate a lack of a proper medium for timely payment. To address this issue, it becomes crucial to ensure that wages are paid promptly and directly to the workers' bank accounts. To achieve timely payments, it is essential to implement robust systems that effectively track and monitor wage disbursements. By adopting such systems, delays can be minimized, and the risk of corruption can be reduced. This requires establishing efficient mechanisms that facilitate direct transfers of wages to workers' bank accounts, bypassing any intermediaries that may contribute to delays or malpractices.

Transparency and Accountability: Based on the data presented in Table 15 and Table 17, it is evident that although the NREGA scheme has shown some positive outcomes, it still falls short of achieving its ultimate goal of eradicating poverty and improving the standard of living in rural areas. Half of the population surveyed remains unfamiliar with the benefits of the scheme and lacks confidence in its ability to enhance their livelihoods. To address these challenges, promoting transparency and accountability in the implementation of NREGA is essential. Technology-driven platforms can play a significant role in achieving this objective. Online portals can be utilized for job

registration, attendance tracking, and wage payments, ensuring transparency and making relevant information accessible to the public.

Understanding these insights can guide policymakers, development practitioners, and society as a whole in designing more effective and inclusive strategies to alleviate poverty, promote sustainable development, and improve the well-being of struggling villagers in Orgram Village.

Bibliography

1. Primary data collected from field survey held by Economics department, Vivekanada Mahavidyalaya in the year 2023
2. http://nrega.nic.in
3. Google map of Orgram village
4. https://www.researchgate.net
5. Rout and Gurkalayan (2013), women need more protection through 'MGNREGA: A Role of Gram Sabha and PRIS' International journal of Social Science.Vol.2(2),pp129-139,2013.
6. Alha A. and Yonzon B. (2011), 'Recent Developments in Farm labour availability in India and Reasons behind its short supply' Agriculture Economics Research review, vol.24(conference number)2011,pp 381-390.
7. Dey.S and Bedi S.A (2010), 'The National Rural Employment Guarantee Scheme in Birbhum. Economic & Political Weekly', XLV(41),19-25
8. Jawed Akhtar M., Abdul Azeez N.P. and Mansoor Md., (2011)15, "Towards Millennium Development Goals and the Role of MGNREGA"
9. Patel Amrit (2006)26, "Role of Panchayati Raj institutions in Implementing Rural Employment Guarantee Scheme"
10. Kavitha A. and Nagaraj G.H. (2012)18, Effect of Employment Guarantee Programme for Rural Women"

11. Ms. Rekha & Dr. Rekha Mehta International Journal of Humanities and Social Science Invention (IJHSSI) Impact of MGNREGA in Improving Socio-Economic Status of Rural-Poor: a study of Jodhpur District of Rajasthan
12. Sanjay Kumar, Meena Kumari and Shamsher Alam: Ground Realities and Inhibitions in Execution of MGNREGA in Jharkhand, India. Journal of Research in Social Sciences and Humanities. 2018
13. D.K. Saha, Soma Srivastava and Khem Chand (2012) MGNREGA: A Case Study in the Arid Village of Bhacharna, Rajasthan
14. Rajesh Sharma and Dr. Manish Didwania (2013) "Performance Analysis of MGNREGA: A Case Study of District Jind"
15. "MGNREGA" AND RURAL DEVELOPMENT Arya Narayanan PG Economics, St.Joseph's College, Irinjalakuda 2017
16. Santosh Singh, Rajendra Singh Negi and Rekha Dhanai, Impact Assessment of MGNREGA: Study of Pauri Garhwal District of Uttarakhand, India, January 2015
17. Prianka Sengupta (2022) New Opportunity and Performance Analysis of MGNREGA During Covid-19 Case Study of Purulia District
18. MGNREGA – "Silver Bullet" for Sustainable Poverty Eradication – A Case Study of Koraput District of Odisha April 2013, Sanjeeb Kumar Jena Rajiv Gandhi University

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Burdwan ★ Pin-713103 ★ W.B

NAAC Re-Accredited (B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

TO WHOM IT MAY CONCERN

This is to certify that Dr. Ananta Gope (Associate Professor of Geography) Vivekananda Mahavidyalaya , Burdwan is going to conduct field excursion on Barda Mouza in Ranibandh Police Station of Bankura District (adjacent to Kangsabati Dam) which is a part of study in the prescribed syllabus of B.A./B. Sc. Geography Honours 5th Semester of The University of Burdwan. The field study will be held on 25th September, 2022.He may be allowed access to data, reports, records, maps, books and other reliable sources of information. It will be convenient for him if he is provided with all sorts of help required for the purpose.

22/9/22

Principal

Principal
Vivekananda Mahavidyalaya
BURDWAN

Vivekananda Mahavidyalaya

Burdwan

Annexure-V

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Burdwan ★ Pin-713103 ★ W.B

NAAC Re-Accredited (B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

LIST OF PARTICIPATING STUDENTS OF GEOGRAPHY HONOURS [5TH SEMESTER] AND TEACHER IN FIELD STUDY THAT IS GOING TO BE HELD AT BARDA MOUZA, RANIBANDH CD BLOCK OF BANKURA DISTRICT

SL. NO	NAME OF STUDENT	ROLL NO	GENDER	MOBILE NO.
1	ABHIJIT PRASAD	200112200004	MALE	7074728129
2	AMBIKA ROY	200112200009	FEMALE	9883439622
3	ANIMESH SANTRA	200112200016	MALE	8768502919
4	ARINDITA HALDAR	200112200030	FEMALE	6295841734
5	ARPITA BHATTACHARIYA	200112200033	FEMALE	8509834568
6	ASMINA KHATUN	200112200044	FEMALE	6296215762
7	DEBJIT ADHIKARI	200112200075	MALE	8250029024
8	JOYDEEP MONDAL	200112200101	MALE	8695483766
9	KARABI ADAK	200112200107	FEMALE	7864029865
10	KRISHNAGOPAL DEY	200112200114	MALE	8768300260
11	KUNAL CHAKRABORTY	200112200116	MALE	9547516059
12	KUNTAL GHOSH	200112200117	MALE	8436004581
13	MALATI BAGDI	200112200123	FEMALE	8167461056
14	MOHINI KHATUN	200112200136	FEMALE	9749217620
15	MOSARAF SK	200112200139	MALE	8900382336
16	MOUSUMI PARAMANIK	200112200147	FEMALE	9883677957
17	MOUSUMI ROY	200112200148	FEMALE	7797207570
18	MRINAL KANTI BISWAS	200112200149	MALE	6296287175
19	NAURIN FARHIN	200112200160	FEMALE	9382611773
20	POULAMI PAUL	200112200175	FEMALE	9883391208
21	PRIYATOSH PULAY	200112200193	MALE	9775916144
22	PURNIMA DAN	200112200198	FEMALE	9832867189
23	RIYA KARMAKAR	200112200219	FEMALE	9153064537
24	SANDIP DAS	200112200247	MALE	9883238080
25	SAYANTAN GARAI	200112200261	MALE	7908882562
26	SHIBHAM DEBNATH	200112200269	MALE	8617339064
27	SK. IZAJUL HAQUE	200112200284	MALE	9083956507
28	SNIGHDHA GHOSH	200112200289	FEMALE	9883325288
29	SONAMONI NANDI	200112200296	FEMALE	7029292110
30	SOUMEN ROY	200112200298	MALE	9679248661
31	SOUVIK MALIK	200112200304	MALE	8695990284
32	SUBRATA MAJHI	200112200319	MALE	7477704202
33	SUJANA KHATUN	200112200325	FEMALE	7679127557
34	TIPSA PAL	200112200353	FEMALE	6295770329

Supervisor: Dr. Ananta Gope, Associate Professor of Geography, Dept. of Geography (V.M.), Burdwan

22/9/22

Principal
Vivekananda Mahavidyalaya
BURDWAN

Annexure-V

Annexure-V

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Burdwan ★ Pin-713103 ★ W.B

NAAC Re-Accredited (B+) with PG in Chemistry

No...../V.M. Date: .....

From : The Principal & Secretary

TO WHOM IT MAY CONCERN

This is to certify that Dr. Shambhu Nath Sing Mura (Assistant Professor of Geography) Vivekananda Mahavidyalaya, Burdwan is going to conduct Educational field excursion of B.A./B.Sc. SEM-III Honours (Geography) students on 16-11-2022 & 21-11-2022 in Silk Rute, East Sikkim, Sikkim, India

Any kind of help regarding the data collection will be immense help to his educational field work and will be acknowledged accordingly.

12/11/22

Principal
Vivekananda Mahavidyalaya
Burdwan

Principal
Vivekananda Mahavidyalaya
BURDWAN

Forwarded 12/11/22

Annexure-V

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Burdwan ★ Pin-713103 ★ W.B

NAAC Re-Accredited (B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

B.A./B.SC. SEM-III GEOGRAPHY HONOURS STUDENTS ARE GOING TO FIELD STUDY IN SILK ROUTE FROM 16TH TO 21ST NOVEMBER, 2022 AND ITS SURROUNDINGS (SIKKIM). NAME OF THE STUDENTS ARE GIVEN BELOW.

Sl. No.	Roll No.	Students' Name	Gender	Phone No.
1	210112200001	AHANA GHOSH CHOUDHURY	F	9641731747
2	210112200005	AISHEE BANERJEE	F	9064924842
3	210112200026	ANKITA SADHU	F	7908876510
4	210112200030	ANTARA KUNDU	F	9883445176
5	210112200031	ANTARA MAJI	F	9907163002
6	210112200054	AYAN NOH	M	9832350557
7	210112200064	BIKRAM DAS	M	9382320194
8	210112200137	KOYEL SAHA	F	8101531856
9	210112200179	NELIMA GHOSH	F	9339862026
10	210112200182	NILANKAN KUNDU	M	9933319391
11	210112200189	PARAMITA SAHA	F	8116362826
12	210112200198	PRAPTI DAS	F	9339756450
13	210112200208	PRIYANKA GHOSH	F	9907470690
14	210112200269	SANDIP BASKEY	M	7601840193
15	210112200276	SANJU GHOSH	M	9641667985
16	210112200299	SHIBADAS BISWAS	M	9064916172
17	210112200307	SHREYA KUNDU	F	8597380733
18	210112200320	SMRITI BARIK	F	9734737483
19	210112200330	SOURAV SINGHA	M	8768765222
20	210112200332	SUBHADWIP ASH	M	9883113665
21	210112200347	SUKANYA ROY	F	7865868973
22	210112200372	SUSMITA SAHA	F	8116362826
23	210112200398	VARSHA DEY	F	7501621270

12/11/22

12/11/22

Principal
Vivekananda Mahavidyalaya
BURDWAN

Annexure-V

Silk Route (16th Nov. to 21st Nov., 2022)

Annexure-V

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Burdwan ★ Pin-713103 ★ W.B

NAAC Re-Accredited (B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

TO WHOM IT MAY CONCERN

This is to certify that Dr. Shambhu Nath Sing Mura (Assistant Professor of Geography) Vivekananda Mahavidyalaya, Burdwan is going to conduct Educational field excursion of B.A./B.Sc. SEM-VI Honours (Geography) students from 11th March to 16th March, 2023 in Pelling, Sikkim, India

Any kind of help regarding the data collection will be immense help to his educational field work and will be acknowledged accordingly.

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 Burdwan

06/3/23

Principal
Vivekananda Mahavidyalaya
Burdwan

Principal
Vivekananda Mahavidyalaya
BURDWAN

06/3/23

Annexure-V

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Burdwan ★ Pin-713103 ★ W.B

NAAC Re-Accredited (B+) with PG in Chemistry

No...../V.M. Date: .....

From : The Principal & Secretary

B.A. /B.SC. SEM-VI GEOGRAPHY HONOURS STUDENTS ARE GOING TO FIELD STUDY IN PELLING FROM 11th TO 16th MARCH, 2023 AND ITS SURROUNDINGS (SIKKIM). NAME OF THE STUDENTS ARE GIVEN BELOW.

Student Name	Roll No.	Registration Year	Phone Number
ANIMESH SANTRA	200112200016	2020-21	8768502918
ARINDITA HALDER	200112200030	2020-21	6295841734
ARPITA BHATTACHARYA	200112200033	2020-21	8509834568
ASMINA KHATUN	200112200044	2020-21	6296215762
KARABI ADAK	200112200107	2020-21	7864029865
NAURIN FARHIN	200112200160	2020-21	9382611773
POULAMI PAUL	200112200175	2020-21	9883391208
PRIYATOSH PUILAY	200112200193	2020-21	9775916144
PURNIMA DAN	200112200198	2020-21	6295674019
RIYA KARMAKAR	200112200219	2020-21	9153064537
SANDIP DAS	200112200247	2020-21	9883238080
SAYANTAN GARAI	200112200261	2020-21	7908882562
SHIBHAM DEBNATH	200112200269	2020-21	8617339064
SK IZAJUL HAQUE	200112200284	2020-21	9083956907
SONAMONI NANDI	200112200296	2020-21	7029292110
SOUVIK MALIK	200112200304	2020-21	8695990284
SUBRATA MAJHI	200112200319	2020-21	7477704202
SWAPNA KHATUN	200412210718	2020-21	9641107416

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 Burdwan

Principal
Vivekananda Mahavidyalaya
BURDWAN

Annexure-V

Pelling, Sikkim (11th March to 16th March, 2023)

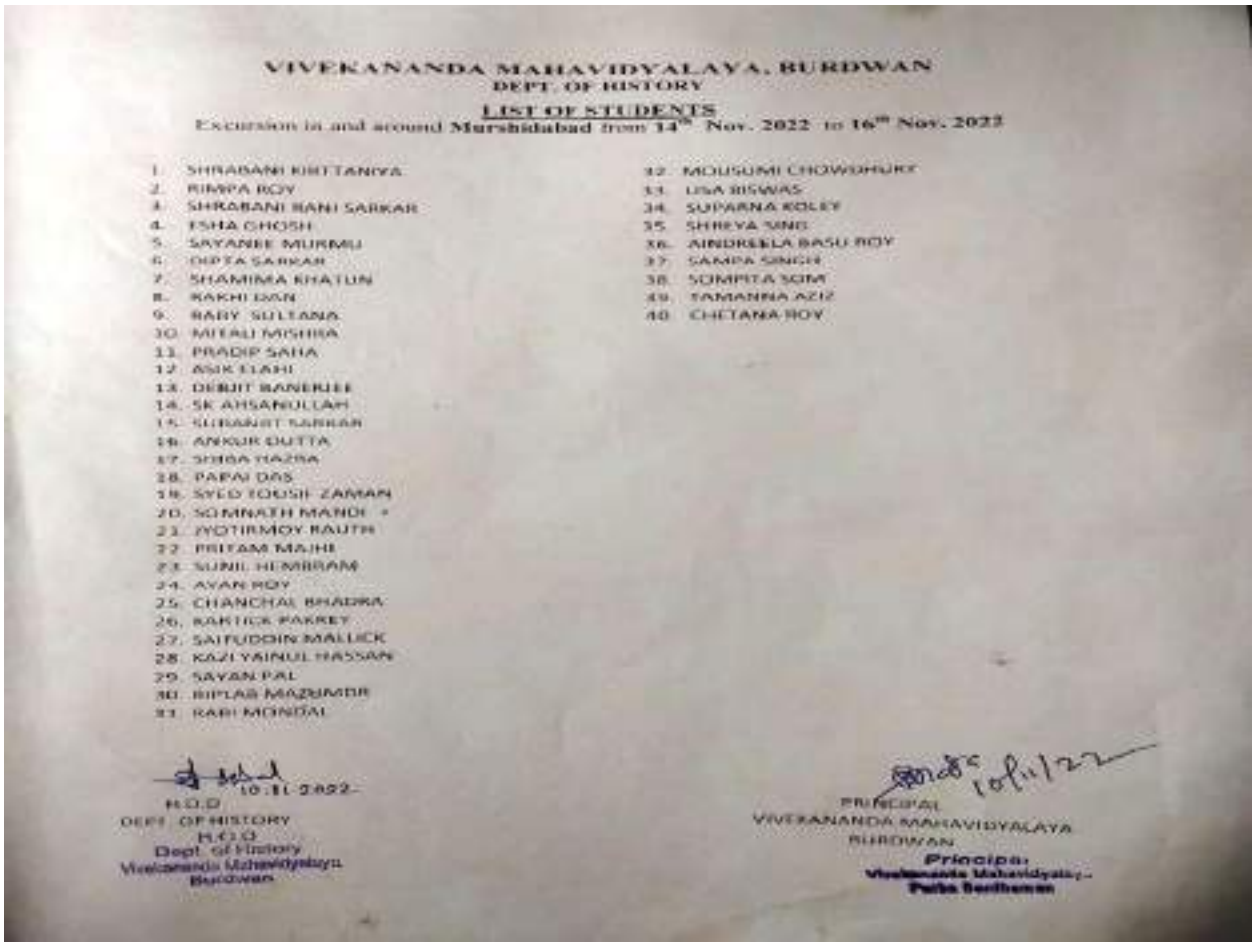
VIVEKANANDA MAHAVIDYALAYA, BURDWAN
DEPARTMENT OF HISTORY
EDUCATIONAL EXCURSION 2022-2023

VENUE: MURSHIDABAD
DATE: From 14/11/2022 to 16/11/2022

What are the historical spot of Murshidabad:

The forts, palaces, and other historical attractions uplift the charm of Murshidabad. There are numerous attractions you can explore in the city such as , Katra Masjid, Murshidabad District Museum, Nizamat Fort, Katgola Palace, Jahan Kosha Cannon, Hazarduari Palace, Imambara and more.

Student list:



VIVEKANANDA MAHAVIDYALAYA, BURDWAN
DEPT. OF HISTORY
LIST OF STUDENTS
Excursion in and around Murshidabad from 14th Nov. 2022 to 16th Nov. 2022

1. SHRABANI KIRTANIYA
2. RIMPA ROY
3. SHRABANI RANI SARKAR
4. ESHA GHOSH
5. SAYANEE MURMU
6. DIPTA SARKAR
7. SHAMIMA KHATUN
8. RAKHI DAN
9. RABY SULTANA
10. MITALI MISHRA
11. PRADIP SAHA
12. ASIK ELAHI
13. DEBJIT BANERJEE
14. SK AHSANULLAH
15. SUBHANJIT SARKAR
16. ANKUR DUTTA
17. SOMA HAZRA
18. PAPAI DAS
19. SYED TOUSIF ZAMAN
20. SOMNATH MANDI
21. JYOTIRMOY RAUTH
22. PRITAM MAJHI
23. SUNIL HEMBRAM
24. AYAN ROY
25. CHANCHAL BHADRA
26. KARTICK PAKREY
27. SAIFUDDIN MALLICK
28. KAZI YAINUL HASSAN
29. SAYAN PAL
30. BIPLAB MAZUMDER
31. RABI MONDAL
32. MOUSUMI CHOWDHURY
33. LISA BISWAS
34. SUPARNA KOLEY
35. SHREYA SING
36. AINDRILLA BASU ROY
37. SAMPA SINGH
38. SOMPITA SOM
39. TAMANNA AZIZ
40. CHETANA ROY

10.11.2022
H.O.D
DEPT. OF HISTORY
H.O.D
Dept. of History
Vivekananda Mahavidyalaya
Burdwan

10/11/22
PRINCIPAL
VIVEKANANDA MAHAVIDYALAYA
BURDWAN
Principal
Vivekananda Mahavidyalaya
Purba Bardhaman

Some memories of our excursion

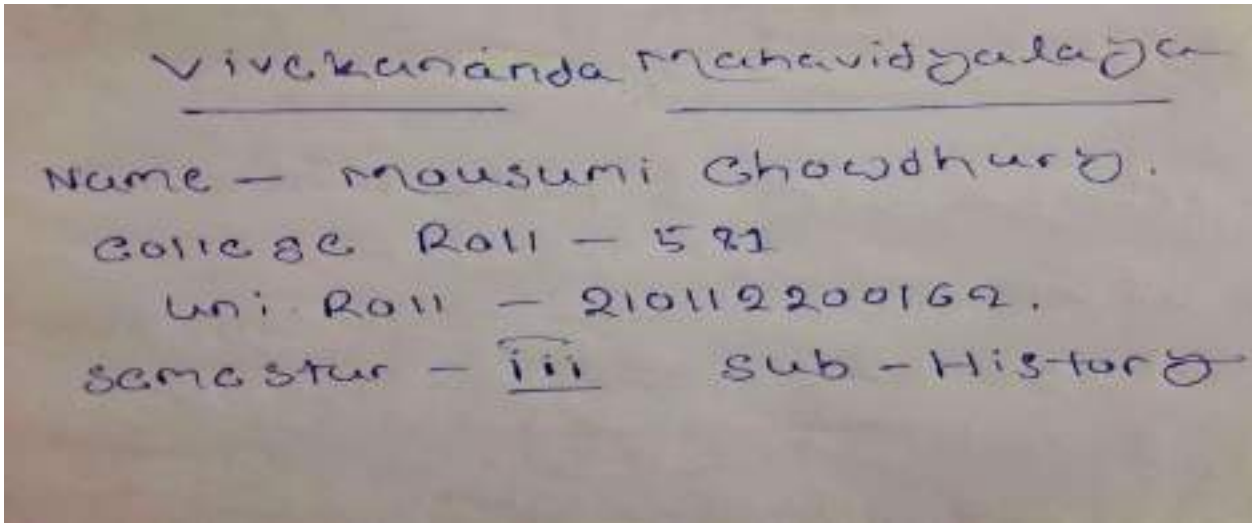
Outcome of our excursion:

In the Palace, there are thousands of doors. All the doors are decorated with expensive ornaments. But, among the thousands of doors, 900 doors are real. And the remaining 100 doors are false doors. These 100 doors create an illusion. the Palace is turned into a museum. In the museum, many valuable things are owned by the Nawabs of Murshidabad. The sculptures and art of the Kathgola Palace will mesmerize you.

Now the Palace is turned into a museum. The library, the bedroom, the drawing-room, and the billiards room are still decorated like the old days. Because of this, we can still taste the old days of living. There is a pond in front of Kathgola Palace. This pond doubles the beauty of the Palace. Various beautiful flowers bloom here in winter, which is like heaven for photo lovers.

Now, know about the history of this cannon. You will be surprised to hear that this cannon weighs about 16,880 pounds. And if you know the length of this weapon, you will be surprised. This weapon is about 17 feet long. It is said to be one of the giant cannons in India.

Students Experience:


Vivekananda Mahavidyalaya
Name – Mousumi Chowdhury.
College Roll – 521
Uni. Roll – 21011220016 2.
Semester – iii Sub – History

মুর্শিদাবাদ - ভারতের একটি ঐতিহাসিক বন্দর

ঐতিহাসিক শহর মুর্শিদাবাদ ভাগীরথী নদীর পূর্ব তীরে একটি ছিলো। এই শহরটি ভারতের একটি অত্যন্ত মূল্যবান ঐতিহাসিক স্থান হিসাবে পরিচিত। নবাব - মুর্শিদ কুলী খান তাঁর নাম অনুসারে এই শহরের নামকরণ করেন। মুর্শিদাবাদ শহর ছিলো বাংলা, বিহার, উড়িষ্যার রাজধানী। মহান নবাব সিরাজ-উদ-দৌল্লা ছিলেন এই শহরের শেষ স্বাধীন নবাব।

□ মুর্শিদাবাদ ইতিহাসের বহু শতাব্দী ধরে, এর সিংহাসন বিভিন্ন রাজবংশের উত্থান ও পতনের সাক্ষী ছিল। অষ্টাদশ শতকে মুর্শিদাবাদ তার গৌরবের শিখরে পৌঁছেছিল। বাংলার নবাবদের অধীনে বড়ো শহরের রাজধানী হিসাবে কাজ করে, মুর্শিদাবাদ বাণিজ্য, শিল্প ও সংস্কৃতির একটি সমৃদ্ধ কেন্দ্র হয়ে উঠে।

□ মুর্শিদাবাদের অন্যতম আকর্ষণীয় স্থাপত্য হাজার দুয়ারি প্রাসাদ। এই হাজার দরজার জন্য উপযুক্তভাবে নামকরণ করা হয়েছে। নবাব নাসির হুমায়ুন জাহের আমলে ১৭ শতকে নির্মিত, এই বিশাল প্রাসাদটি হলো ইন্দো-সারাসেনিক স্থাপত্যের একটি চমৎকার উদাহরণ। হাজারদুয়ারি প্রাসাদটি এখন ভারতের একটি জাতীয়

চলো →

বিজাত বাড়ুজ। যা নজরের আসাদ বহন করছে, প্রাচীন নির্দশনের জন্য আজও অলেক্ষিত হয়ে আছে।

মুর্শিদাবাদের আর একটি স্থাপত্য নিদর্শন হলো কাটরা মসজিদ। ১৪ বছরের লোকায় দিকে নবাব মুর্শিদকুলী খাঁ কর্তৃক প্রতিষ্ঠিত একটি বিশাল মসজিদ। এটি মুর্শিদাবাদের অন্যতম আকর্ষণীয় স্থান। তবুও মসজিদটি কবে তৈরিনের জন্য নিশ্চিত হওয়া যায়নি। কাটরা মসজিদটি এই অঞ্চলের সমৃদ্ধ ইসলামীয় ঐতিহ্য এবং স্থাপত্য দক্ষতার উজ্জ্বল নিদর্শন হিসাবে দাঁড়িয়ে।

এই স্থাপত্যের নিদর্শনের মধ্যে মুর্শিদাবাদ সাংস্কৃতিক ঐতিহ্যের গর্বিত। এইগুলি তার ঐতিহ্যগত বাড়ুশিল্পের জন্য বিখ্যাত। যার মধ্যে রয়েছে হাতির দাঁতের খোদাই, রেশম জরি এবং পিতলের কাজ যা কারিগরের এক উজ্জ্বল উদাহরণ।

মুর্শিদাবাদের আর একটি নিদর্শন হলো মতিঝিল। মতিঝিল হলো মসজিদ এবং কবরস্থানের প্রতিষ্ঠাতাদের। এটি নির্মাণ করেন নওয়াজিশ মুহাম্মদ খান। মতিঝিল বাড়ির অবশেষ আজকের হলোটির ট্রেন এবং রেলের ব্যাপক ক্ষতি। কয়েকটি এখানে একটি জাদুঘর রয়েছে যেখানে মুর্শিদাবাদের নবাবী যুগের ইতিহাস স্মৃতিত হয়েছে।

মুর্শিদাবাদের আর একটি উল্লেখযোগ্য নিদর্শন হলো জোরবাগান। জোরবাগান ভাগীরথী নদীর পশ্চিমে তীরে অবস্থিত। এটি একটি আম, তাল, বট এবং নানা ফুল-ফল-ছায়া, তার মধ্যে সুজাউদ্দিন এবং নবাব পরিবারের অন্যান্য সদস্যদের সমাধিস্থল।

০ কাটরা : কাটরা খুবই প্রাচীন বর্ধিষ্ণু স্থান। কাটরা কাটরা জায়গাটি নামে পরিচিত। এটি অত্যন্ত গুরুত্বপূর্ণ, জাঁকজমক, আয়তনের এবং সুন্দর আকারের জন্য বিখ্যাত।

০ তারা বাংলার স্বাধীনতা সূর্য অস্তে মুর্শিদাবাদের একটি উল্লেখযোগ্য স্থান রয়েছে। ১৭৫৭ সালে পলাশীর ঐতিহাসিক যুদ্ধ হয়েছিল যা বাংলার বৃটিশ জীবনের নিয়ন্ত্রণ সংঘটন করে। ইতিহাসের এই গুরুত্বপূর্ণ মুহূর্তে অনেকগুলি ঘটনা মুর্শিদাবাদে অনুষ্ঠিত হয়ে গেছে, যেখানে যুদ্ধক্ষেত্র এবং বাংলার শেষ স্বাধীন নবাব সিরাজ-উদ-দৌল্লার স্মৃতি সৌধটি সবচেয়ে স্থান রয়েছে।

০ মুর্শিদাবাদ বাংলার সমৃদ্ধ এবং গৌরবময় ঐতিহ্যের জীবন্ত প্রমাণ হিসেবে দাঁড়িয়ে আছে। এর মহিমান্বিত প্রাসাদ এবং রাজকীয় মসজিদ থেকে এর ধনবন্ত সংস্কৃতি এবং অতীত গৌরব, মুর্শিদাবাদ সময়ের মধ্যে একটি চিরস্থায়ী স্মৃতির প্রতীক হয়ে আছে।

ডেঙ্গু: প্রতিকার ও প্রতিরোধে মানবসমাজের ভূমিকা

উপস্থাপিকা

অন্তরা কারক

রোল : 20011220022

রেজিস্ট্রেশন নম্বর: 202001014050 of 2020-21

শিক্ষাবর্ষ : 2020-2023

তত্ত্বাবধায়ক

অধ্যাপক প্রজ্জ্বল কর্মকার

গণজ্ঞাপন ও সাংবাদিকতা বিভাগ বিবেকানন্দ মহাবিদ্যালয়, বর্ধমান

"মোবাইল গেম: বিষণ্ণতা ও একাকিত্ব উদ্রেককারী সামাজিক আসক্তি"

উপস্থাপিকা : অন্বেষা দে

রোল: 200112200028

রেজিস্ট্রেশন নম্বর: 202001014056 of 2020-2021

তত্ত্বাবধায়ক: অধ্যাপক প্রদ্যুম্ন কর্মকার

9/8/2023

শিক্ষাবর্ষ: 2020-2023

গণজ্ঞাপন ও সাংবাদিকতা বিভাগ

বিবেকানন্দ মহাবিদ্যালয়, পূর্ব বর্ধমান

শিক্ষার প্রসার ও সর্ব শিক্ষা অভিযান

উপস্থাপিকা : অর্পিতা দাস

রোল : 200112200035

রেজিস্ট্রেশননম্বর : 20200101463 of 2020-21

তত্ত্বাবধায়ক : অধ্যাপক প্রফুল্ল কর্মকার

গণজ্ঞাপন ও সাংবাদিকতা

বিবেকানন্দ মহাবিদ্যালয়, বর্ধমান

শিক্ষাবর্ষ : 2020-2023

নারী স্বাস্থ্য সুরক্ষাঃ এলাকায় স্যানিটারি ন্যাপকিন ভেন্ডিং মেশিনের ভূমিকা

উপস্থাপক

দেবস্মিতা মন্ডল

রোল - 200112200072

রেজিস্ট্রেশন নম্বর – 202001014100 of 2020-2021

তত্ত্বাবধায়ক

শ্রী প্রজ্জ্বল কর্মকার

গনজ্ঞাপন ও সাংবাদিকতা বিভাগ

বিবেকানন্দ মহাবিদ্যালয়, পূর্ব বর্ধমান

শিক্ষাবর্ষ - 2020-2023

শৌচালয় ব্যবহার সম্পর্কে প্রান্তিক গ্রামীণ জনগণের মধ্যে সচেতনতার প্রসার

উপস্থাপিকা- ঈশিকা কোনার

রোল- 200112200096

রেজিস্ট্রেশন নম্বর-202001014124 of 2020-21

শিক্ষাবর্ষ- 2020-23

তত্ত্বাবধায়ক- অধ্যাপক প্রজ্বল কর্মকার

গন জ্ঞাপন ও সাংবাদিকতা বিভাগ

বিবেকানন্দ মহাবিদ্যালয় ,বর্ধমান

DOWRY: A SOCIAL DISEASE

PRESENTED BY

Megha Bhakat

ROLL NO: 200112200131

REGISTRATION NO: 202001014159

SUPERVISIOR

Projjwal Karmakar

DEPARTMENT OF MASS COMMUNICATION AND JOURNALISM

VIVEKANANDA MAHAVIDYALAYA

ACADEMIC YEAR: 2020-2023

বিষয়

"রক্তদান জীবনদান "- শুভ চেতনার নবোদয়

গণজ্ঞাপন ও সাংবাদিকতা বিভাগ

নাম - রোহন কর্মকার

বিভাগ- গণজ্ঞাপন ও সাংবাদিকতা

রোল নাম্বার - 200112200221

রেজিস্ট্রেশন নাম্বার – 202001014247 of 2020-21

বিবেকানন্দ মহাবিদ্যালয়

বর্ধমান বিশ্ববিদ্যালয়

INTEGRATION OF HEALTH AND HYGIENE IN WOMEN'S SANITIZATION

A COMMUNITY OUTREACH PROGRAMME

PRESENTED BY: SANCHITA CHATTERJEE

ROLL NO: 200112200246

REGISTRATION NO: 202001014271 Of 2020-2021

SUPERVISOR: MR. PROJJWAL KARMAKAR

DEPARTMENT OF MASS COMMUNICATION AND JOURNALISM

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

ACADEMIC YEAR: 2020-2023

গ্রামীণ সমাজে প্রবীণ সদস্যদের মধ্যে ডিজিটাল সাক্ষরতার প্রয়োজনীয়তা

উপস্থাপিকা - শ্রেয়সী যশ

রোল নং - 200112200277

রেজিস্ট্রেশন নং - 202001014302 of 2020-'21

তত্ত্বাবধায়ক - অধ্যাপক প্রঞ্জল কর্মকার

গণজ্ঞাপন ও সাংবাদিকতা বিভাগ

বিবেকানন্দ মহাবিদ্যালয়, বর্ধমান

শিক্ষাবর্ষ : 2020-'23

শহরাঞ্চলের বায়ু দূষণ : স্বাস্থ্যের উপর দূষণের প্রভাব ও প্রতিকার

উপস্থাপিকা : স্নেহা সামন্ত

রোল নং- 200112200287

রেজিস্ট্রেশন নং- 202001014312 of 2020-21

তত্ত্বাবধায়ক : প্রজ্জ্বল কর্মকার

শিক্ষাবর্ষ- 2020-2023

গনজ্ঞাপন ও সাংবাদিকতা বিভাগ

বিবেকানন্দ মহাবিদ্যালয়, বর্ধমান

বিষয়-"আবর্জনার সঠিক ব্যবস্থাপনার ভূমিকা"

উপস্থাপক-শৌবন্তিকা ব্যানার্জি

রোল নম্বর-200112200297

রেজিস্ট্রেশন নম্বর-202001014322 of 2020-21

তত্ত্বাবধায়ক-প্রদ্যুল কর্মকার মহাশয়

শিক্ষাবর্ষ:-২০২০-২৩

বিভাগ-গণ জ্ঞাপন ও সাংবাদিকতা

বিবেকানন্দ মহাবিদ্যালয় পূর্ব বর্ধমান

শিশু স্বাস্থ্য ও স্বাস্থ্য বিধি:গ্রামীণ সমাজে সার্বিক উন্নয়নে সচেতনতার ভূমিকা

উপস্থাপিকা : ঈশিতা দত্ত

রোল 200112400065

রেজিস্ট্রেশান নম্বর 202001015479 Of 2020-21

তত্ত্বাবধায়ক : প্রজ্জ্বল কর্মকার

শিক্ষা বর্ষ 2020-2023

গণজ্ঞাপন ও সাংবাদিকতা বিভাগ

বিবেকানন্দ মহাবিদ্যালয়, পূর্ব বর্ধমান

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No. : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No. : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❐ *ESTD.-1964*

P.O.- Sripally ★ Dist. - Burdwan ★ Pin - 713103, W.B.

NAAC Accredited College (B+) with PG in Chemistry

No. ..... /V.M. Date .....

From : The Principal & Secretary

To
The Head
Department of Zoology
Gorubathan Govt. degree College
Kalimpong, W.B. 735231

As per conversation through mobile and approval of visit in **Gorubathan Degree College** via E. mail, students to cover syllabus of **2nd Semester**, intend to take part in the educational visit from Microbiology Department, Vivekananda Mahavidyalaya Burdwan on 27th March, 2023 are listed below.

Sl. No.	Name	Sl. No.	Name
1	Lipsa guin P	10	Payel Pal ABSENT
2	Kuheli Panamanik P	11	Tandra Chakraborty P
3	Debabrata Mondal ABSENT	12	Tamalika Bag ABSENT
4	Sourav Roy ABSENT	13	Koyena Sinha P
5	Zarin Yasmeen P	14	Sabnam Sultana P
6	Niyaj Ahammed P	15	Masud Molla ABSENT
7	Kushal Mallick P	16	Koustav Thakur P
8	Sudip Mondal P	17	Soumi Bhattacharyya ABSENT
9	Aheli Samanta ABSENT	18	Diyasha Karmakar P
		19	Debjit Kundu P

visited our College
Dr. M. K. Mukhopadhyay along with
12 (twelve students) of Dept. of
Microbiology, Vivekanda Mahavidyalaya

27/03/2023
DR. PRATAP KUMAR SEN (W.B.E.S)
Officer-in-Charge
Gorubathan Government College
Gorubathan, Kalimpong-735231

15/3/23
Principal
Vivekananda Mahavidyalaya
BURDWAN

Dr. Manoj Kumar Mukhopadhyay 15/3/23
Head
Department of Microbiology
Vivekananda Mahavidyalaya
BURDWAN

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA BURDWAN

REPORT ON EDUCATIONAL TOUR VISIT

B.Sc. 2nd semester CBCS Practical Examination 2023

Paper : CC- 4

UNIVERSITY ROLL : 220312200121

REGISTRATION NO : 202201016065 of 2022-23

ACKNOWLEDGEMENT

I would like to express my special thanks and my gratitude to our HOD sir Dr. Manas Kumar Mukhopadhyay, who gave me the golden opportunity to do this wonderful report writing activity on our 'Educational visit' to ' Gorubathan Government College', Kalimpong, which also help me to express my experience about this educational visit and I came to know about many new things there that are also mentioned in this report. I am really thankful to all the members of our 'Microbiology' department who have help me lot .Once again I would like to express my gratitude towards our HOD sir, who helped me a lot to finalize the report within the limited time. My thanks and appreciation also goes to my classmates in developing the project and the people who have willingly helped me out with their abilities.

Thanking you.

Sulp Mondal

.....

EXAMINED

INTRODUCTION

In the session 2022-23, Microbiology department of "Vivekananda Mahavidyalaya" planned an "Educational visit" to "Gorubathan Government College", Kalimpong . As it mentioned in our syllabus, an essential part of curriculum. So, our HOD sir honorable Manas Kumar Mukhopadhyay sir, tell us about the plan and discuss it importance for us. After that he also discussed the various aspects of this visit. Our teacher also mentions that this type of activities will be a good experience for us. Then our honorable sir announced the date of journey that was on 23/03/23. The duration of our journey was five days from 23/03/23 to 27/03/23 . We were very excited about our first visit from our college also curious about what going to be held there. Although our teacher clarified us that we will be given a brief description of various microbiology instruments use in a Microbiology laboratory and special emphasis on their application. But there was a curiosity among us how we are going to spend the five days there. Our teacher also informed us to bring various document and parents' permission document with their signature for this visit. A day before the visit we all submitted our documents and our honorable HOD sir had done all the official work for the educational visit.

As per decision and plan before on the scheduled date 23/03/23, we all students gathered at Bandel Junction to catch our train. Then head counting started and we all present at that moment. Then around 9:30 pm our scheduled train 'Kanchankanya Express' arrived the station and we boarded the train with our huge luggage. Our HOD sir, lab assistant sirs were with us as academic guardians. We enjoyed our train journey very much. We spent the whole night playing antakshari and gossiping to each other. The next morning we woke up to find our train passing through a beautiful mountain railway track. Around 10 am we reached our destination station New Mal Junction. Then we took a car from there to an eco-friendly resort in Dooars surrounded by pine trees. The environment here was very eye soothing. After lunch we visited the Murti river. The water of this river was so clean that we could see our feet under water clearly. We enjoyed the whole afternoon there and reformed back to the resort, Next days we reached at Bengal Safari. We saw many animals from a short distance. There were also many adventurous activities that amused us very much, From there we proceeded to Sitong. Though it was summer time but the climate of this area was so cool. It was a place where we could feel ourselves in the lap of nature. We also visited Pine forest at Latpanchar. On the third day of our tour we visited Lava in Kalimpong. It lies in the high altitude, so we observed the beauty and splendour of the hilly areas. We visited there a Buddha temple. From there we went to Rishop along the clean curved roads. We were surprised to see the beautiful scenery of the mountain valley. Enjoying the whole day we returned to our recent. Last day of our tour we visited. Gorumara National Park early in the morning. Then we proceeded to tea Factory. Here we learnt home tea leaves are processed. From there we reached Gorubathan Government College. As instructed by our professor we were going into the college with discipline and without any noise . Our HOD sir had done all the official work. We were introduced with a professor of that institute. We started observing the whole campus with him. After that we just put on our apron and get ready for visiting laboratory room. Then we came to know about many instruments one by one used in Microbiology. The Professor of the institution had guided us all the time and our HOD sir also with us every time. After the instrument session over ,a conclusion of the whole day curriculum were to be done. The Principal Dr. Barin Kumar Paramanik gave a valuable speech and blessed us with well wishes. After that during photo session we took some frame to make the moment memorable. Then we left for the station for our scheduled returning train around 5 pm. We reached our home next morning safely.

SOME GLIMPSE OF OUR TOUR

INSTRUMENTS DEMONSTRATED

(1) AUTOCLAVE : -

Application of Autoclave:- Autoclaves are widely used in microbiology, veterinary science, mycology etc. An autoclave is used to sterilize surgical equipment, laboratory instruments, pharmaceutical items, and other materials. It can sterilize solids, liquids, hollows, and instruments of various shapes and sizes. Autoclaves vary in size, shape and functionality.

(2) HOT AIR OVEN :-

Application of Hot Air Oven:- Hot air oven is used to sterilize glassware, heat resistant material, oils, powders, waxes and other substances that cannot be sterilized by moist heat as they either get spoiled or are not sterilized effectively. Hot air oven sterilized glassware by dry heat, which removes moisture.

(3) WATER BATH :-

Application of Water Bath :- It helps to improve the solubility of a poorly soluble substance. It is the best choice for heat-flammable substances that might ignite under an open flame. It is used for heating laboratory reagents. The water bath is also used for melting substances. It is used to heat the smear during acid-fast staining and spore staining. It is also used for cell culture incubation for various purposes in laboratories.

(4) TRANSILLUMINATOR :-

Application of Transilluminator : - A transilluminator is standard equipment present in biosciences laboratories for the visualization of target proteins and DNA. Transilluminator is used to study the results of electrophoretic patterns accurately. Gels after staining are placed on Transilluminator and the image can be seen directly by naked eye. The Transilluminators are designed and manufactured for extensive clarity and trouble-free performance. The sensitivity of detection depends on the nature and intensity of light source used. We offer different types of UV, Visible and combined Transilluminators which are suitable for routine and advanced applications

(5) MICROPROCESSOR VISIBLE SPECTROPHOTOMETER :-

Application of Spectrophotometer : - It is useful in qualitative analysis, especially when identifying classes of compounds in both biological and pure state. The spectrophotometer is essential in quantitative analysis of biochemistry practical such as in determining the unknown concentration of a given species through absorption spectrometry. Spectrophotometry uses photometers, known as spectrophotometers, that can measure the intensity of a light beam at different wavelengths. A perfect example is the nucleic acid in a protein. Enzyme assay is the primary use of spectrophotometry. Identifying the molecular weight of a particular sample such as amine picrates, ketone compounds, aldehyde, and sugar, to name a few.

(6) MAGNETIC STIRRER WITH HOT PLATE :-

Application of magnetic stirrer with hot plate:- The primary use of magnetic stirrer or hot plate with magnetic stirrer is to conduct biological and chemical experiments by mixing two components. It is equally suitable for solids or liquid samples to obtain a consistent liquid mixture. Examples include media for bacterial growth and chemical synthesis.

ABOUT THE CAMPUS

(GORUBATHAN GOVERNMENT COLLEGE , KALIMPONG)

Gorubathan Government College , Kalimpong has a well maintained and decorated campus. Gorubathan Government College is situated in beautiful foothill surrounded by huge greenery in lower Fagu, Gorubathan, Kalimpong. When we enter into the campus, we see academic block. A reception situated in ground floor for any help needed. It has a medium size playground. Campus has a green scenario due to the green plants, tall trees and some bushes. There are many branches science department along Microbiology. All departments have separate class room and laboratory. Most of the rooms are air conditioned. It is a well maintained campus and a healthy environment for students studying here that's all.

Official address- XP24+9JM, Lower Fagu Tea Garden, Kalimpong , West Bengal 73523

SOME MOMENTS

CONCLUSION

The visit that conducted by our college ' Vivekananda Mahavidyalaya' in the department of 'Microbiology' is very much important to us. Nowadays this type of activities highly needed for practical experience for our study. We all the students are now able to understand how the study and culture of Microbiology going on throughout the different campus. We also come to about many instruments in that campus and a practical knowledge gathered by our students. This type of Educational visit will encourage us to prepare ourselves much better by observing other campus study culture.

EXAMINED

Head
Department of Microbiology
Vivekananda Mahavidyalaya
BURDWAN

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Burdwan ★ Pin-713103 ★ W.B

NAAC Re-Accredited (B+) with PG in Chemistry

No...../V.M. Date :.....

From : The Principal & Secretary

TO WHOM IT MAY CONCERN

It is certified that the following students and teachers of our college are going to Dooars for an educational tour which is scheduled on and from 18/09/2022 to 22/09/2022.

List of the students

Sl	Name	Gender	Department	Semester
1	BISHAL DAS	M	POLITICAL SCIENCE	V
2	PRIYAJIT CHATTERJEE	M	POLITICAL SCIENCE	V
3	SUBHOJIT SIKDAR	M	POLITICAL SCIENCE	V
4	ARIF MONDAL	M	POLITICAL SCIENCE	III
5	AYUSH BHANDARI	M	POLITICAL SCIENCE	III
6	BISWANATH RANA	M	POLITICAL SCIENCE	III
7	CHIROJEET PAL	M	POLITICAL SCIENCE	III
8	DWAIPAYAN MUKHERJEE	M	POLITICAL SCIENCE	III
9	SAYAN SAMANTA	M	POLITICAL SCIENCE	III
10	SOURA DEEP RAY	M	POLITICAL SCIENCE	III
11	SK MOSTAKIN	M	POLITICAL SCIENCE	III
12	URMIMALA PALIT	F	POLITICAL SCIENCE	V
13	KIRTI SHARMA	F	POLITICAL SCIENCE	V
14	RUPALI KHATUN	F	POLITICAL SCIENCE	V
15	NURJAHAN KHATUN	F	POLITICAL SCIENCE	V
16	ASFIA ASRIN	F	POLITICAL SCIENCE	V
17	ISHIKA CHATTERJEE	F	POLITICAL SCIENCE	V
18	SALONEY BARDHAN	F	POLITICAL SCIENCE	V
19	GAYTRI SHARMA	F	ECONOMICS	V
20	RIMA KHATUN	F	POLITICAL SCIENCE	V
21	PARNA SARKAR	F	POLITICAL SCIENCE	V

18/9/22

Principal
Vivekananda Mahavidyalaya
BURDWAN

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Burdwan ★ Pin-713103 ★ W.B

NAAC Re-Accredited (B+) with PG in Chemistry

No.....V.M. Date : .....

From : The Principal & Secretary

22	ADITI JHA	F	B.A. GENERAL	III
23	ANKITA NANDI	F	POLITICAL SCIENCE	III
24	JAYASREE KUNDU	F	POLITICAL SCIENCE	III
25	NICE KHATUN	F	POLITICAL SCIENCE	III
26	PAROMITA CHAKRABORTY	F	POLITICAL SCIENCE	III
27	RUPSA DAS	F	POLITICAL SCIENCE	III
28	SHRABANI DUTTA	F	POLITICAL SCIENCE	III
29	SOUMILI DUTTA	F	POLITICAL SCIENCE	III
30	BHAGYASREE ROY	F	POLITICAL SCIENCE	V

List of escort teachers

1. Prof. Madhumita Bhattacharya, Associate Professor, Department of Political Science
2. Prof. Amit Kumar Ash, Assistant Professor, Department of Political Science
3. Prof. Bikash Haldar, Assistant Professor, Department of Political Science

16/9/21

Principal
Vivekananda Mahavidyalaya,
Burdwan, 713103

Vivekananda Mahavidyalaya, Burdwan

Department of Political Science

Educational Tour at Dooars 18th September, 2022 to 22nd September, 2022

An educational trip to Dooars was organized by the Department of Political Science of Vivekananda Mahavidyalaya, Burdwan for the under graduate students on and from 18th September, 2022 to 22nd September, 2022. The tour comprised of the students from 3rd Semester and 5th Semester and the faculty members of this esteemed department. The tour started on 18th Septemebr, 2022 from Burdwan station and all the members boarded the train(Uttar Banga Express) at night. On 19th September the team went to the Lataguri Forest area and checked in at Mayur Resort. From there the entire team went to visit Samsing Tea Garden and Santalikhola. On the next day they visited Bindu waterfalls, Murti River site and Lataguri Forest. On 21st the team went to Garumara forest safari and Tista Dam. The visit completed after a short break for launch and all the team members boarded train from NJP and back to Bardhaman on 22nd Septembe.

This educational tour was an important part of students growth. This was a great opportunity for the student learned by crossing the boundary of books. The selection of this particular place was to make the students' conscious about the environment and sustainable development. So, that they can be more conscious about the gift of nature and the rational use of technology in future. All the aforementioned issues are directly connected with the environmental movement and politics in India. Students get to have the practical experience of theory that they have read in books. This tour eventually showed way to make education interesting and engage studentin learning, when they see things in real life rather than reading books. They grasp things better and remember them for a longer time.

Benefit of educational tour for students aid experiential learning, improves knowledge and understanding, foster social skills and team work. It enable student to think creatively and helps them to build cultural enrichment.

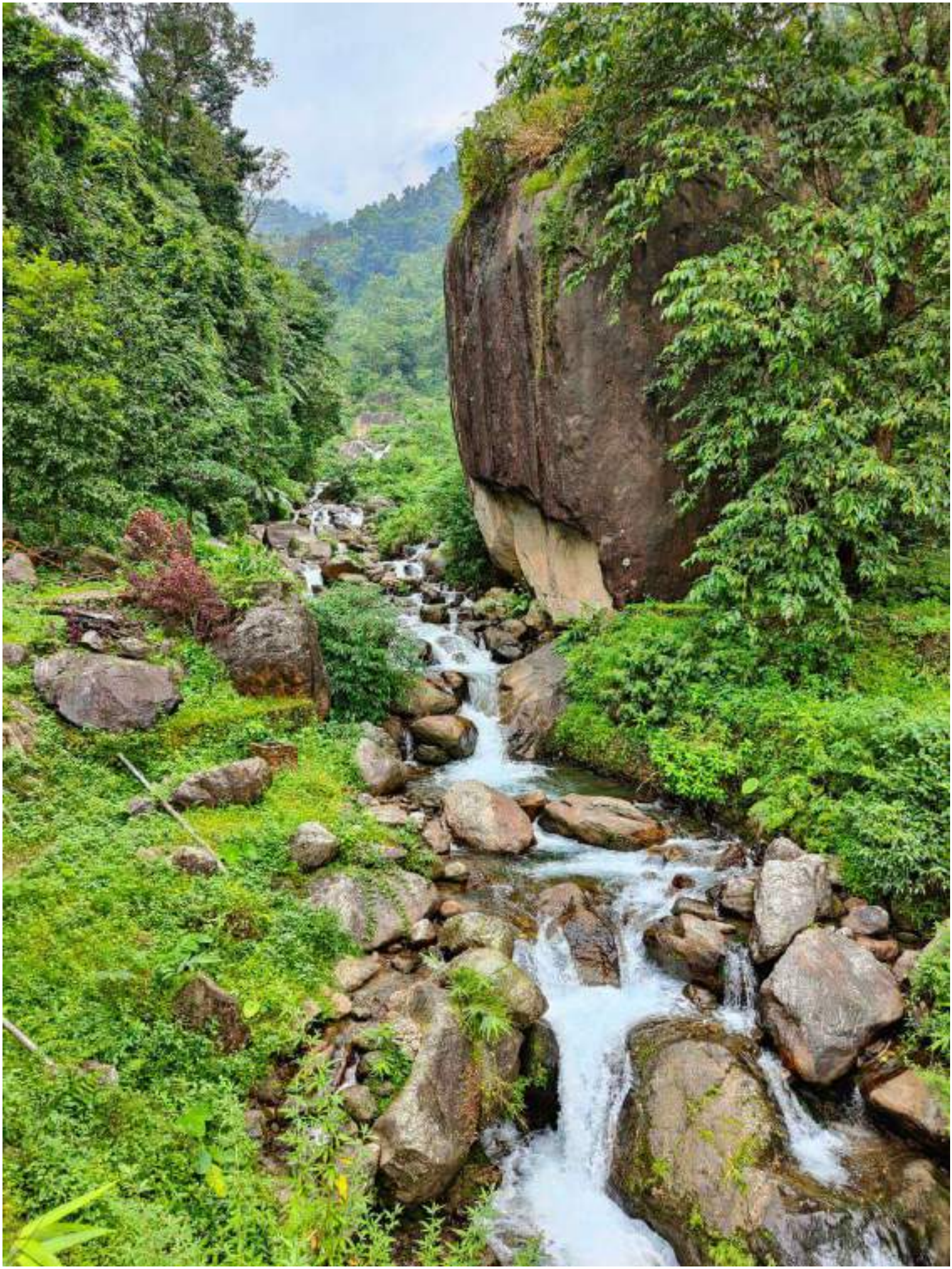
Madhumita Bhattacharya
Dept. of Political Science
Vivekananda Mahavidyalaya
Burdwan
24/9/22

The student spontaneously expressed bonding and friendship with their peer group and it was outburst of stress relief and they reported that it was a break from their durgery of routine classes.

The department experienced a newer scope to build up a better student-teacher relationship and an opportunity to interact in a more informal and relaxed setting.

Dept. of Political Science
Vivekananda Mahavidyalaya
Burdwan

24/9/22



PROJECT TITLE	OBJECTIVES OF THE FIELD STUDY	NAME OF THE SUPERVISORS (TEACHER)	DATE & PLACE OF FIELD	DEPT. (SEM)
DIVERSITY AND BEHAVIOURAL ANALYSIS OF MAMMALIAN AND AVIAN FAUNA IN **ALIPORE ZOOLOGICAL GARDEN**	➢ To acquire the on spot knowledge about Zoological Garden. ➢ To identify the maintenance of animals. ➢ To collect information about the habits of different animals. ➢ To observe behaviour pattern of animals within enclosure.	DR. SOMESHWAR SINGHA SHUBHRAJIT BHOWMIK DR. ARGHA KHAN	**ALIPORE ZOOLOGICAL GARDEN** **Date of Visit: 22.11.2022**	**DEPARTMENT OF ZOOLOGY** SEM-I and SEM-V HONOURS STUDENTS

DEPARTMENT OF ZOOLOGY
VIVEKANANDA MAHAVIDYALAYA
GHUPALLY, BURDWAN-713103

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Burdwan ★ Pin-713103 ★ W.B

NAAC Re-Accredited (B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

LIST OF STUDENTS FOR EXCURSION TO ALIPORE ZOO

Date of Visit: 22.11.2022

SL. NO.	NAME	SEX	SL. NO.	NAME	SEX
1.	SATHI GHOSH	F	24.	ANTARA MONDAL	F
2.	SAHELI BHATTACHARYYA	F	25.	NAYAN DAS	M
3.	SUDESNA KESH	F	26.	NIBEDITA KUMAR	F
4.	SHIPRA MAJUMDAR	F	27.	PROBAL GHOSH	M
5.	SMRITI HALDAR	F	28.	RAHUL DE	M
6.	TITHI SARKAR	F	29.	ROUNAK HAZRA	M
7.	SABIHA KHATUN	F	30.	SABAHAT ANJUM	F
8.	RIJU SAHA	M	31.	SAMIRAN DAS	M
9.	NAHIN SULTANA	F	32.	SUSMITA HALDER	F
10.	BANDANA DHALI	F	33.	SWARNALI SAIN	F
11.	ANISHA MONDAL	F	34.	TANIA SULTANA	F
12.	ANANYA KARMAKAR	F			
13.	SURAJIT SANTRA	M			
14.	KOUSHIK MONDAL	M			
15.	AISHIK DATTA	M		TEACHERS & NON-TEACHING STAFF	
16.	SK TOUKIR ZIYA	M	1.	DR. SOMESHWAR SINGHA	M
17.	RIMPA KUNDU	F	2.	DR. ARGHA KHAN	M
18.	SK MD SAHJAMAL	M	3.	SHUBHRAJIT BHOWMIK	M
19.	DEBAPRIYA GHOSH	M	4.	SANDIP DEY	M
20.	DIPAK DAS	M			
21.	PROKASH DEY	M			
22.	SHASHWATA DATTA	M			
23.	AYES MALLICK	M			

27/11/22

Principal
Vivekananda Mahavidyalaya
Burdwan

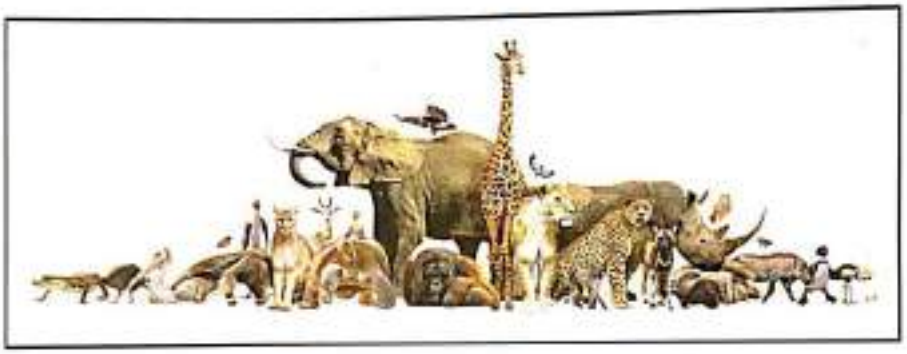
SAMPLE COPY OF PROJECT REPORT

THE UNIVERSITY OF BURDWAN

B. Sc SEM VI HONOURS

PROJECT REPORT ON

BEHAVIOURAL ACTIVITIES OF ANIMALS



Name: - **Rahul De**

Subject: -**Zoology (H)**

University Roll No.: -**200312200077**

University Registration No.:-

202001015245 of 2020-21

Paper: - **Animal Behaviour**

Paper Code: - **DSE-3**

Excursion Report On Different Animals & Their Behaviours

Introduction:-

Excursion actually equip us with knowledge of ecosystem & biodiversity, particularly, there biotic & abiotic components & process of their inter-selection.

Thus it plays a dual role in education & enjoyment. It enhances the interest of knowledge collection & knowing about organisms which we do not get much interest theoritically.

Aims & objective:-

Objectives of excursion is to make ourselves more & more familiar with wild varieties about which we get a theoritical knowledge through books. We worked as groups to understand the characteristics of a rich biodiversity, studying the ecology of that area & animal behaviours inhabiting in that place.

What is animal behaviour?

Animal behaviour includes all the ways animals interact with other organisms & the physical environment.

Behaviour can also be defined as a change in the activity of an organism in response to a stimulus, an external or internal cue or combo of cue.

"Ethology" is a branch of zoology that studies the behaviour of animals, usually with a scientific focus on behaviour under natural conditions, & viewing behaviour as an evolutionarily adaptive trait.

Why we study animal behaviour?

Studying animal behaviour will provide us with a deeper understanding of how animals interact with each other & their environment.

- We can learn about the biological & psychological mechanisms that influence behaviour, including hormones & learning.
- We can also learn how animals communicate, form social bonds, & adapt to changing conditions.
- As a student of animal behaviour, we will be equipped with the knowledge & skills to promote animal welfare.
- We can also learn about & identify behavioural problems in animals, & develop strategies to improve their well being.
- It provides us the opportunity to contribute in scientific research. We could conduct research on the behaviour of a particular species or investigate the impact of human activity on animal behaviour.

LIST OF BEHAVIOURS :-

Type of Behaviour	Behaviour	Description of Behaviour
Solitary	Sleep	Animal assumes species-specific position for sleep, stays in one place & is not alert to environmental changes.
	Rest	Animal stays in one place but may be aroused easily by environmental changes.
	Groom self	Animal engages in washing or smoothning it's own fur or hair using tongue or limbs.
	Maintenance	Animal urinates or defecates
	Travel	Animal moves from place to place.
Food related.	Eat	Animal consumes food it finds in its environment
	Drink	Animal consumes water or other liquid it finds in surroundings.
	Look for food	Animal search for food item.
Social	Groom others	Animal engages in washing or smoothning the fur or hair of another animal.
	Play	Animal engages & interact with another animal that may involve locomotion, climbing, manipulating objects or other activities that show a relationship between two or more interacting animals.
	Contact	Animal comes in contact with another animal while engaging in a solitary behaviour.
Aggressive	Fight	Animals engages in physical conflict with another animal in it's environment.
	Steal food	Animal approaches another animal that has located food in the environment & either by physical force or distraction removes that food item from the vicinity of the other animal.
Off exhibit	Off exhibit	Animal is not visible in exhibit

Methodology :-

In the zoo, few animals are randomly selected for behavioural observation. Various details about the animals & it's enclosures like fencing, type of fencing, number of animals present are noted. If the animals is in a group, then one particular animal is chosen to observe the behaviour.

Each observation is done for 4 minutes & all the behaviour shown by the animals are noted in the ethogram at 30 seconds interval.

ANIMAL BEHAVIOUR OBSERVATIONS

Data Sheet

OBSERVER'S NAME: Rahul De

DATE: 22/11/2022

LOCATION: Zoological Garden, Alipore Kolkata - 700027

START TIME: 1:00 p.m.

END TIME: 1:05 p.m.

NAME OF THE ANIMAL: Rhesus Monkey (Macaca mulatta)

NUMBER OF ANIMALS: 7

DESCRIPTION OF ANIMAL: Brown or grey in colour & has a pink face without fur. It's tail averages between 20 - 25 cm.

DESCRIPTION OF HABITAT (EXHIBIT): Able to live in a range of climate extremes, from hot dry temperatures to cold temperatures. Inside the cage there are high trees & rocks, the cage has high fencing.

BEHAVIOUR CHART:

TIME (MINS:SECS)	RESTING	EATING/ DRINKING	GROOMING	TRAVELLING	AGRESSION	SOCIAL INTERACTION	NOT VISIBLE
0:30				✓			
1:00				✓			
1:30				✓			
2:00					✓		
2:30				✓			
3:00						✓	
3:30			✓				
4:00			✓				

BEHAVIOUR NOTES:

ANIMAL BEHAVIOUR OBSERVATIONS

Data Sheet

OBSERVER'S NAME: Rahul De

DATE: 22/11/2022 LOCATION: Zoological garden, Alipore Kolkata-700027

START TIME: 1:15 p.m. END TIME: 1:20 p.m.

NAME OF THE ANIMAL: Indian Crested Porcupine (*Hystrix indica*)

NUMBER OF ANIMALS: 3

DESCRIPTION OF ANIMAL: A large rodent with multiple layers of modified hair called quills. The quills are brown or black with alternating white & black bands. The body is brownish or black. Broad feet with long claws.

DESCRIPTION OF HABITAT (EXHIBIT): As it is a nocturnal animal the cage is covered with black curtains & placed inside a dark room. The ground of the cage has small grasses & sands & small rocks.

BEHAVIOUR CHART:

TIME (MINS:SECS)	RESTING	EATING/ DRINKING	GROOMING	TRAVELLING	AGRESSION	SOCIAL INTERACTION	NOT VISIBLE
0:30				✓			
1:00				✓			
1:30				✓			
2:00		✓					
2:30				✓			
3:00	✓						
3:30	✓						
4:00	✓						

BEHAVIOUR NOTES:
Open up it's quills when feel excited, scared or threatened.

ANIMAL BEHAVIOUR OBSERVATIONS

Data Sheet

OBSERVER'S NAME: Rahul De

DATE: 22/11/2022 LOCATION: Zoological Garden, Alipore Kolkata - 700027

START TIME: 1:30 p.m. END TIME: 1.35 p.m.

NAME OF THE ANIMAL: Bengal tiger (Panthera tigris tigris)

NUMBER OF ANIMALS: 1

DESCRIPTION OF ANIMAL: Body colour ranging from yellow to orange with black stripes. The belly & interior parts of the limbs are white. Tail is orange with black rings.

DESCRIPTION OF HABITAT (EXHIBIT): The ground inside the cage is covered with small grasses & shrubs. Cage is covered by fencing wire.

BEHAVIOUR CHART:

TIME (MINS:SECS)	RESTING	EATING/ DRINKING	GROOMING	TRAVELLING	AGRESSION	SOCIAL INTERACTION	NOT VISIBLE
0:30	✓						
1:00	✓						
1:30	✓						
2:00	✓						
2:30				✓			
3:00				✓			
3:30					✓		
4:00				✓			

BEHAVIOUR NOTES:

ANIMAL BEHAVIOUR OBSERVATIONS

Data Sheet

OBSERVER'S NAME: Rahul De

DATE: 22 / 11 / 2022

LOCATION: Zoological garden, Alipore Kolkata - 700027

START TIME: 1:45 p.m

END TIME: 1:50 p.m

NAME OF THE ANIMAL: White Tiger (Panthera tigris tigris)

NUMBER OF ANIMALS: 1

DESCRIPTION OF ANIMAL: Body covered with white coloured fur with black stripes. These are basically a leucistic pigmentation variant of Bengal Tigers.

DESCRIPTION OF HABITAT (EXHIBIT): The cage is well protected by fencing wire. Ground panels small grasses, shrubs, rocks etc.

BEHAVIOUR CHART:

TIME (MINS:SECS)	RESTING	EATING/ DRINKING	GROOMING	TRAVELLING	AGRESSION	SOCIAL INTERACTION	NOT VISIBLE
0:30				✓			
1:00				✓			
1:30				✓			
2:00				✓			
2:30					✓		
3:00				✓			
3:30				✓			
4:00					✓		

BEHAVIOUR NOTES:

Examined
Archana
7/8/2023

Few sample images from Excursion of Department of Zoology to ALIPORE ZOOLOGICAL GARDEN On 22.11.2022

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

PROJECT TITLE	OBJECTIVES OF THE FIELD STUDY	NAME OF THE SUPERVISORS (TEACHER)	DATE & PLACE OF FIELD	DEPT. (SEM)
DIVERSITY AND BEHAVIOURAL ANALYSIS OF MAMMALIAN AND AVIAN FAUNA IN **North Bengal Wild Animals Park (Bengal Safari), West Bengal**	➢ To acquire the on spot knowledge about Zoological Garden. ➢ To identify the maintenance of animals. ➢ To collect information about the habits of different animals. ➢ To observe behaviour pattern of animals within enclosure.	DR. SOMESHWAR SINGHA SHUBHRAJIT BHOWMIK DR. ARGHA KHAN	**North Bengal Wild Animals Park (Bengal Safari), West Bengal and surroundings from 23rd March 2023 to 28th March 2023**	**DEPARTMENT OF ZOOLOGY** SEM-I and SEM-V HONOURS STUDENTS

DEPARTMENT OF ZOOLOGY
VIVEKANANDA MAHAVIDYALAYA
SRIPALLY, BURDWAN-713103

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Burdwan ★ Pin-713103 ★ W.B

NAAC Re-Accredited (B+) with PG in Chemistry

No......./V.M. Date : .....

From : The Principal of Secretary

EXCURSION TO NORTH BENGAL WILD ANIMALS PARK (BENGAL SAFARI), WEST BENGAL

SL. NO	NAME OF THE STUDENT 5TH SEMESTER	SEX	AGE
1.	SWARNALI SAIN	F	21
2.	TANIA SULTANA	F	21
3.	SUSMITA HALDER	F	21
4.	SABAHAT ANJUM	F	21
5.	NAYAN DAS	M	21
6.	RAHUL DE	M	21
7.	NIBEDAN GHATAK	M	21
8.	ROUNAK HAZRA	M	21
9.	PROBAL GHOSH	M	21
10.	CHANDRA SHAKAR JOSH	M	21
11.	ANKITA GHOSAL	F	21
12.	INDRANI HAZRA	F	21
13.	ANKITA RAY	F	20
14.	SRIKANTA GARAI	M	20

SL. NO	NAME OF THE STUDENT 3RD SEMESTER	SEX	AGE
1.	AYES MALLICK	M	19
2.	PRAKASH DEY	M	20
3.	DIPAK DAS	M	20
4.	DEBOPRIYO GHOSH	M	20
5.	RIDDHI PURBAIT	M	19
6.	SOURIK DAS	M	19
7.	SOHAM DATTA	M	20
8.	SEKH MUSTAK	M	20

SL. NO.	NAME OF THE TEACHER/ NON-TEACHING STAFF
1.	SOMESHWAR SINGHA
2.	ARGHA KHAN
3.	SHUBHRAJIT BHOWMIK
4.	SANDIP DEY

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 Burdwan

15/3/23

PRINCIPAL
VIVEKANANDA MAHAVIDYALAYA
BURDWAN

Principal
Vivekanada Mahavidyalaya
Burdwan

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Burdwan ★ Pin-713103 ★ W.B

NAAC Re-Accredited (B+) with PG in Chemistry

No......./V.M. Date : .....

From : The Principal of Secretary

EXCURSION TO NORTH BENGAL WILD ANIMALS PARK (BENGAL SAFARI), WEST BENGAL

SL. NO	NAME OF THE STUDENT 1ST SEMESTER	AGE	SEX
1.	SAHELI BHATTACHARYYA	18	F
2.	SHIPRA MAJUMDAR	18	F
3.	TITHI SARKAR	18	F
4.	ANISHA MONDAL	18	F
5.	ANANYA KARMAKAR	18	F
6.	SUDESNA KESH	18	F
7.	SATHI GHOSH	18	F
8.	SMRITI HALDAR	19	F
9.	NAHIN SULTANA	18	F
10.	KOUSHIK MONDAL	18	M
11.	RIJU SAHA	18	M
12.	SK. MD. SAHJAMAL	20	M
13.	SUBAJIT SANTRA	18	M
14.	SURYAKANTA PANDIT	19	M
15.	SK TOUKIR ZIYA	18	M
16.	AISNIK DATTA	19	M

SL. NO.	NAME OF THE TEACHER/ NON-TEACHING STAFF
1.	SOMESHWAR SINGHA
2.	ARGHA KHAN
3.	SHUBHRAJIT BHOWMIK
4.	SANDIP DEY

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 Burdwan

15/3/23

PRINCIPAL
VIVEKANANDA MAHAVIDYALAYA
BURDWAN

Principal
Vivekanada Mahavidyalaya
Burdwan

Few sample images from Excursion of Department of Zoology to North Bengal Wild Animals Park (Bengal Safari), West Bengal and surroundings from 23rd March 2023 to 28th March 2023

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

VIVEKANANDA MAHAVIDYALAYA, BURDWAN
Submission of Environmental Science Project
Paper-AECC-1
Fundamentals of Environmental Studies
Semester-I

Department of Bengali(BNGH)

Sl. No.	Roll No.	Signature	Remarks
1	220112200002	Abhishek Patra	Submitted
2	220112200004	Aditi Ghosh	Do
3	220112200013	Amishra Dhara	Do
4	220112200017	Anonya Chakraborty	Do
5	220112200021	Anik Dutta	Do
6	220112200032	Anowar Hossain Mondal	Do
7	220112200036	Anuska Kundu	Do
8	220112200038	Anwesha Hazra	Do
9	220112200039	Apgha Ghosh	Do
10	220112200040	Arghya Chakraborty	Do
11	220112200047	Arpita Ghosh	Do
12	220112200052	Anunima Mittra	Do
13	220112200065	Barsha Ghosh	Do

ENVS - PROJECT
Examined
Vivekananda Mahavidyalaya
Burdwan

14	220112200081	Chandrra Dey	Submitted
15	220112200085	Debankur Hazra	Do
16	220112200087	Debnath Dog	Do
17	220112200092	Dipankar Ghosh	Do
18	220112200101	Farida Khatun	Do
19	220112200105	Gousya Jahan	Do.
20	220112200124	Jyoti Mondal	Do
21	220112200127	Kamrunnesa Khatun.	Do
22	220112200134	Khadija Khatun Molla	Do
23	220112200138	Koyel Barik	Do
24	220112200146	Madhumita saha	Do
25	220112200151	Mampi Mukherjee	Do
26	220112200154	Mandira Roy.	Do
27	220112200176	Moushi Ghosh	Do
28	220112200183	Nandita Dutta	Do
29	220112200200	Poulomi Sarkar	Do
30	220112200208	Pritha Ghosh.	Do
31	220112200213	Priya Banali	Do
32	220112200218	Priya Kumari	Do
33	220112200228	Puja Raushet	Do
34	220112200239	Rahul singh	Do
35	220112200247	Ranu Mondal	Do
36	220112200249	Reshmi Khatun	Do

S. Bag. 13.1.23 13/1/23

ENVS - PROJECT
Examined
Vivekananda Mahavidyalaya
Burdwan

37	220112200255	Rinky Sarkar.	Submitted
38	220112200262	Rojina Khatun	Do
39	220112200264	Rubina Khatun	Do
40	220112200268	Ruma Ghosh	Do
41	220112200275	Sagori Bagdi	Do
42	220112200294	Sangita Ghosh	Do
43	220112200300	Sayan Ghosh	Do
44	220112200309	Shinjinee Das	Do
45	220112200316	Shreya Panamenik	Do
46	220112200317	Shreya Sarkar.	Do
47	220112200321	Shurechchha Dikpati	Do
48	220112200327	Simran Khatun	Do
49	220112200332	SK Rehena Sultana	Do
50	220112200350	Soumya Ghosh	Submitted
51	220112200352	Sounak Kundu	Do
52	220112200358	Srijita Hazra	Do
53	220112200359	Subhajit Das	Do
54	220112200376	Sultana Parvin	Do
55	220112200380	Sumana Santra	Do
56	220112200385	Supriti Mondal	Do
57	220112200390	Susmita Malik.	Do
58	220112200396	Swastika Samanta	Do
59	220112200397	Taisha Sarkar	Do

S. Bauri 17.1.23

17/1/23

ENVS - PROJECT
Examined
Vivekananda Mahavidyalaya
Burdwan

60	220112200404	Tanuja Khatun.	Submitted
61	220112200406	Tiza Biswas	Do
62	220112200412	Tithi Pal	Do
63	220112200415	Trisha Howlik	Do
64	220112200417	Trishna Das	Do
65	220112200418	Umme Salma	Do
66	220112200419	Zeba Raisa	Do

S. Banerji.
17-1-23

17/1/23

ENVS - PROJECT
Examined
Vivekananda Mahavidyalaya
Burdwan

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

Submission of Environmental Science Project

Paper-AECC-1

Fundamentals of Environmental Studies

Semester-I

Department of Botany(BOTH)

Sl. No.	Roll No.	Signature	Remarks
1	220312200013	Anjum Mondal	Submitted
2	220312200044	Jayeeta Paul.	Submitted
3	220312200045	Jishnu Biswas	Submitted
4	220312200060	Md Rakib	Submitted
5	220312200073	Pactra Biswas	Submitted
6	220312200078	Ranjan Kisku	Submitted
7	220312200085	Sabana Mandal	Submitted
8	220312200094	Samima Khatun	Submitted
9	220312200108	Sohel Mustafi Shikder	Submitted
10	220312200119	Subhasish Saha	Submitted
11	220312200122	Sumana Mudi	Submitted
12	220312200129	Swastika Sarkar	Submitted
13	220312200134	Tina Chakraborty.	Submitted

S. Bose 17-1-23

17/1/23

ENVS - PROJECT Examined Vivekananda Mahavidyalaya Burdwan

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 Burdwan

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

VIVEKANANDA MAHAVIDYALAYA, BURDWAN
Submission of Environmental Science Project
Paper-AECC-1
Fundamentals of Environmental Studies
Semester-I

Department of Chemistry(CEMH)

Sl. No.	Roll No.	Signature	Remarks
1	220312200007	Ananya Das	Submitted
2	220312200015	Ankita Ghosh	Submitted
3	220312200027	Asish santra	Submitted
4	220312200033	Bristi Mondal	Submitted
5	220312200040	Dipu Bez	Submitted
6	220312200062	Mousom Santra	Submitted
7	220312200066	Pallabi Datta	Submitted
8	220312200098	Sayan Mondal	Submitted
9	220312200118	Subhadip Mondal	Submitted
10	220312200133	Tarak Nath Mondal	Submitted
11	220330300062	Somdatta Nayak	Submitted

10/1/23 12/1/23

ENVS - PROJECT
Examiner
Vivekananda Mahavidyalaya
Burdwan

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 Burdwan

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

VIVEKANANDA MAHAVIDYALAYA, BURDWAN
Submission of Environmental Science Project
Paper-AECC-1
Fundamentals of Environmental Studies
Semester-I

Department of Economics (ECOH)

Sl. No.	Roll No.	Signature	Remarks
1	220312200068	Payel Giri	Submitted
2	220312200075	Purbea Das	Submitted.

S. Banerji. 17-1-23

17/1/23

ENVS - PROJECT
Examined
Vivekananda Mahavidyalaya
Burdwan

VIVEKANANDA MAHAVIDYALAYA ESTD-1964

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date: .....

From : The Principal & Secretary

VIVEKANANDA MAHAVIDYALAYA, BURDWAN
Submission of Environmental Science Project
Paper-AECC-1
Fundamentals of Environmental Studies
Semester-I

Department of English (ENGH)

Sl. No.	Roll No.	Signature	Remarks
1	220112000242	Soumyadip Pakira	Submitted
2	220112200008	Aishi Das	Submitted
3	220112200009	Avash Ghosh	Submitted
4	220112200011	Akash Shit	Submitted
5	220112200024	Anisha Pan	Submitted
6	220112200030	Ankita Samanta	Submitted
7	220112200031	Anrita Samanta	Submitted
8	220112200033	Anubrata Roy.	Submitted
9	220112200034	Anushka Dalla.	Submitted
10	220112200042	Arindam Malik	Submitted
11	220112200045	Arpita Chatterjee	Submitted
12	220112200049	Arpita Mallick	Submitted

S. Bhowmik. 13.1.23
ENVS - PROJECT
Examiner
Vivekananda Mahavidyalaya
Burdwan

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 Burdwan

13	220112200055	Asma Sultana	Submitted
14	220112200057	Amita Hazra	Submitted
15	220112200059	Avilash Datta	Submitted
16	220112200061	Ayesha Hossain	Submitted
17	220112200064	Batnali Hembram	Submitted
18	220112200066	Barema Khatun	Submitted
19	220112200068	Bidisha Ghosh	Submitted
20	220112200078	Burujhasma Murmu	Submitted
21	220112200082	Chandrayanee Ghosh	Submitted
22	220112200084	Debalina Mondal	Submitted
23	220112200091	Dipanjan Majhi	Submitted
24	220112200111	Indrani Bhaduri	Submitted
25	220112200113	Jhabati Dalui	Submitted
26	220112200118	Jayeta Bag	Submitted
27	220112200135	Kishmattona Parvin,	Submitted
28	220112200140	Kunal Mondal	Submitted
29	220112200141	Lakhiram Tudu	Submitted
30	220112200148	Maitreyee Roy	Submitted
31	220112200158	Maya Kumari Shaw	Submitted
32	220112200159	Md. Maimuddin	Submitted
33	220112200160	Md Rakib Ali Mallick	Submitted
34	220112200162	Megha Bhattacharya	Submitted
35	220112200166	Mohak Mondal	Submitted

S. Banerji
19.1.23
BNVS - PROJECT
Exam
Vivekananda Mahavidyalaya
Burdwan

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 Burdwan

36	220112200169	Monija Khatun.	Submitted
37	220112200174	Moumita Santra	Submitted
38	220112200178	Munmun Khatun	Submitted
39	220112200192	Pallabi Sen.	Submitted
40	220112200199	Polly santra	Submitted
41	220112200202	Prashamita Koner	Submitted
42	220112200203	Prasun De.	Submitted
43	220112200209	Pritha Laha	Submitted
44	220112200221	Priyanka Mazza	Submitted
45	220112200222	Priyanka Hensh	Submitted
46	220112200227	Puja Patra	Submitted
47	220112200229	Purba Mazumder.	Submitted
48	220112200244	Rakhi Ankure.	Submitted
49	220112200250	Rajan Tudu	Submitted
50	220112200278	Sahina Khatun	Submitted
51	220112200287	Samiul SK	Submitted
52	220112200289	Sama Mirbahar	Submitted
53	220112200292	Sangharmitra Ghosh	Submitted
54	220112200296	Sankhadeep Dalui.	Submitted
55	220112200304	serma Saren	Submitted
56	220112200305	Shabnam Seikh	Submitted
57	220112200308	Shilpa Bagdi	Submitted
58	220112200315	Shreya Pal.	Submitted

S. Bani
17.1.23
ENVS - PROJECT
Examiner
Vivekananda Mahavidyalaya
Burdwan 17/1/23

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 BURDWAN

59	220112200320	Shuvajit Ray	Submitted
60	220112200336	Sneha Ghosh.	Submitted
61	220112200338	Sneha Pal	Submitted
62	220112200339	Sneha Sarkar	Submitted
63	220112200343	Soma Das	Submitted
64	220112200353	Sourav Pal	Submitted
65	220112200356	Sonomita Maji	Submitted
66	220112200357	Sraeya Pal	Submitted
67	220112200361	subhojit Murali	Submitted
68	220112200363	Suchismita kundu	Submitted
69	220112200381	Sumanta Nayek	Submitted
70	220112200393	Swagata Mondal	Submitted
71	220112200399	Tamashree Das.	Submitted
72	220112200408	Tina Kurmi	Submitted
73	220112200409	Tista Nandi	Submitted
74	220112200413	Tiyasha Biswas	Submitted
75	220112800167	Shubhrjit Mukherjee.	Submitted
76	220140100057	Ayendrila Mishra.	Submitted
77	220141700376	Sushmita Das	Submitted.

S. Bangi.
17.1.23
1:30

ENVS - PROJECT
Examined
Vivekananda Mahavidyalaya
Burdwan

VIVEKANANDA MAHAVIDYALAYA
ESTD-1964
Burdwan

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

VIVEKANANDA MAHAVIDYALAYA, BURDWAN
Submission of Environmental Science Project
Paper-AECC-1
Fundamentals of Environmental Studies
Semester-I

Department of Geography(GEOH)

Sl. No.	Roll No.	Signature	Remarks
1	220112000017	Ankita Ghosh	Submitted
2	220112200007	Afrin Khatun	Submitted
3	220112200010	Akash Kundu	Submitted
4	220112200022	Arindita Das	Submitted
5	220112200035	Anushree Das	Submitted
6	220112200037	Anwesa Santra	Submitted
7	220112200041	Arifa Khatun	Submitted
8	220112200050	Arpita Pal	Submitted
9	220112200093	Dipankar Hembram	Submitted
10	220112200132	Keya Ghosh.	Submitted.
11	220112200139	Koyel Karak	Submitted
12	220112200142	Lakshmi Rani De	Submitted.

17.1.23 ENVS - PR 17/1/23
Examiner
Vivekananda Mahavidyalaya

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 Burdwan

13	220112200149	Maitreyee Nath	Submitted
14	220112200171	Moumi Ghosh	Submitted
15	220112200181	Najma Sultana	Submitted
16	220112200189	Nirupam Gayen	Submitted
17	220112200194	Pema Pal.	Submitted
18	220112200212	Pritikona Saha	Submitted
19	220112200219	priyanka Adak	Submitted
20	220112200248	Rehena Khatun	Submitted
21	220112200252	Rima Das	Submitted
22	220112200253	Rimi yasmin	Submitted
23	220112200259	Rittika Singha	Submitted
24	220112200261	Rohan Saha	Submitted
25	220112200273	Sabina khatun	Submitted
26	220112200276	Sagun Murmu	Submitted
27	220112200290	Sanchita Ghosh.	Submitted
28	220112200295	Sania khatun.	Submitted
29	220112200298	Satarupa Barik	Submitted
30	220112200313	Shreya Baul.	Submitted
31	220112200335	Sneha Bhattacharyya	Submitted
32	220112200344	Soma Ghosh	Submitted
33	220112200354	Souvik Mandi	Submitted
34	220112200360	Subhajit Das	Submitted
35	220112200368	Sudipta Boxi	Submitted

17/1/23

Examiner

Vivekananda Mahavidyalaya

Burdwan

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 Burdwan

36	220112200371	Sujan Panja	Submit Head
37	220112200391	Susmita Sarkar.	Submit Head
38	220112200400	Tandra Pal	Submit Head
39	220112200410	Tithi Karmakar	Submit Head
40	220112200414	Tiyasha Dutta	Submit Head
41	220141500265	Sabina Khatun	Submit Head.

S Bari
17.1.23

12/1/23

ENVS - PROJECT
Examined
Vivekananda Mahavidyalaya
Burdwan

VIVEKANANDA MAHAVIDYALAYA
ESTD-1964
Burdwan

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

VIVEKANANDA MAHAVIDYALAYA, BURDWAN
Submission of Environmental Science Project
Paper-AECC-1
Fundamentals of Environmental Studies
Semester-I

Department of History(HISH)

Sl. No.	Roll No.	Signature	Remarks
1	220112200001	Abhi Das	Submitted
2	220112200046	Arpita Dutta	Submitted
3	220112200069	Biplab Mazumdar	Submitted
4	220112200072	Bithika Sarkar	Submitted
5	220112200080	Chandan Bag	Submitted
6	220112200083	Debabrata mondal	Submitted
7	220112200086	Debasis Santra	Submitted
8	220112200096	Dipika Ruidas	Submitted
9	220112200097	Dipta Sarkar	Submitted
10	220112200102	Findousi Khatun	Submitted
11	220112200104	Gujendra Mondal	Submitted
12	220112200120	Jinna Khatun	Submitted

S. Banerji 13.1.23

27/1/23 ENVS - PROJECT
Examined
Vivekananda Mahavidyalaya
Burdwan

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 Burdwan

13	220112200122	Joyeep Dutta	Submitted
14	220112200129	Kartick Bagdi	Submitted
15	220112200147	Magha Biswas	Submitted
16	220112200152	Mamtaisultana khatun	Submitted
17	220112200164	megha Shit	Submitted
18	220112200170	Monisha Mondal	Submitted
19	220112200172	Moumita Ganai	Submitted
20	220112200177	Mousumi Mondal	Submitted
21	220112200184	Nasima khatun	Submitted
22	220112200187	Netaichakraborty	Submitted
23	220112200193	Paromita BEJ	Submitted
24	220112200198	Piu Dutta.	Submitted
25	220112200230	Rabi mondal	Submitted
26	220112200232	Rachana Ghosh.	Submitted
27	220112200242	Rajan Yadav	Submitted
28	220112200243	Rajesh Mallick.	Submitted
29	220112200245	Rama Garan	Submitted
30	220112200269	Rupa Hazra	Submitted
31	220112200283	Samima Khatun	Submitted
32	220112200286	Samir Ganai	Submitted
33	220112200288	Sampa Singh	Submitted
34	220112200293	Sangita Das	Submitted
35	220112200303	Sayan Pal	Submitted

13.1.23 13/1/23

ENVS - PROJECT
Examined
Vivekananda Mahavidyalaya
Burdwan

36	220112200306	Shahelli Roy	Submitted
37	220112200314	Shreya Majhi	Submitted
38	220112200329	SK Ayesha Sultana	Submitted
39	220112200334	Smriti Santra	Submitted
40	220112200351	Soumak Haxra.	Submitted
41	220112200362	Subhrata Khanra	Submitted
42	220112200365	Sudip Ghosh	Submitted
43	220112200367	Sudipa Chowdhury	Submitted
44	220112200372	Sujay Das	Submitted
45	220112200377	Suman Das	Submitted
46	220112200384	Supriti Das	Submitted
47	220112200388	Sushobhan Das.	Submitted
48	220112200395	Swarnali Sadhu.	Submitted
49	220112200401	Tarisa Khatun.	Submitted
50	220112200403	Tariya Sultana	Submitted

S. Banerji. 17/1/23

17/1/23

ENVS - PROJECT
Examined
Vivekananda Mahavidyalaya
Burdwan

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date: .....

From : The Principal & Secretary

VIVEKANANDA MAHAVIDYALAYA, BURDWAN
Submission of Environmental Science Project
Paper-AECC-1
Fundamentals of Environmental Studies
Semester-I

Department of Mass Communication and Journalism (MCJH)

Sl. No.	Roll No.	Signature	Remarks
1	220112200016	Ananya Banerjee	Submitted
2	220112200023	Anindita Datta	Submitted
3	220112200063	Baishakhi Maji	Submitted
4	220112200103	Gargi Ghoshal	Submitted
5	220112200109	Indira Chakraborty	Submitted
6	220112200117	Jayati Roy	Submitted
7	220112200128	Kankana De	Submitted
8	220112200131	Kazi Farhan Ahamed	Submitted
9	220112200144	madhu nishad	Submitted
10	220112200145	Madhumita Ruidas.	Submitted
11	220112200165	Meghna Karmakar	Submitted

S. Bagchi. 10.1.23

12/1/23

ENVS - PROJECT
Examined
Vivekananda Mahavidyalaya
Burdwan

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 BURDWAN

12	220112200180	Musamad Amrin Sultana	Submitted
13	220112200182	Namrata Saha	Submitted
14	220112200190	Nisha Sarkar	Submitted
15	220112200258	Ritika Malik	Submitted
16	220112200277	Sahin Saba	Submitted
17	220112200282	Salina khatun	Submitted
18	220112200285	Samiparna Chakraborty	Submitted
19	220112200307	Sibani Soren	Submitted
20	220112200328	Sk Arif	Submitted
21	220112200349	Soumili Banerjee	Submitted
22	220112400164	Samparna Dey	Submitted

17.1.25

17/1/25

ENVS - PROJECT
Examined
Vivekananda Mahavidyalaya
Burdwan

VIVEKANANDA MAHAVIDYALAYA ESTD-1924

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

VIVEKANANDA MAHAVIDYALAYA, BURDWAN
Submission of Environmental Science Project
Paper-AECC-1
Fundamentals of Environmental Studies
Semester-I

Department of Mathematics (MTMH)

Sl. No.	Roll No.	Signature	Remarks
1	220312200001	Abhijeet Majhi	Submitted
2	220312200002	Abhinaba Mitra	Submitted
3	220312200004	Agnik Das	Submitted
4	220312200014	Ankan Chattopadhyay	Submitted
5	220312200020	Arnab Roy	Submitted
6	220312200023	Arpita Ghosh	Submitted
7	220312200024	Arpita Medda	Submitted
8	220312200026	Aryan Gupta	Submitted
9	220312200031	Barnali Roy	Submitted
10	220312200035	Choudhury Fahim Aziz	Submitted
11	220312200039	Dip Mondal	Submitted
12	220312200042	Dolon Jash	Submitted

17.1.23 17/1/23

ENVS - PROJECT
Examined
Vivekananda Mahavidyalaya
Burdwan

13	220312200043	Jay mondal	Submitted
14	220312200046	Jit Malick	Submitted
15	220312200059	Mayukh Roy	Submitted
16	220312200064	Nikita Dey.	Submitted
17	220312200067	Parichoy Nandi	Submitted
18	220312200070	Poulomi Ghosh Choudhury	Submitted
19	220312200071	Pradiva konar.	Submitted
20	220312200077	Rakesh Bhakat	Submitted
21	220312200080	Reshma Khatun	Submitted
22	220312200087	Salina khatun.	Submitted
23	220312200092	Sakibuddin SK	Submitted
24	220312200095	Sanaha khatun	Submitted
25	220312200096	Sarmin Sultana	Submitted.
26	220312200101	Sayantan Das	Submitted
27	220312200104	Shubhajit Ghosh.	Submitted
28	220312200111	Soumyadip Dhara	Submitted
29	220312200112	Soumyajit Rana.	Submitted
30	220312200117	Subhadip Maji	Submitted
31	220312200124	Surajit Dey	Submitted
32	220312200128	Susmita Roy	Submitted
33	220312200132	Topas Ruidas	Submitted.

S. Bari
17.1.23
ENVS - PROJECT
Examined
Vivekananda Mahavidyalaya
Burdwan

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date: .....

From : The Principal & Secretary

VIVEKANANDA MAHAVIDYALAYA, BURDWAN
Submission of Environmental Science Project
Paper-AECC-1
Fundamentals of Environmental Studies
Semester-I

Department of Microbiology(MCBH)

Sl. No.	Roll No.	Signature	Remarks
1	220312200005	Aheli Samanta	Submitted
2	220312200008	Ananya Ghosh	Submitted
3	220312200018	Anuska Mondal	Submitted
4	220312200022	Arpit Ghosh	Submitted
5	220312200036	Debabrata Mondal	Submitted
6	220312200037	Debjit Kundu	Submitted
7	220312200041	Diyasha Karmakar	Submitted
8	220312200051	Kaustav Thakur	Submitted
9	220312200052	Koyena Sinha	Submitted
10	220312200053	Kuheli Paramanick	Submitted
11	220312200055	Kushal Mallick	Submitted
12	220312200056	Lipsa Guin	Submitted

S. Banerjee 17.1.23

17/1/23

ENVS - PR
Examiner
Vivekananda Mahavidyalaya
Burdwan

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 Burdwan

13	220312200057	Masud Molla	Submitted
14	220312200061	Molla Niyaj Ahamed	Submitted
15	220312200069	Payel Pal	Submitted
16	220312200083	Rishika Jash	Submitted
17	220312200088	Sabnam Sultana	Submitted
18	220312200089	Sagnik Dutta	Submitted
19	220312200091	Sakhi Chattopadhyay	Submitted
20	220312200109	Sougotra Seth	Submitted
21	220312200113	Sourav Ray.	Submitted
22	220312200121	Sudip Mondal.	Submitted
23	220312200127	SURYA SIDDHANTA MALICK	Submitted
24	220312200130	Tamalika Bag	Submitted
25	220312200136	Tundra Chakrabarty	Submitted
26	220312200137	Zarin Yasmeen	Submitted

S. Bose
17.1.23

17/1/23

ENVS - PROJECT
Examined
Vivekananda Mahavidyalaya
Burdwan

VIVEKANANDA MAHAVIDYALAYA
ESTD-1964
Burdwan

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

VIVEKANANDA MAHAVIDYALAYA, BURDWAN
Submission of Environmental Science Project
Paper-AECC-1
Fundamentals of Environmental Studies
Semester-I

Department of Physics(PHSH)

Sl. No.	Roll No.	Signature	Remarks
1	220312200016	Anup Das	Submitted.
2	220312200017	Anupam Pal.	Submitted
3	220312200019	Anitra Pal	Submitted
4	220312200028	[illegible]	Submitted
5	220312200029	Arian Naru.	Submitted.
6	220312200032	Bidisha Koner	Submitted
7	220312200049	Koushik Gagai	Submitted.
8	220312200076	Rajesh Mondal.	Submitted.
9	220312200079	Renuka Ansari	Submitted.
10	220312200084	Rudra Nath Ghosh	Submitted
11	220312200114	Souvik Pal	Submitted
12	220312200115	Spandan Chaunabonty	Submitted

S. Bag 17.1.23

17/1/23

ENVS - PROJECT
Examined
Vivekananda Mahavidyalaya
Burdwan

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 BURDWAN

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No......./V.M. Date : .....

From : The Principal & Secretary

VIVEKANANDA MAHAVIDYALAYA, BURDWAN
Submission of Environmental Science Project
Paper-AECC-1
Fundamentals of Environmental Studies
Semester-I

Department of Philosophy(PHIH)

Sl. No.	Roll No.	Signature	Remarks
1	220112200003	Aditi Ghosh	Submitted
2	220112200044	Arpan Maghi	DO
3	220112200051	Arpita Roy	DO
4	220112200062	Ayesha siddika	DO
5	220112200088	Debraj Samanta	DO
6	220112200106	Hafija khatun	DO
7	220112200126	Kajal Hira	DO
8	220112200173	Moumita Ghosh	DO
9	220112200197	Piu Dey	DO
10	220112200205	Prathama Garai	DO
11	220112200207	Pritha Chakraborty	DO
12	220112200214	Priya Ghosh	DO

S. Bag 17.1.23

17/1/23

ENVS - PROJECT
Examined
Vivekananda Mahavidyalaya
Burdwan

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 Burdwan

13	220112200231	Rabia Khatun	Submitted
14	220112200233	Raichama Roy	DO
15	220112200257	Rittick Das	DO
16	220112200267	Ruma Bag	DO
17	220112200271	Sabana Khatun	DO
18	220112200301	Sagan Kar	DO
19	220112200318	Shreya Sarkera	DO
20	220112200323	Sibu Roy	DO
21	220112200364	Sudeshna Ghosh ~~Swarnali Mondal~~	DO
22	220112200370	Suhana Parveen	DO
23	220112200394	Swarnali Mondal.	DO

S. Banerji.
17.1.23

17/1/23

ENVS - PROJECT
Examined
Vivekananda Mahavidyalaya
Burdwan

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

VIVEKANANDA MAHAVIDYALAYA, BURDWAN
Submission of Environmental Science Project
Paper-AECC-1
Fundamentals of Environmental Studies
Semester-I

Department of Political Science(PLSH)

Sl. No.	Roll No.	Signature	Remarks
1	220112200005	Aditi mukherjee	SUBMITTED
2	220112200006	Aditi Sarkhel	Do
3	220112200012	Akshya kansri	Do
4	220112200014	Amrita Guha.	Do
5	220112200015	Ananta Ghosh.	Do
6	220112200020	Angshu Das	Do
7	220112200028	Ankita Dey	Do
8	220112200029	Ankita Dhar	Do
9	220112200048	Anpita Malik	Do
10	220112200056	Asmina Khatun	Do
11	220112200070	Bishik Rajmalla	Do
12	220112200090	~~Dip~~ Dip Sutradhar	Do

S. Banerji 17.1.23 17/1/23

ENVS - PROJECT
Examined
Vivekananda Mahavidyalaya
Burdwan

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 Burdwan

13	220112200098	Disha Saha	Submitted
14	220112200108	Himadri Maddy	DO
15	220112200112	Indrani Ghosh	DO
16	220112200114	Ishika Biswas	DO
17	220112200125	Kadina Sultana	DO
18	220112200155	Mangal Ram	DO
19	220112200156	manisha Baidya.	DO
20	220112200157	Maya Adhikary	DO
21	220112200161	MD. Sajal Ali	DO
22	220112200163	Megha Sai	DO
23	220112200168	Mon Roy	DO
24	220112200186	Nasrin Mallick	DO
25	220112200188	Nikita Hazra	DO
26	220112200191	Nishani Alicaj	Submitted
27	220112200201	Prasanta Ruidas	DO
28	220112200204	Pratap Mallick	DO
29	220112200206	Pratima Besmu	DO
30	220112200211	Priti Nasrin	DO
31	220112200215	Puja Khatun	DO
32	220112200224	Priyanka Nayek	DO
33	220112200225	Puja Biswas	DO
34	220112200226	Puja Ghosh	DO
35	220112200235	Rakhi Dam	DO

S. Banerjee. 13.1.23

17/1/23

ENVS - PROJECT
Examined
Vivekananda Mahavidyalaya
Burdwan

36	220112200238	Rahul Santra	Submitted
37	220112200240	Raihanul Islam	Do
38	220112200256	Rishaa Chaudhuri	Do
39	220112200263	Romy Bardhan	Do
40	220112200270	Rupam Bhattacharjee.	Do
41	220112200272	Sabanna Ghosh	Do
42	220112200279	Sahinoor Hossain	Do
43	220112200281	Sakina Khatun	Do
44	220112200312	Shraabana Show	Do
45	220112200322	Shyandeep Roy	Do
46	220112200326	Simran Khatun.	Do
47	220112200330	SK Moinuddin	Do
48	220112200331	Sk Olivullah	Do
49	220112200340	Sneha Shaw	Do
50	220112200341	Snigdha Pal	Do
51	220112200366	Subip Kumar Hazra.	Do
52	220112200369	Sudipta Hazra.	Do
53	220112200378	Suman Mallick	Do
54	220112200379	Sumana Naikel	Do
55	220112200383	Summa Yasmin	Do
56	220112200386	Surabhi Shaw.	Do
57	220112200398	Tamanna Yeasmin	Do

S. Bag 17.7.23

ENVS - PROJECT
Examiner
Vidyalaya

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 Burdwan

Website www.vmbdn.in
Email vmprincipal2012@gmail.com
Phone No. 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No. 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No ..... /VM Date : .....

From : The Principal & Secretary

VIVEKANANDA MAHAVIDYALAYA, BURDWAN
Submission of Environmental Science Project
Paper-AECC-1
Fundamentals of Environmental Studies
Semester-I

Department of Sanskrit(SNSH)

Sl. No.	Roll No.	Signature	Remarks
1	220112200019	Ananya Panja	Submitted
2	220112200025	Ankita Biswas	Submitted
3	220112200026	Ankita Biswas.	Submitted
4	220112200027	Ankita Chakraborty.	Submitted
5	220112200067	Bhuban Sarkar	Submitted
6	220112200074	Brishti Ghosh	Submitted
7	220112200076	Bristi Ghosh	Submitted
8	220112200079	Champa Bagdi	Submitted
9	220112200095	Dipika Das	Submitted
10	220112200099	Diya Chakraborty	Submitted
11	220112200100	Dyel Mondal	Submitted
12	220112200107	Haradhan Santra	Submitted

19.1.23 17/1/23

ENVS - PROJECT
Examined
Vivekananda Mahavidyalaya
Burdwan

13	220112200110	Indrajit Saha	Submitted
14	220112200115	Jaba Adhikari	Submitted
15	220112200121	Joydeep Chakraborty	Submitted
16	220112200133	Keya Roy	Submitted
17	220112200136	Koushik Ghosh.	Submitted
18	220112200150	Mallika Sorren	Submitted
19	220112200179	Munshi Zenifa Azmi	Submitted
20	220112200185	Nasrin Khatun	Submitted
21	220112200195	Pajel Mohanta	Submitted
22	220112200216	Priya Kshetrapal.	Submitted
23	220112200217	Priya kumari Pandit	Submitted
24	220112200223	Poriyanka Lohar	Submitted
25	220112200241	Raja Das	Submitted
26	220112200254	Rimpa Ghosh	Submitted
27	220112200260	Riza Manna	Submitted
28	220112200291	Sandip Banerjee.	Submitted
29	220112200297	Santanu Saha	Submitted
30	220112200299	Sathi Dutta.	Submitted
31	220112200310	Shipra Dey.	Submitted
32	220112200311	Shipra Mondal	Submitted.
33	220112200319	Shubhra Saha	Submitted
34	220112200324	Sidhartha Let	Submitted
35	220112200337	Sneha Ghosh	Submitted

S. Banerjee 13.1.23

17/1/23

ENVS - PROJECT
Examined
Vivekananda Mahavidyalaya
Burdwan

36	220112200345	Soma Ghosh	Submitted
37	220112200348	Sonjana Mondal	Submitted
38	220112200355	Sova Sharma	Submitted
39	220112200373	Sujoy Chatterjee	Submitted
40	220112200374	Sukanya pramanik.	Submitted
41	220112200375	Sukhdeb Mondal	Submitted
42	220112200382	Sumi Mistry	Submitted
43	220112200387	Suoya Let	Submitted
44	220112200389	Susmita Dey	Submitted
45	220112200392	Susmita Soren	Submitted
46	220112200402	Tanish Roy	Submitted

S. Banerji
17.1.23

17/1/23

ENVS - PROJECT
Examined
Vivekananda Mahavidyalaya
Burdwan

VIVEKANANDA MAHAVIDYALAYA
ESTD-1964

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

Submission of Environmental Science Project

Paper-AECC-1

Fundamentals of Environmental Studies

Semester-I

Department of Statistics(STSH)

Sl. No.	Roll No.	Signature	Remarks
1	220312200010	Anindita Nandi.	Submitted
2	220312200021	Arnab Sen	Submitted
3	220312200034	Chandan Mukherjee	Submitted
4	220312200065	Nisa Paul	Submitted
5	220312200074	Pritha Das.	Submitted
6	220312200102	Sekh Tauhid Jamal	Submitted.

S. Bari 13.1.23

17/01/23

ENVS - PROJECT
Examined
Vivekananda Mahavidyalaya
Burdwan

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 Burdwan

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

VIVEKANANDA MAHAVIDYALAYA, BURDWAN
Submission of Environmental Science Project
Paper-AECC-1
Fundamentals of Environmental Studies
Semester-I

Department of Zoology(ZOOH)

Sl. No.	Roll No.	Signature	Remarks
1	220312200006	Aishik Datta	Submitted
2	220312200009	Anangga Karmakar.	Submitted
3	220312200012	Arisha Mondal	Submitted
4	220312200030	Bandana Dhali	Submitted
5	220312200050	Koushik Mondal.	Submitted
6	220312200058	Mosuma Sultana	Submitted
7	220312200063	Nahin Sultana	Submitted
8	220312200082	Rimpa Kundu	Submitted
9	220312200086	Sabiha Khatun	Submitted
10	220312200090	Saheli Bhattacharyya	Submitted
11	220312200097	Sathi Ghosh	Submitted
12	220312200100	Sayandip Ghosh	Submitted

S. Banerjee 10.1.23

10/1/23 ENVS - PROJECT
Examiner
Vivekananda Mahavidyalaya

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 Burdwan

13	220312200103	Shipra Majumdar	Submitted
14	220312200106	Sk. Toukir Ziya	Submitted
15	220312200107	Smriti Haldar	Submitted
16	220312200116	Subhadeep Mate	Submitted
17	220312200120	Sudesna Kesh.	Submitted
18	220312200125	Suvajit Sandra	Submitted
19	220312200126	Suryakanta Pandit	Submitted
20	220312200135	Tithi Sarokar	Submitted
21	220312400028	Subhojit Som	Submitted
22	220341300028	Shreyasha	Submitted

S. Banerji 13.1.23

13/1/23

ENVS - PROJECT
Examined
Vivekananda Mahavidyalaya
Burdwan

VIVEKANANDA MAHAVIDYALAYA

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

VIVEKANANDA MAHAVIDYALAYA, BURDWAN
Submission of Environmental Science Project
Paper-AECC-1
Fundamentals of Environmental Studies
Semester-I

SCIENCE GENERAL

Sl. No.	Roll No.	Signature	Remarks
1	220612210001	Aksina Khatun	Submitted
2	220612210002	Alamgis chowdhury	Submitted
3	220612210004	Anish Rudra.	Submitted
4	220612210005	Ankita Mahanta	Submitted
5	220612210006	Arijit Pal	Submitted
6	220612210007	Basudeb Ghosh	Submitted
7	220612210009	Chowdhury Roshkul	Submitted
8	220612210010	Hayatulla SK	Submitted
9	220612210012	Kumar Krishna Porja	Submitted
10	220612210013	Mangaldeep Das	Submitted
11	220612210014	Payal Karmakar	Submitted
12	220612210015	Pritam Bayen	Submitted

S. Banerji 17/1/23

17/1/23 ENVS - PROJECT Examiner Vivekananda Mahavidyalaya Burdwan

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 Burdwan

13	220612210016	Paitha Aich.	Submitted
14	220612210017	Raisa Farzana	Submitted
15	220612210018	Raj Pan	Submitted
16	220612210020	Riya Pramanick	Submitted
17	220612210022	Rohit Sen	Submitted
18	220612210023	Saganika pal.	Submitted
19	220612210024	Samiran Pramanik	Submitted
20	220612210025	Sant Mondal.	Submitted
21	220612210026	Sarmistha Kundu	Submitted
22	220612210027	Sayan Dam	Submitted
23	220612210028	Sayan Sk	Submitted
24	220612210029	Shauvik kumar	Submitted
25	220612210030	Shreya Pal	Submitted
26	220612210032	Shubhadip Ghosh	Submitted
27	220612210033		AB
28	220612210035	Sk Md. Mahebab.	Submitted
29	220612210037	SK Riajuddin	Submitted.
30	220612210040	Soumi Adhikari	Submitted
31	220612210041	Soumi Karmakar	Submitted
32	220612210042	Srija Chowdhuri	Submitted
33	220612210043	Subhadip Jaan	Submitted
34	220612210044	Sudipta Santra	Submitted
35	220612210045	Swastika Dhar	Submitted

S. Bani. 13.1.23

17/01/22

ENVS - PROJECT
Examined
Vivekananda Mahavidyalaya
Burdwan

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 Burdwan

36	220612210046	Tanima Das	Submitted
37	220612210049	Tushar Sen	Submitted

S.S.-V.
17.1.23

17/1/23

S - PROJECT
Examined
Vivekananda Mahavidyalaya
Burdwan

VIVEKANANDA MAHAVIDYALAYA
ESTD-1964
Burdwan

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

Session-2022-2023

VIVEKANANDA MAHAVIDYALAYA, BURDWAN
Submission of Environmental Science Project
Paper-AECC-1 (Fundamentals of Environmental Studies)
Semester-I
Session-2022-2023
BA GENERAL

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

Session-2022-2023

VIVEKANANDA MAHAVIDYALAYA, BURDWAN
Submission of Environmental Science Project
Paper-AECC-1 (Fundamentals of Environmental Studies)
Semester-I
Session-2022-2023

Sl No.	Roll No.	Signature	Remarks
1	220412210002	Abeda Sultana	Submitted
2	220412210003	Abhijit Bairagi	Submitted
3	220412210004	Abhijit Das	Submitted
4	220412210005	Abhijit Roy	Do
5	220412210006	Abhisen Das	Do
6	220412210008	Aditi Banerjee	Do
7	220412210009	Aditi Chakraborty	Do
8	220412210010	Aditya Dey	Do
9	220412210012	Afsana Khatun Mondal	Do
10	220412210014	Anaja yasmin	Do
11	220412210015	Agnidipta Banerjee	Do
12	220412210016	Aisarny Karmakar.	Do

17-1-23 ENVS - PROJECT Examined Vivekananda Mahavidyalaya Burdwan

18/1/23

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 Burdwan

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date :.....

From : The Principal & Secretary

Session-2022-2023

13	220412210019	Akash Dhara	Submitted
14	220412210021	Akash Ghosh	DO
15	220412210023	Akash Mallick	DO
16	220412210025	Akshay Barman	DO
17	220412210027	Akshay Mohanta.	DO
18	220412210028	Aman Mondal	DO.
19	220412210029	Amina Khatun	DO
20	220412210030	Amir Ali Mallick	DO
21	220412210032	Amit Kumar Bid	DO
22	220412210033	Amiya Mohanta.	DO
23	220412210034	Ammita chatterjee	DO
24	220412210035	Amrita Hazra	Submitted
25	220412210036	Ananya Mondal.	DO
26	220412210037	Ananya Mondal	DO
27	220412210039	Aniket Arora	DO

S. Bera
13 ERVS - PROJECT
Examined
Vivekananda Mahavidyalaya
Burdwan
17/11/23

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 Burdwan

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

Session-2022-2023

28	220412210040	Aniket Sarkar	Submitted
29	220412210043	Animesh Panja	DO
30	220412210044	Aninda Roy	DO
31	220412210047	Anita DAS	DO
32	220412210048	Anita Saha	DO
33	220412210049	Anjila Gope	DO
34	220412210050	Ankan Ghosh	DO
35	220412210052	Ankan Roy	DO
36	220412210053	Ankit Halder.	DO
37	220412210054	Ankit Kumar Shah	DO
38	220412210055	Anwita Dey	DO
39	220412210056	Ankur Roy.	DO
40	220412210059	Anupam Roy	DO
41	220412210060	Anupama Bag	DO
42	220412210061	Anuspriya Roy	DO

S. Bag 12.1.23
ENVS - PROJECT
Examined
Vivekananda Mahavidyalaya
Burdwan
12/1/23

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 Burdwan

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

Session-2022-2023

43	220412210062	Aparna Karmakar	Submitted
44	220412210063	Aparna Tudu	Do
45	220412210064	Apurba Mal	Do
46	220412210066	Ardhendu kumar Sen	DO
47	220412210067	Ardhendu Sarkar	DO
48	220412210070	Arghya Roy	Do
49	220412210071	Arifuddin ahammed	Do
50	220412210072	Arijit Roy	Do
51	220412210073	Arijit Saha	Submitted
52	220412210074	Arijita Kolay	Do
53	220412210075	Arin Sarkar	Do
54	220412210076	Arinjoy Mohanta	Submitted
55	220412210077	Arkit pal	Do
56	220412210078	Arnab kumar sain	Do
57	220412210079	Arman Hassan	Do

S. Banerji 17.1.23

ENVS - PROJECT Examined Vivekananda Mahavidyalaya Burdwan

17/1/23

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 Burdwan

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

Session-2022-2023

58	220412210080	Arpan Mondal	Submitted
59	220412210081	Arpan Paul.	Do
60	220412210082	Arpan Ruidas	Do
61	220412210083	Arpona Sen	Do
62	220412210084	Arpita Dhara	Do
63	220412210085	Arpita Sahana	Do
64	220412210086	Arpita Sarkar	Do
65	220412210088	Arup Halder	Do
66	220412210090	Asraful SK.	Do
67	220412210094	Atanu mondal	Do
68	220412210095	Atiur Rahaman SK	Do
69	220412210097	Avijit Rajbanshi	Do
70	220412210098	Ayan Manik	Do
71	220412210099	Ayan Rajak Das	Do
72	220412210100	Ayan Shee	Do

S. Banerjee 17.1.23
ENVS - PROJECT Examined
Vivekananda Mahavidyalaya Burdwan

17/1/23

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 BURDWAN

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date :.....

From : The Principal & Secretary

Session-2022-2023

73	220412210101	Ayesa Khatun	Submitted
74	220412210102	Ayesa khatun	DO
75	220412210103	Babla Sahesab	DO
76	220412210107	Balaram - [illegible]	DO
77	220412210108	Barsa Banerjee	DO
78	220412210109	Barsa Gain	DO
79	220412210110	Barsha BEJ	DO
80	220412210111	Barsha sharma	DO
81	220412210114	Bidesh Bag	DO
82	220412210115	Bidisha Mitra.	DO
83	220412210116	Bijay Mitra	DO
84	220412210117	Bijoy Mahato	DO
85	220412210118	Bikram Pal	DO
86	220412210120	Bikram Pal.	DO
87	220412210122	Bimalendu Bi	DO

S. Banerjee. 17.1.23
ENVS - PROJECT
Examined
Vivekananda Mahavidyalaya
Burdwan

17/1/23

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 Burdwan

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

Session-2022-2023

88	220412210124	Binoy Biswas	Submitted
89	220412210125	Bipasha Guin	Do
90	220412210129	Bittu Saha	Do
91	220412210132	Bristi Shil	Do
92	220412210133	Brojeswar mondal	Do
93	220412210134	Buddhadev Barman	Do
94	220412210135	Buddhoder Mukherjee	Do
95	220412210136	Budhadev Katari	Do
96	220412210137	Chaitali Das.	Do
97	220412210140	Chandana Das	Do
98	220412210141	Chandi Charan Kamakar	Do
99	220412210142	Chanchi Khatun.	Do
100	220412210144	Chayan Mishi	Do
101	220412210146	Chowdhury Rizia Sultana	Do
102	220412210147	Chumki Murmu	Do

17.1.23 ENVS - PROJECT Examined
Vivekananda Mahavidyalaya
Burdwan

17/1/23

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 Burdwan

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date: .....

From : The Principal & Secretary

Session-2022-2023

103	220412210150	Deb Das	Submitted
104	220412210154	Debabrata Sikdar	Do
105	220412210155	Debashis Dey.	DO
106	220412210157	Debasish Das	DO
107	220412210158	Debjit Ghosh	DO
108	220412210159	Debjyoti Majumder	DO
109	220412210160	Debosmita Ghosh	DO
110	220412210162	Deep Dutta	DO
111	220412210164	Deep Pal	Submitted
112	220412210165	Deep Ruidas	Do
113	220412210167	Dibyadip Chaudhuri	Do
114	220412210168	Dibyendu Sikdar	Do
115	220412210169	Dinabandhu Mondal	Do
116	220412210170	DIP Pandey.	DO
117	220412210171	Dipa Baidya	DO

S. Banerji 17.1.23

ENVS - PROJECT
Examined
Vivekananda Mahavidyalaya
Burdwan
17/1/23

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 Burdwan

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

Session-2022-2023

118	220412210174	Dipendu Mondal	Submitted.
119	220412210175	Disa Ghosh	Submitted
120	220412210176	Disha Banerjee	Do
121	220412210177	Disha Chakraborty	Do
122	220412210179	Diya Bakshi	Do
123	220412210180	Doyel Soren	Do
124	220412210181	Durba Mondal	Do
125	220412210182	Enamul Haque Mondal.	Do
126	220412210183	Esha Biswas.	Do
127	220412210185	Farial Jasmin	Do
128	220412210186	Ganesh Hazra	Do
129	220412210187	Gargi Dey	Do
130	220412210188	Gobinda Prosad Dey	Do
131	220412210189	Golam Zardis Khan	Do
132	220412210190	Gowri Saha.	Do

17-1-23 ENVS - PROJECT Examined Vivekananda Mahavidyalaya Burdwan 18/1/23

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 Burdwan

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

Session-2022-2023

133	220412210196	Indrajit Baskey	Submitted
134	220412210198	Isha Biswas	DO
135	220412210199	Ishita Hazra	DO
136	220412210200	Ismatara Chowdhury	DO
137	220412210201	Ishha Roy.	DO
138	220412210202	Jahangir Layek	DO
139	220412210204	Jasmina Khatun	DO
140	220412210205	Jayanto Biswas	DO
141	220412210206	Jayasree Maulik	DO
142	220412210207	Jeet Pal	DO
143	220412210208	Jesmin Khatun	DO
144	220412210209	Jesmin Khatun	DO
145	220412210210	Jesmin Sultana.	DO
146	220412210213	Jhakon Soren	DO
147	220412210216	Jasima Khatun	DO

S. Bose 13.1.23

ENVS - PROJECT
Examined
Vivekananda Mahavidyalaya
Burdwan

18/1/23

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 Burdwan

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

Session-2022-2023

148	220412210219	Kaberi Ghosh	DO
149	220412210220	Kakali Ghosh	DO
150	220412210222	Kalpana Das	Submitted
151	220412210223	Kartick Ghosh	DO
152	220412210224	Kautick Mondal	DO
153	220412210226	Kartik Shaw	DO
154	220412210227	Kartik Tudu	DO
155	220412210228	Kaushik Pal	DO
156	220412210229	Keya Gain	DO
157	220412210232	Khusi Khatun	DO
158	220412210233	Khusi Paswan	DO
159	220412210234	Khusi Singh	DO
160	220412210235	Kiran Patra	DO
161	220412210237	Kodanda Priya Joardar	DO
162	220412210238	Kohinur Khatun	DO

S. Bari 17.11.23

ENVS - PROJECT
Examined
Vivekananda Mahavidyalaya
Burdwan

17/11/23

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 Burdwan

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

Session-2022-2023

163	220412210239	Kaushik Charjya Paul	Submitted
164	220412210242	Koyel Bhattacharyya	Do
165	220412210243	Koyel Ghosh	Do
166	220412210244	Koyal Roy	Do
167	220412210245	Krishan Mazumder	Do
168	220412210250	Laboni Chowdhury	Do
169	220412210253	Lata Khatun	Do
170	220412210254	Laxmi Kanta Bauri	Do
171	220412210256	Likhan Sarkar	Do
172	220412210258	Lili Garai	Do
173	220412210259	Lipi Das	Do
174	220412210261	Lovely Ghosh	Do
175	220412210263	Madhumita Dey	Do
176	220412210264	Mahammad Arif Mallick	Submitted
177	220412210265	Mahammad Irfan	Submitted

S. Banerjee
1st ENVS - PROJECT
Examined
Vivekananda Mahavidyalaya
Burdwan

17/1/23

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 Burdwan

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date: .....

From : The Principal & Secretary

Session-2022-2023

178	220412210267	Mohsin Maiumdar	Submitted
179	220412210268	Mainul Hoque	Do
180	220412210270	Mallika Gain	Do
181	220412210271	Mallika Mondal	Do
182	220412210272	Malobika Ghosh	Do
183	220412210273	Malobika Roy	Do
184	220412210275	Maman Pal.	Do
185	220412210276	Mamoni Biswas	Do
186	220412210277	Mamtaz Khatun	Do
187	220412210278	Manas Kumar Chanel.	Do
188	220412210281	Manisha Sain	Do
189	220412210282	Manisha Tury	Do
190	220412210283	manoj malik	Do
191	220412210287	Md Kaif Mallick	Do
192	220412210288	md Shahid Afridi mondal	Do

17.1.23 ENVS - PROJECT
Examined
Vivekananda Mahavidyalaya 17/1/23
Burdwan

VIVEKANANDA MAHAVIDYALAYA ESTD-1964

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

Session-2022-2023

193	220412210289	Megha Das	Submitted
194	220412210290	Megha Hazra	Do
195	220412210291	Mehuly Das	Do
196	220412210292	Midda Jahanara Khatun.	Submitted
197	220412210293	Milan Majhi	Do
198	220412210294	Mina Khatun	Do
199	220412210295	Mina Kumari Singh.	Do
200	220412210299	Mitali Khan	Do
201	220412210300	Mithun Hansda	Do
202	220412210301	Mobarak Ansari	Do
203	220412210302	Mohit Kumar Singh	Do
204	220412210305	Monaj Dalui	Do
205	220412210306	Monali Debnath	Do
206	220412210307	Mondira Roy	Do
207	220412210308	Moni Khatun	Do

12.1.23 ENVS - PROJECT Examined Vivekananda Mahavidyalaya Burdwan 12/1/23

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 Burdwan

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

Session-2022-2023

208	220412210309	Moni Khetrapal	Submitted
209	220412210310	Manisha Singh	Do
210	220412210313	Moumita Bose	Do
211	220412210314	Moumita Hazra	Do
212	220412210315	Moupriya Goswami	Do
213	220412210317	Mousumi Murmu	Do
214	220412210318	Mousumi Tudu.	Do
215	220412210319	Mrinmoy pal	Do
216	220412210322	Munmun Ghosh	Do
217	220412210323	Munmun Khatun	Do
218	220412210325	Muskan Haque	Do
219	220412210326	Munshi Zanim.	Do
220	220412210328	Namita Bag	Do
221	220412210329	Namrata Pramanik	Do
222	220412210330	Nandini Jadav	Do

B. Bag
12 FAYS - PROJECT
Examined
Vivekananda Mahavidyalaya
Burdwan
12/1/23

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 ★ Burdwan ★

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

Session-2022-2023

223	220412210334	Nasrin khatun	Submitted
224	220412210335	Nasrin Parvin	DO
225	220412210337	Nazmul Islam Sha.	DO
226	220412210338	NEHA DAS.	DO
227	220412210339	Neha Nandy	DO
228	220412210340	Neha Santra	DO
229	220412210341	Neha singh	DO
230	220412210350	Pabitra Das	DO
231	220412210352	pallabi chakraborty.	DO
232	220412210356	Papiya Barman	DO
233	220412210357	Papiya Mondal	DO
234	220412210358	Papri Dutta	DO
235	220412210359	Partha Bale	DO
236	220412210361	Parvin Khatun	DO
237	220412210362	Parvin Sultana	DO

S. Banerjee. 12-1-23
ENVS - PROJECT
Examined 12/1/23
Vivekananda Mahavidyalaya
Burdwan

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 Burdwan

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

Session-2022-2023

238	220412210364	Payel Das	Submitted
239	220412210365	Payel Dutta.	Do
240	220412210366	Payel Khatun	Do
241	220412210368	Payel Nandi	Do
242	220412210369	Payel Sal.	Do
243	220412210370	Payel Singh	Do
244	220412210371	Pijush Pan	Do
245	220412210372	Pinki · Dutta	Do
246	220412210374	Piu Dal	Do
247	220412210377	Pollovi Mondal	Do
248	220412210380	Prantar Baler	Do
249	220412210381	Praapti Ghosh	Do
250	220412210382	Prosjak Sarkar	Do
250	220412210386	Prema Pal	Do
251	220412210387	Prianka Das	Do

S. Banerjee
13-EVVS - PROJECT
Examined
Vivekananda Mahavidyalaya
Burdwan
13/1/23

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 Burdwan

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

Session-2022-2023

252	220412210389	Prapam Vaibaptya Das	Submitted
253	220412210390	Pritam Pan	DO
254	220412210391	Priti Adhikari	DO
255	220412210392	Priti Ghosh	DO
256	220412210393	priti pal	DO
257	220412210394	ppiti Shaw	DO
258	220412210395	Prity Chaudhury	DO
259	220412210396	priya Ghosh.	DO
260	220412210397	priya Ghosh	DO
261	220412210398	Priyashi	DO
262	220412210400	Priyangshu Mondal.	DO
263	220412210401	Priyanka Das	DO
264	220412210402	Priyanka Dasgupta	DO
265	220412210403	Priyanka Dutta	DO
266	220412210405	Priyanka Khatun	DO

IQAC - PROJECT
Examiner
Vivekananda Mahavidyalaya
Burdwan
17-1-23

17/1/23

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 Burdwan

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

Session-2022-2023

267	220412210406	Priyanka Malik	Submitted
268	220412210407	Priyanka Malo	Do
269	220412210408	Priyanka orao	Do
270	220412210409	Priyanka Pal	Do
271	220412210410	Priyanka Paswan	Do
272	220412210411	Priyanka Poddar	Do
273	220412210415	Priyanshu Majumdar	Do
274	220412210417	Puja Sarkar	Do
275	220412210418	Purba Kundu	Do
276	220412210419	Purnabrata DAS	Do
277	220412210420	Puspa Malik	Do
278	220412210421	Pushpita Dey	Do
279	220412210422	Rakhirmanemukhraborty	Do
280	220412210423	Rabi Majhi	Do
281	220412210424	Rubi Soren	Do

17/1/23 IQAC - PROJECT Examiner Vivekananda Mahavidyalaya Burdwan

17/1/23

VIVEKANANDA MAHAVIDYALAYA ESTD-1964

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

Session-2022-2023

282	220412210425	Radhakanta Bagdi	Submitted
283	220412210426	Rafayel Mandi	DO
284	220412210427	Raghabeswar Bagdi	DO
285	220412210428	Rahul Das	DO
286	220412210429	Rahul Kumbhakar	DO
287	220412210430	Rahul Mallick.	DO
288	220412210431	Rahul Malo	DO
289	220412210432	Rahul Mondal	DO
290	220412210433	Rahul mondal	DO
291	220412210434	Rahul Ruidas	DO
292	220412210435	Rahul Shaw	DO
293	220412210436	Raj chandra	DO
294	220412210437	Raj Dey	DO
295	220412210438	Raj Routh	DO
296	220412210439	Raja Dutta	DO

IQAC - PROJECT 7/1/23
Examined
Vivekananda Mahavidyalaya
Burdwan

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 BURDWAN

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

Session-2022-2023

297	220412210441	Rajani Kharat	Submitted
298	220412210442	Rajesh Shee	Do
299	220412210445	Rakesh Mallick	Do
300	220412210446	Rakhi Orang	Do
301	220412210447	Rakhi Roy	Do
302	220412210448	Rakhi Sarkar	Do
303	220412210449	Rakib Mallick	Do
304	220412210452	Ranu Kapasi	Do
305	220412210453	Ranu Kharal	Do
306	220412210455	Rekha Didi Sing	Do
307	220412210457	Resmi Khatun	Do
308	220412210459	Ria Khatun	Do
309	220412210460	Ritu Sinha	Do
310	220412210461	Rikta Ghosh	Do
311	220412210462	Rima Mondal	Do

IQAC - PROJECT
Examined
Vivekananda Mahavidyalaya
Burdwan

12/1/23

VIVEKANANDA MAHAVIDYALAYA ESTD-1964

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

Session-2022-2023

312	220412210464	Rimpa Dhara	Submitted
313	220412210465	Ritu Ghosh	Do
314	220412210468	Rita Ruidas	Do
315	220412210471	Ritu chakrabarty	Do
316	220412210473	Riya Bairagya.	Do
317	220412210474	Riya Hait	Do
318	220412210475	Riya Karmakar	Do
319	220412210477	Riya Mondal.	Do
320	220412210478	Riya Mondal	Do
321	220412210479	Riya Santra	Do
322	220412210482	Rohan Gharami	Do
323	220412210484	Rohitosh Ghosh	Do
324	220412210485	Romisha Khatun	Do
325	220412210486	Roni Karmakar.	Do
326	220412210489	Rashmi Khatun	Do

S Bani
17.7.23
ENVS - PROJECT
Examined
Vivekananda Mahavidyalaya
Burdwan

17/1/23

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 Burdwan

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

Session-2022-2023

327	220412210492	Ruma Karmakar.	Submitted
328	220412210493	Ruma Khorat	Do
329	220412210494	Rupali Karmykar	Do
330	220412210495	Rupsa Daroath	Do
331	220412210496	Rupsa Malik	Do
332	220412210498	Sabyasachi Roy	Do
333	220412210499	Sadhan Das	Do
334	220412210500	Sadina Khatun	Do
335	220412210502	Sagar Saha	Do
336	220412210506	Sahida Sultana	Do
337	220412210508	Sahinur Khatun	Submitted.
338	220412210511	Saiyanti Mondal.	submitted
339	220412210512	Sajal Das	Do
340	220412210514	Salma khatun	Do
341	220412210515	salma Khatun.	Do

S. Bag 12/1/23
ENVS - PROJECT
Examined
Vivekananda Mahavidyalaya
Burdwan

12/1/23

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 Burdwan

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

Session-2022-2023

342	220412210516	Salma Khatun	Submitted
343	220412210518	Samadrita Kesh	DO
344	220412210519	Samar Haldar	DO
345	220412210520	Samanesh Shea	DO
346	220412210521	Samim Sekh	DO
347	220412210522	Samir Rajbanshi	DO
348	220412210524	Sanchita Biswas	DO
349	220412210525	Sanghita Das.	DO
350	220412210526	Sanchita mojhi	DO
351	220412210528	Sandip Bag	DO
352	220412210529	Sandep chandra	DO
353	220412210531	Sangharmitra Sarkar	DO
354	220412210533	Sania khatun	DO
355	220412210535	Sanjib Bag	DO
356	220412210536	Sanjit Ruidas.	DO

S. Banerjee 18/12/23
ENVS - PROJECT
Examiner
Vivekananda Mahavidyalaya
Burdwan

18/12/23

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 Burdwan

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

Session-2022-2023

357	220412210540	Sankha Mallick	Submitted
358	220412210542	Saptadip Malik	DO
359	220412210546	Sarmistha Ghosh	DO
360	220412210547	Sarmolata Das.	DO
361	220412210548	Saroba Pal	DO
362	220412210549	Saswati Karmakar	DO
363	220412210550	Sathi Dalui	DO
364	220412210551	Sathi Das	DO
365	220412210553	Sathi Kojal	Submitted
366	220412210554	Sathi Mondal	DO
367	220412210555	Sathi Porel.	DO
368	220412210556	Sathi Pramanik	DO
369	220412210558	Sayak Hazra	DO
370	220412210559	Sayan Banerji	DO
371	220412210560	Sayan Das.	DO

S. Banerji 17.1.23

ENVS - PROJECT 17/1/23
Examiner
Vivekananda Mahavidyalaya
Burdwan

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 Burdwan

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

Session-2022-2023

372	220412210564	Sayandip Kundu	Submitted
373	220412210565	Sayanti Koyal	Submitted
374	220412210567	Sekh Abdul Ahad	DO
375	220412210568	Sekh Ashraful Islam	DO
376	220412210570	Sekh Sohail	DO
377	220412210572	Shantana Banerji	DO
378	220412210573	Shayandi Ghosh	DO
379	220412210575	Shilpa Khatun mallick	DO
380	220412210576	Shinska Paul.	DO
381	220412210577	Shishek Dey	DO
382	220412210578	Shrabani Mahato	DO
383	220412210580	Shrabani Shit	DO
384	220412210582	Shrabanti Mondal	DO
385	220412210583	Shreosi Bhattacharyya.	DO
386	220412210585	Shreya Nayek	DO

S. Banerji
IQAC - PROJECT
Examiner
Vivekananda Mahavidyalaya
Burdwan
17/1/23

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 Burdwan

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

Session-2022-2023

387	220412210586	Shubhankar Roy	Submitted
388	220412210587	Shavodip Singh	DO
389	220412210588	Shuvajit Mallick.	DO
390	220412210590	Shyamale Mal	DO
391	220412210592	Shyamal Murmu	DO
392	220412210593	Siddhartha Nandi	DO
393	220412210594	Siddika Khatun	DO
394	220412210596	Simanta Adhikary	DO
395	220412210597	Sita Majhi	DO
396	220412210598	SK Afaz ubair	DO
397	220412210602	SK Aman	DO
398	220412210604	SK. Asim	DO
399	220412210605	SK. Asman Raj	DO
400	220412210607	SK Asrabul	DO
401	220412210608	SK Fajrul Rahaman	DO

19-1-23
ENVS - PROJECT
Examined
Vivekananda Mahavidyalaya
Burdwan

19/1/23

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 Burdwan

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

Session-2022-2023

402	220412210610	SK Golam Mohiuddin	Submitted
403	220412210611	SK Hakibul Islam	Submitted
404	220412210612	SK Ibadat	Submitted
405	220412210613	SK Imran	DO
406	220412210617	SK Mainul Islam Sarik	SUBMITTED
407	220412210623	SK Munmun Khatun	DO
408	220412210624	SK Nasima Khatun	DO
409	220412210625	SK NASIFUL HAQUE	DO
410	220412210626	SK Nth Islam	DO
411	220412210627	SK Rahul	DO
412	220412210630	SK. Rizaj	DO
413	220412210635	SK Rose	DO
414	220412210638	SK Saiful	DO
415	220412210643	SK Suraj	DO
416	220412210646	Sneha Bagchi	DO

17/1/23
ENVS - PROJECT
Examiner
Vivekananda Mahavidyalaya
Burdwan

17/1/23

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 Burdwan

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

Session-2022-2023

417	220412210647	Sneha Biswas	Submitted
418	220412210648	Sneha Khatun	Do
419	220412210651	Snigdha Pal	Do
420	220412210652	Sohan Dey	Do
421	220412210653	Sonona Khatun	Do
422	220412210654	Sohom Das	Do
423	220412210655	Soma Karmaker	Do
424	220412210656	Soma Om	Do
425	220412210657	Soma Sarkar	Do
426	220412210658	Somnath Dey.	Do
427	220412210660	Sonali Das	Do
428	220412210661	Sonali Garai	Do
429	220412210662	Sonali Ghosh	Do
430	220412210663	Sonali mal	Do
431	220412210664	Sonali pan	Do

17/1/23 ENVS - PROJECT 17/1/23
Examined
Vivekananda Mahavidyalaya
Burdwan

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 Burdwan

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

Session-2022-2023

432	220412210666	Sougata Das	Submitted
433	220412210667	Sougata Dutta.	DO
434	220412210668	Soumadeep Roy	DO
435	220412210670	Soumi Sahana.	DO
436	220412210671	Soumik Banerjee	DO
437	220412210672	Soumitra Mahakar	DO
438	220412210674	Soupadeep Roy	DO
439	220412210675	Souradip mondal	DO
440	220412210676	Sourav Brahma	DO
441	220412210680	Sovana Khatun.	DO
442	220412210682	Shabani Nayek	AB
443	220412210683	Shabani Sahikah	Submitted
444	220412210685	Shija Halder	DO
445	220412210686	Srijani Majumder.	DO
446	220412210687	Sruti Das	DO

17/1/23 ENVS - PROJECT 17/1/23
Exam.
Vivekananda Mahavidyalaya
Burdwan

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 Burdwan

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date: .....

From : The Principal & Secretary

Session-2022-2023

447	220412210688	Souti Rajbanshi	Submitted
448	220412210691	Subhajit Das	DO
449	220412210692	SubhaJitRuidas	DO
450	220412210693	Subham Chakraborty	DO
451	220412210694	Subham mondal.	DO
452	220412210696	Sobhanik Ghosh.	DO
453	220412210697	Subhra Panda	DO
454	220412210698	Sujata Hazra	DO
455	220412210699	Subrata Mahanta	DO
456	220412210701	Suchitra Kshetrapal.	DO
457	220412210703	Sudha Meidha	DO
458	220412210704	Sudip chatterjee.	DO
459	220412210706	Sudip Dey	DO
460	220412210708	SUdiPa GhoSh	DO
461	220412210709	Sudipta chatterjee	DO

13-1-23
ENVS - PROJECT
Examined
Vivekananda Mahavidyalaya
Burdwan

13/1/23

VIVEKANANDA MAHAVIDYALAYA ESTD-1964

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

Session-2022-2023

462	220412210712	Sujon mou.	Submitted
463	220412210713	Sujan mondal	DO
464	220412210714	Sujata Shee	DO
465	220412210715	Sujit Hansda	DO
466	220412210717	Sujon chakraborty	DO
467	220412210721	Sultana Naz	DO
468	220412210722	Suman Dhara	DO
469	220412210723	Suman Ghosh	DO
470	220412210724	suman Ghosh	DO
471	220412210725	Sumanta Chowdhury.	DO
472	220412210726	Sumit Biswas	DO
473	220412210728	Sumit Mondal.	DO
474	220412210729	Sumit pandit	DO
475	220412210730	Sumit Sarkar	DO
476	220412210733	Sunoyan Ghosh	Submitted

17/1/23 ENVS - PROJECT Examined Vivekananda Mahavidyalaya Burdwan 17/1/23

VIVEKANANDA MAHAVIDYALAYA ESTD-1964

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

Session-2022-2023

477	220412210734	Sunita Kisku	Submitted
478	220412210736	Suparna Bain	DO
479	220412210737	Suparna Barik	DO
480	220412210738	Suparna Mandi	DO
481	220412210739	Suparna Mondal	DO
482	220412210740	Suparna Nandi	DO
483	220412210741	Suparna Saha	DO
484	220412210742	Supriya Biswas	DO
485	220412210745	Subajit Das	DO
486	220412210747	Susmita Jash	DO
487	220412210748	Suvabrata Koney	DO
488	220412210751	Swagatika Hembram	DO
489	220412210752	Swapna Das	DO
490	220412210753	Swapna Khatun	DO
491	220412210754	Swapna Bauri	DO

13.1.23
ENVS - PROJECT
Examined
Vivekananda Mahavidyalaya
Burdwan

17/1/23

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 Burdwan

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

Session-2022-2023

492	220412210756	Swatika Sen	Submitted
493	220412210757	Sweety Bishwakarma.	Do
494	220412210759	Sweety Shaw	Do
495	220412210761	Tamojit Ghosh.	Do
496	220412210762	Tandrani Khan	Do
497	220412210763	Tanmoy Dutta	Do
498	220412210764	Tanmoy Roy	Do
499	220412210765	Tanushree Ponja	Do
500	220412210766	Tabasin Khan	Do
501	220412210767	Tasima Khatun	Do
502	220412210769	Tibro Bhaiya	Submitted
503	220412210771	Tithi Bose	Do
504	220412210773	Tithi Kapasi	Do
505	220412210775	Titli Chatterjee.	Do
506	220412210777	Tiyasa Ghosh	Do

S Banerji 17.7.23

ENVS - PROJECT
Examined
Vivekananda Mahavidyalaya
Burdwan

17/1/23

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 Burdwan

Website : www.vmbdn.in
Email : vmprincipal2012@gmail.com
Phone No : 0342-2541208 (Day Office), 2541521 (Morning Office)
Fax No : 0342-2646916

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(GOVT. SPONSORED) ❑ ESTD-1964

P.O- Sripally ★ Dist- Purba Bardhaman ★ Pin-713103 ★ W.B

NAAC Re-Accredited (2nd cycle, B+) with PG in Chemistry

No...../V.M. Date : .....

From : The Principal & Secretary

Session-2022-2023

507	220412210779	Tatgn Sasen	Submitted
508	220412210780	Trisha Ghosh	Do
509	220412210781	Tufan Mondal	Do
510	220412210782	Tuhin Banerjee	Do
511	220412210783	Tumpa Orang	Do
512	220412210785	Tumpa Pandit	Do
513	220412210786	Tusher Barui	Do
514	220412210787	Tushar Das	Do
515	220412210789	Ujjal Das	Do
516	220412210790	Ujjal Roy	Submitted
517	220412210791	Uma Roy	Do
518	220412210793	Uttara Ghosh	Do
519	220412210794	Vishmadeb Khan	Do
520	220412210795	Zinia Sultana	Do
521	220412210799	Sneha Gurin.	Do

S. Banerji 17.1.23
ENVS - PROJECT
Examined
Vivekanada Mahavidyalaya
Burdwan

17/1/23

VIVEKANANDA MAHAVIDYALAYA ESTD-1964 Burdwan

TOPIC :- INDUSTRIAL POLLUTION AND EFFECTON ON ENVIRONMENT

NAME :- TAMANNA YEASMIN
CLASS :- B.A 1st YEAR (HONS)
SUB :- ENVS (SEM 1, AECC)
COLLEGE ROLL NO :- 953
REGE NO :- 1222206875

SESSION :-2022-23

THE UNIVE

VIVEKANANDA MAHAVIDYALAYA

TOPIC : Environmental pollution - Industrial.

	:	MONIJA KHATUN
NAME	:	B.A. (HONS) 1ST YEAR
CLASS	:	SEM – I
SEMESTER	:	ENVS
SUBJECT	:	539
COLLEGE ROLL	:	
UNIVERSITY ROLL NO.:		
REGISTRATION NO.	:	

SESSION : 2022 - 2023

Monija Khatun

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

B.A. GEOGRAPHY)

SEMESTER-I

NAME- MOUMI GHOSH

COLLEGE ROLL NO.- 601

SUBJECT- ENVS

TOPIC NAME- STUDY OF COMMON BIRDS

YEAR OF SUBMISSION- 2022-2023

VIVEKANANDA MAHAVIDYALAYA (THE UNIVERSITY OF BURDWAN)

YEAR-(2022-2023)

PROJECT OF ENVIRONMENTAL STUDIES (AECC-1)

NAME - MUNMUN KHATUN

COLLEGE ROLL NO - 542

REGISTRATION NO-

UNIVERSITY ROLL NO-

TOPIC - ENVIRONMENT ASSET (RIVER)

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

University → BURDWAN UNIVERSITY

Project → Industrial pollution

Name → Ankita Dhar.

Registration No →

year → 2022

College Roll → 889

University Roll →

class → B.A.(H) 1st sem.

Department Name → Political Science

Sub → ENVS.

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

TOPIC:- STUDY OF COMMON INSECT

NAME :-ANIK DUTTA

COLLEGE ROLL NO:-360

COURSE CODE:- AEECC1

HONOURS SUBJECT:- BENGALI

UNIVERSITY REGISTRATION NO:-

UNIVERSITY ROLL NO:-

YEAR:-2022

SESSION:-2022-23

STUDENTS SIGNATURE WITH DATE:- Anik Dutta 22/12/22

THE UNIVERSITY OF BURDWAN

VIVEKANAND MAHAVIDYALAYA

BENGALI HONS , SEM-I

SUB- ENVIRONMENTAL SCIENCE (ENVS)

Topic Name → Urban Pollution

STUDENT'S NAME - MADHUMITA SAHA

COLLEGE ROLL NO - 388

REGISTRATION NO -

UNIVERSITY ROLL NO -

YEAR - 2022-23

Madhumita Saha

Student signature

Teacher signature

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

ENVIRONMENTAL STUDIES

TOPIC:- FOREST ECOSYSTEMS

NAME :-ARGHYA CHAKRABARTY

COLLEGE ROLL NO:-365

COURSE CODE:- AEECC1

HONOURS SUBJECT:- BENGALI

UNIVERSITY REGISTRATION NO:-

UNIVERSITY ROLL NO:-

SESSION:-2022-23

Arghya Chakrabarty

Vivekananda Mahavidyalaya, Burdwan

University of Burdwan

Study of Common - Birds

Name Of The Candidate - Pritha Laha

Course - Arrt

Semester - Eng Hons (1st)

College Roll No - 548

University Roll No - 220112200209

Registration No - 1222201130

Subject Name - E.V.S (Environmental Studies)

Year - 2022

Pritha Laha

Signature of the Student

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

INTERNAL PROJECT

SUBJECT:- ENVIRONMENT STUDIES

STUDENT'S NAME : DEBNATH DAS

SEMESTER :- 1st SEM. BA (BENGALI HONOURS

COLLAGE ROLL :-376

UNIVERSITY ROLL:-

REGISTRATION NO :-

MOBILE NO:- 8509384924

MAIN SUBJECT:- BENGALI HONOURS

SESSION - 2022-23

TOPIC :- Environmental assets Forest

STUDENT'S SIGNATURE WITH DATE - Debnath Das

22-12-2022

THE UNIVERSITY OF BURDWAN

Title of the Project: URBAN POLLUTION

INSTITUTE NAME : VIVEKANANDA MAHAVIDYALAYA

NAME : PRITIKONA SAHA

COLLEGE ROLL NO : 606

UNIVERSITY ROLL NO :

REGISTRATION NO :

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

NAME	:	SNEHA BHATTACHARYYA
CLASS	:	B.A. (HONS) SEM- 1st
SECTION	:	DAY
COLLEGE ROLL NO.	:	621
UNIVERSITY ROLL NO	:	
REG NO	:	
SUBJECT	:	ENVS (AECC -1)
DEPARTMENT	:	GEOGRAPHY
YEAR	:	2022-2023
SUBMISSION DATE	:	21.12.2022

TOPIC

STUDY OF COMMON INSECTS

Student's signature - Sneha Bhattacharyya

VIVEKANANDA MAHAVIDYALAYA

THE UNIVERSITY OF BURDWAN

STUDENT'S NAME: SOURAV PAL

COURSE: ARTS

SEMESTER- 1st sem

COLLEGE ROLL NO: 575

UNIVERSITY ROLL NO: 2201122 00353

REGISTRATION NO: 2202201014919

SUBJECT NAME: ENVIRONMENTAL STUDIES

COURSE CODE: AECC - 1

TOPIC: ENVIRONMENTAL POLLUTION

SESSION- 2022-23

Sourav Pal

The University of Burdwan

Vivekananda Mahavidyalaya, Burdwan

(Affiliated to The University Of Burdwan)

INTERNAL PROJECT

STUDENT'S NAME (Capital)- SHREYA BAUL

SECTION - MORNING / DAY (TICK ANY ONE)

COURSE - SCIENCE / ARTS (TICK ANY ONE)

SEMESTER - 2 (HONS / GENERAL) (TICK ANY ONE)

HONOURS SUBJECT (If Any) - Geography

COLLEGE ROLL NO. - 628

UNIVERSITY ROLL NO. - .....

REGISTRATION NO. - ..... of .....

SUBJECT - Environmental Science

COURSE CODE - AEECC1

MOBILE NO. .....

STUDENT'S SIGNATURE WITH DATE - Shreya Baul. 21.11.22

Topic : Environmental Pollution [Industrial]

THE UNIVERSTI OF BURDWAN
VIVEKANANDA COLLEGE

PROJECT NAME - MUNICPAL SOLD WASTE MANAGEMENT AND HANDING

NAME - BRISTI GHOSH
REG NO - 2022010146 24 of 2022-2023
Roll No - 968
SESSION - 2022-2023

Bristi Ghosh
STUDENT SIGNATURE

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

SEMESTER – 1

Subject : Environment Science

Topic : Environmental Assets : GRASSLAND

Name : PRITHA DAS
College Roll No. : 1196
Registration No. : 202201016008 of 2022-23
Roll No : 220312200074

***Year* : 2022 - 2023**

Pritha Das.

Vivekananda Mahavidyalaya, Burdwan

(Affiliated to The University Of Burdwan)

INTERNAL PROJECT

STUDENT'S NAME (Capital)-...SRIJITA HAZRA.....

SECTION - MORNING / DAY (TICK ANY ONE)

COURSE – SCIENCE / ARTS (TICK ANY ONE)

SEMESTER – 1st sem (HONS / GENERAL) (TICK ANY ONE)

HONOURS SUBJECT (If Any) -...BENGALI.....

COLLEGE ROLL NO. - ..422.....

UNIVERSITY ROLL NO. – .....

REGISTRATION NO. - ..... of .....

SUBJECT - ..ENVIROMENTAL STUDIES.....

COURSE CODE - ..AEECC-1.....

MOBILE NO. ..9832810578.....

TOPIC - STUDY OF COMMON INSECT

STUDENT'S SIGNATURE WITH DATE-...Srijita Hazra 22/12/22...

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

NAME OF THE STUDENT: Puja Ghosh

COLLEGE ROLL NO: 922

RIGISTATION NO:

UNIVERSITY ROLL NO:

TOPIC: Environmental pollution: Urban

Puja Ghosh
STUDENT SIGNTURE

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

DEPT. OF ENGLISH (HONOURS)

[B.A SEMESTER-I]

NAME : SNEHA PAL

COLLEGE ROLL NO. : 572

UNIVERSITY ROLL NO. : 220112200338

REGISTRATION NO. : 202201014903

SESSION : 2022-23

TOPIC- STUDY OF COMMON PLANTS

DATE : 19.12.2022

SUBJECT : ENVIRONMENTAL STUDIES

Sneha Pal

STUDENT SIGNATURE

THE UNIVERSITY OF BURDWAN

NAME OF THE INSTITUTE : VIVEKANADA MAHAVIDALAYA

NAME OF THE STUDENT : ANWESA SANTRA

COLLEGE ROLL NO: 592

UNIVERSITY ROLL NO:

REGISTRATIION NO:

TITLE OF THE PROJECT : URBAN POLLUTION

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHA VIDYALAYA

TOPIC – INDUSTRIAL PO LLUTION

NAME – SHIPRA DEY

SUBJECT-ENVS

SEMESTER - 1ST

COURS – B.A (SANSKRIT HONS)

COLLEGE ROLL NO – 1003

UNIVERSITY ROLL NO - _____

REG NO - _____

YEAR : 2022-2023

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

TOPIC : Environmental pollution
URBAN pollution

NAME : REHENA KHATUN

CLASS : B.A. 1ST YEAR (DAY)

SEMESTER : SEM - I

SUBJECT : ENVS

COLLEGE ROLL : 609

UNIVERSITY ROLL NO :

REGISTRATION NO. :

SESSION : 2022-23

G · Rehena
4, 20:46

VIVEKANANDA MAHAVIDYALAYA

BURDWAN UNIVERSITY

SUBJECT : - ENVS (AECC-1)

TOPIC : -

STUDY OF COMMON PLANTS

NAME : - SAMIUL SK

REGISTRATION NO : - 20220101485 0

Roll no – 22011220028 7

ROLL NO [COLLEGE] : - 562

ROLL NO (ADMIT CARD) :

Course : English (Hons)

Vivekananda Mahavidyalaya ESTD-1964 Burdwan

YEAR : - 2022-23

SEM : - I

Samiul SK
Student sign

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

SUBJECT – ENVIRONMENTAL STUDIES

NAME OF THE STUDENT - SANCHITA GHOSH

COLLEGE ROLL NO - 617

REGISTRATION NO - 1222200263

UNIVERSITY ROLL NO -

TOPIC - ENVIRONMENTAL POLLUTION- INDUSTRIAL

PAPER NAME – AECC 1

COURSE - B.A 1ST SEM(GEOGRAPHY HONOURS)

SUBMISSION OF YEAR -2022-2023

VIVEKANANDA MAHAVIDYALAYA (THE UNIVERSITY OF BURDWAN)

PROJECT : ENVIRONMENTAL POLLUTION- URBAN

NAME : AMRITA GUHA

COLLEGE ROLL NO : 885

REGISTRATION NO :

UNIVERSITY ROLL NO : 220112200014

SUBJECT : ENVIRONMENTAL STUDIES

COURSE CODE : AEECC-1

SECTION :DAY

SEMESTER :1ST (HONS)

COURSE : B.A HONOURS IN POLITICAL SCIENCE

YEAR :2022-23

Students Signature Amrita Guha.

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

ENVIRONMENTAL STUDIES

TOPIC:- FOREST ECOSYSTEMS

NAME :- DIPANKAR GHOSH

COLLEGE ROLL NO:- 379

COURSE CODE:- AEECC1

HONOURS SUBJECT:- BENGALI

UNIVERSITY REGISTRATION NO:-

UNIVERSITY ROLL NO:-

Dipankar Ghosh

SESSION:-2022-23

PROJECT WORK BOOK

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYAYA

SUBJECT - ENVIRONMENTAL STUDIES (AECC1)

PROJECT NAME : STUDY OF COMMON BIRDS

NAME : KOYEL BARIK

ROLL NO. : 387

CLASS : BA. 1st YEAR [HONS.]

REG NO. : **OF**

SEM : 1st SEM

GROUP NAME :

SUBMISSION YEAR : 2022

THE UNIVERSITY OF BURDWAN
VIVEKANANDA MAHAVIDYALAYA
BA SEM-I EXAMINATION
NAME - SUSMITA MALIK
DEPT OF BENGALI
SUBJECT - ENVIROMENTAL SCIENCE
COLLEGE ROLL NO - 427
UNIVERSITY ROLL NO-
REGISTRATION NO-
YEAR - 2022 - 2023

TOPIC
URBAN POLLUTION

Vivekananda Mahavidyalaya, Burdwan

(Affiliated to The University Of Burdwan)

INTERNAL PROJECT

STUDENT'S NAME (Capital)- MANDIRA ROY

SECTION - MORNING / DAY (TICK ANY ONE)

COURSE – SCIENCE / ARTS (TICK ANY ONE)

SEMESTER – 1st SEM (HONS / GENERAL) (TICK ANY ONE)

HONOURS SUBJECT (If Any) - BENGALI

COLLEGE ROLL NO. - 390

UNIVERSITY ROLL NO. – .....

REGISTRATION NO. - ..... of .....

SUBJECT - ENVIRONMENT STUDIES

COURSE CODE - .....

MOBILE NO. 9732136449

TOPIC- URBAN POLLUTION

STUDENT'S SIGNATURE WITH DATE- Mandira Roy 22.12.2022

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

ENVIRONMENTAL STUDIES

TOPIC:- INDUS TRIAL POLLUTION

NAME :-KOUSHIK GHOSH

COLLEGE ROLL NO:-981

HONOURS SUBJECT:- SANSKRIT

UNIVERSITY ROLL NO:-

REGISTRATION:-

SESSION:-2022-23

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

ENVIRONMENTAL STUDIES

TOPIC:- POND ECOSYSTEMS

NAME :-PRIYANKA NAYEK

COLLEGE ROLL NO:-920

COURSE CODE:- AEECC1

HONOURS SUBJECT:- POLITICAL SCIENCE

UNIVERSITY REGISTRATION NO:-

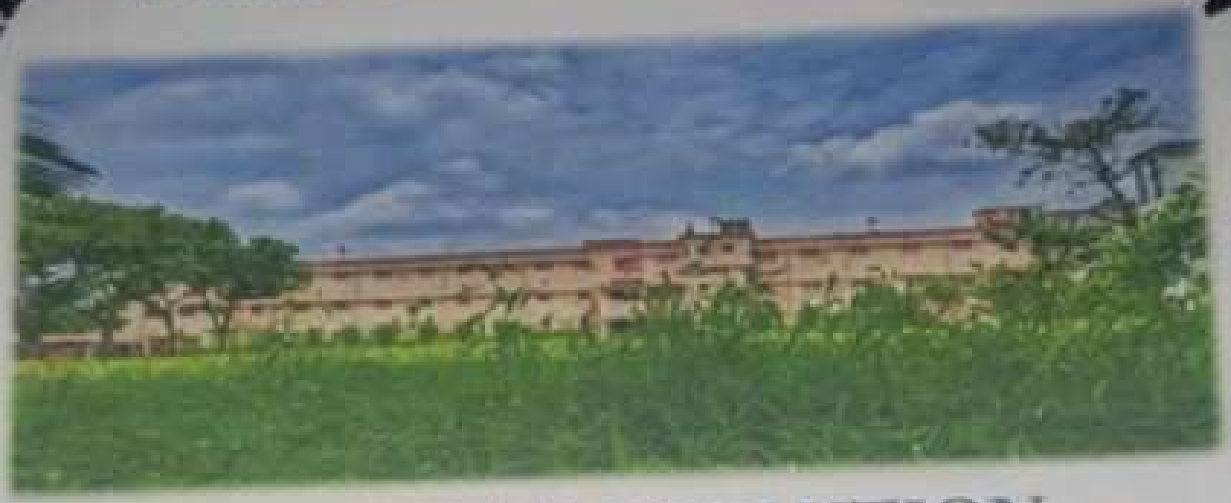
UNIVERSITY ROLL NO:-

YEAR:-2022

SESSION:-2022-23

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHA VIDYALAYA



TOPIC - URBAN POLLUTION

NAME – SHUBHRA SAHA

SUBJECT-ENVS

SEMESTER - 1ST

COURS – B.A (SANSKRIT HONS)

COLLEGE ROLL NO – 1005

UNIVERSITY ROLL NO - _____

REG NO - _____

YEAR : 2022-2023

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

B.A. GEOGRAPHY)

SEMESTER-I

NAME- AFRIN KHATUN

COLLEGE ROLL NO.- 588.

SUBJECT- ENVS.

TOPIC NAME- STUDY OF COMMON BIRDS

STUDENT'S SIGNATURE - Afrin Khatun

YEAR OF SUBMISSION- 2022-2023

Name — Masud Molla
University Roll No. — 220312200057
University Registration No. — 2022010159 88 of 2022-23

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

Environmental Pollution:
Air Pollution, Water Pollution, Sea Pollution, Soil Pollution

NAME :- MASUD MOLLA
CLASS :- B.SC 1ST YEAR SEM-1 (MCBH)

SUBJECT :- ENVS (AECC1)
COLLEGE ROLL NO :- 723
UNIVERSITY REG. NO.:-
UNIVERSITY ROLL NO :-

TOPIC :- ENVIRONMENTAL POLLUTION(URBAN)

YEAR :- 2022 - 2023

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

SUBJECT :: ENVIRONMENTAL STUDIES

COURSE - B.A (Honours 1st Sem) -Geography Honours.
TOPIC NAME- ENVIRONMENTAL POLLUTION – URBAN
NAME - ARIFA KHATUN
REG. NO - OF :: 2022-23
UNIVERSITY ROLL NO -
COLLEGE ROLL NO - 593
PAPER NAME - AECC-1

STUDENT'S SIGNATURE - Arifa Khatun

SUBMISSION OF YEAR :: 2022-23

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

NAME - ANUSKA MONDAL

COLLEGE ROLL NO- 708

REGISTRATION NO-

UNIVERSITY ROLL NO-

COURSE - B.Sc. (MICROBIOLOGY HONOURS)

TOPIC - AGRICULTURAL POLLUTION

SESSION- 2022-23

Anuska Mondal

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

Project Name : Study of Common Insects

NAME : RIMPA KUNDU

DEPARTMENT : ZOOLOGY(HONOURS)

CLASS : B.SC 1ST YEAR (DAY)(SEM-1)

UNIVERSITY ROLL NO :

REGISTRATION NO :

COLLEGE ROLL NO : 1213

SUBJECT : ENVS PROJECT(AECC-1)

SESSION: 2022-23

20/12/2022
DATE

Rimpa Kundu
SIGNATURE

VIVEKANANDA MAHAVIDYALAYA
THE UNIVERSITY OF BARDHAMAN
INTERNAL PROJECT

NAME - MUNSHI ZENIFA AZMI
COURSE - ARTS
SEMESTER - HONS
HONOURS SUBJECT NAME - SANSKRIT
COLLEGE ROLL NO - 985
REGESTRATION NO -
SUBJECT NAME - ENVS

SUBMISSION DATE - 22. 12. 22

TOPIC - URBAN POLLUTION

CLASS - B.A. SEM 1

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

ENVIRONMENTAL STUDIES

TOPIC:- INDUSTRIAL POLLUTION

NAME :-RAJA DAS

COLLEGE ROLL NO:-996

HONOURS SUBJECT:- SANSKRIT

UNIVERSITY ROLL NO:-

REGISTRATION:-

SESSION:-2022-23

COURSE CODE :- AECC-1

YEAR :- 2022

VIVEKANANDA MAHAVIDYALAYA(THE UNIVERSITY OF BURDWAN)

PROJECT OF ENVIRONMENTAL STUDIES (AECC-1)

NAME : ANANYA PANJA

COLLEGE ROLL NO : 957

REGISTRATION NO :

UNIVERSITY ROLL NO :

TOPIC : Environmental Pollution → Urban

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

ENVIRONMENTAL STUDIES

TOPIC:- ENVIRONMENTAL POLLUTION- INDUSTRIAL

NAME :-SOMA GHOSH

COLLEGE ROLL NO:-1009

COURSE CODE:- AEECC1

HONOURS SUBJECT:- SANSKRIT

UNIVERSITY REGISTRATION NO:-

UNIVERSITY ROLL NO:-

YEAR:-2022

SESSION:-2022-23

THE UNIVERSITY OF BURDWAN

INTERNAL PROJECT

INSTITUTION'S NAME : VIVEKANANDA MAHAVIDYALAYA

STUDENT'S NAME : ABHINABA MITRA

COLLEGE ROLL NO. : 772

SUBJECT : ENVIRONMENTAL STUDIES

SEMESTER : 1ST (MATHEMATICS HONOURS)

REGISTRATION NO. :

UNIVERSITY ROLL NO. :

TOPIC : STUDY OF COMMON PLANTS

Student's Signature : Abhinaba Mitra

VIVEKANANDA MAHAVIDYALAYA

THE UNIVERSITY OF BURDWAN

Name — Aheli Samanta

College Roll no. — 705

University Roll no. — 220312200005

University Registration no. — 202201015923 of 2022 - 23

Course — AECC-I

Topic — Study of common Insect

Honours Subject — Microbiology

Vivekananda Mahavidyalaya ESTD-1964

Aheli Samanta

Signature

THE UNIVERSITY OF BURDWAN
VIVEKANANDA MAHAVIDYALAYA

TOPIC- INSECTS

(RE' ***)

NAME- PRIYA KUMARI PANDIT
SEM 1 (ENVS)
COLLEGE ROLL NO-992
UNIV. ROLL NO-
UNIV. REG. NO-
SESSION- 2022-2023
COURSE - BA (SAHH HONS)

VIVEKANANDA MAHAVIDYALAYA

STUDY OF COMMON BIRDS

BURDWAN UNIVERSITY

NAME OF THE CANDIDATE = ARPITA MALLICK

REGISTRATION NO =

ROLL NO = 512 SUBJECT = ENVS

YEAR = 2022-2023

TITLE OF THE PROJECT = STUDY OF COMMON BIRDS

NAME OF INSTITUTION = BURDWAN VIVEKANANDA MAHAVIDYALAYA

NAME OF UNIVERSITY = BURDWAN UNIVERSITY

Arpita mallick

NAME OF THE UNIVERSITY : The University of Burdwan.

NAME OF THE INSITUTE : Vivekananda Mahavidyalaya.

NAME OF THE STUDENT : Shabnam Sekh.

COLLEGE ROLL NO : 567

REGISTATION NO :

UNIVERSITY ROLL NO :

SUBJECT : ENVS (AECC-1)

TOPIC : Environmental assets : Forest

Course : English (Hons)

Vivekananda Mahavidyalaya ESTD-1964 Burdhaman

Shabnam Sekh.

Vivekananda Mahavidyalaya, Burdwan

(Affiliated to The University Of Burdwan)

INTERNAL PROJECT

STUDENT'S NAME (Capital)- ANNITA SAMANTA

SECTION - MORNING / DAY (TICK ANY ONE)

COURSE – SCIENCE / ARTS (TICK ANY ONE)

SEMESTER – 1 **(HONS / GENERAL) (TICK ANY ONE)**

HONOURS SUBJECT (If Any) - ENGLISH

COLLEGE ROLL NO. - 504

UNIVERSITY ROLL NO. – .....

REGISTRATION NO. - ..... of .....

SUBJECT - ENVIRONMENTAL STUDIES

COURSE CODE - AECC-1

MOBILE NO. 8535863055

TOPIC - POND ECOSYSTEM

STUDENT'S SIGNATURE WITH DATE- Annita Samanta 18/12/2022

Vivekananda Mahavidyalaya ESTD-1964 Burdwan

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

ENVIRONMENTAL STUDIES

TOPIC- STUDY OF SIMPLE ECOSYSTEMS : POND

NAME :-CHANDRAYANEE GHOSH

COLLEGE ROLL NO:-523

UNIVERSITY REGISTRATION NO:- 202201014630 of 2022-23

UNIVERSITY ROLL NO:- 220112200082

YEAR:-2022

SESSION:-2022-23

Chandrayanee Ghosh

Vivekananda Mahavidyalaya, Burdwan

(Affiliated to The University Of Burdwan)

INTERNAL PROJECT

STUDENT'S NAME (Capital)-..INDRANI GHOSH.....

SECTION - MORNING / DAY (TICK ANY ONE)

COURSE – SCIENCE / ARTS (TICK ANY ONE)

SEMESTER – ...1st..... (HONS / GENERAL) (TICK ANY ONE)

HONOURS SUBJECT (If Any) -..POLITICAL SCIENCE.....

COLLEGE ROLL NO. - ..897.....

UNIVERSITY ROLL NO. – .....

REGISTRATION NO. - ..... of .....

SUBJECT - ..ENVIRONMENTAL SCIENCE.....

COURSE CODE - ..AECC1.....

MOBILE NO. ...7679580436.....

TOPIC- INDUSTRIAL POLLUTION

SESSION- 2022 - 2023

STUDENT'S SIGNATURE WITH DATE-..Indrani Ghosh.....

NAME OF THE UNIVERSITY - THE UNIVERSITY OF BURDWAN

NAME OF THE INSTITUTION - VIVEKANANDA MAHAVIDYALAYA

NAME OF THE STUDENT - BURUJHARNA MURMU

ROLL NO [COLLEGE] - 522

REGISTRATION NO -

UNIVERSITY ROLL NO -

YEAR :- 2022 - 2023, SEM - I

TOPIC :- ENVIRONMENTAL ASSETS - FOREST

SUBJECT :- ENVIRONMENTAL STUDIES

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

SUBJECT :- ENVIRONMENTAL STUDIES

PROJECT NAME : - URBAN POLLUTION

B.A GEOGRAPHY (HONOURS) - 1ST YEAR

NAME - ANUSHREE DAS

COLLEGE ROLL : - 591

UNIVERSITY ROLL : -

REG. NO. : - 20220101458l ~~1222403106~~

SUBMISSION YEAR - 2022 - 2023

VIVEKANANDA MAHA VIDYALAYA

PROJECT REPORT ON THE STUDY, 'A SIMPLE ECOSYSTEM OF POND'

NAME :- SHINJINEE DAS.

CLASS :- BA HONOURS

DEPARTMENT :- BENGALI HONOURS.

COLLAGE ROLL NO:- 414.

REGISTRASION NO:-

SEMISTER:- 1st SEM.

UNIVERSITY NAME:- BURDWAN UNIVERSTTY.

ADMITCARD ROLL NO:-

SESSION:- 2022.

COURSE CODE:- AEECC-1

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

ENVIRONMENTAL STUDIES

(AEE CC—1)

TOPIC:- STUDY OF SIMPLE ECOSYSTEMS POND

NAME :-SANTANU SAHA

COLLEGE ROLL NO:-1001

HONOURS SUBJECT:- SANSKRIT

YEAR:-2022

SESSION:-2022-23

Vivekananda Mahavidyalaya, Burdwan

(Affiliated to The University Of Burdwan)

INTERNAL PROJECT

STUDENT'S NAME (Capital)- SOUMYA GHOSH

SECTION - MORNING / DAY (TICK ANY ONE)

COURSE – SCIENCE / ARTS (TICK ANY ONE)

SEMESTER – 1st (HONS / GENERAL) (TICK ANY ONE)

HONOURS SUBJECT (If Any) - BENGALI

COLLEGE ROLL NO. - 420

UNIVERSITY ROLL NO. – .....

REGISTRATION NO. - ..... of .....

SUBJECT - ENVIRONMENTAL STUDIES

COURSE CODE - AEECC-1

MOBILE NO. 7076910649

TOPIC – Study of Common Insect

STUDENT'S SIGNATURE WITH DATE- Soumya Ghosh 22/12/2022

Title of the project - Study of common Birds

Name of the candidate - Reyan Tudu

Reg. No -

Roll no (college) - 556

Roll no (

Name of the university - Burdwan University

Name of the college - Vivekananda Mahavidyalaya

Dept. of English (1st Sem)

Year - 2022 - 2023

Vivekananda Mahavidyalaya Burdwan
(Affiliated to the university of Burdwan)

INTERNAL PROJECT

STUDENT'S NAME (capital)...Sultana Parvin

SECTION - MORNING / DAY (TICK ANYONE)

COURSE - SCIENCE / ARTS (TICK ANYONE)

SEMESTER - ...1st... (HONS / GENERAL) (TICK ANY ONE)

HONOURS SUBJECT (If Any)...Bengali

COLLEGE ROLL NO.....424

UNIVERSITY ROLL NO.22011220037 6

REGISTRATION NO 1222206010 of 2022-2023

SUBJECT ENVIRONMENTAL STUDIES

COURSE CODE...AECC-1

MOBILE NO ..9641495249

TOPIC SUBJECT. Study of common Insect

STUDENT'S SIGNATURE WITH DATE. Sultana Parvin
22/12/2022

Name of the University :— The University of Burdwan.

Name of the Institution :— Vivekananda Mahavidyalaya.

Name of the Student :— Rinky Sarkar.

College Roll No. :— 404

Registration No. :—

University Roll No. :—

COURSE CODE :— AECC-1

Topic :— Environmental Pollution-Industrial.

Session :— 2022-23

Semester :— BA 1st Sem Beng (Hon)

Ph no. :— 7501640138

VIVEKANANDA MAHAVIDYALAYA

BURDWAN

ESTD-1964

PROJECT REPORT ON THE STUDY OF COMMON PLANTS

NAME : ANUSKA KUNDU
CLASS : B.A HONOURS
DEPARTMENT : BENGALI
COLLAGE ROLL NO : 362
REGISTRASION NO :
SEMISTER : 1st
UNIVERSITY NAME : BURDWAN UNIVERSITY
ADMIT CARD ROLL NO :
SESSION : 2022 – 2023
COURSE CODE : AECC-1

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

Project Work Of Environment Studies

SEMISTER-I

Name : Nisa Paul
Subject : Statistic Honours
College Roll No: 1194
University Roll: 22031220065
Reg. No: 202201016000 of 2022-23
Topic: Ecosystem of Pond

Nisa Paul

THE UNIVERSITY OF BURDWAN
VIVEKANANDA MAHAVIDYALAYA

TOPIC- INDUSTRIAL POLLUTION

NAME- INDRAJIT SAHA
CLASS- B.A 1St YEAR (SANSKRIT HONOURS)
SEM1 AECC-1 (ENVS)
COLLEGE ROLL NO- 976
UNIV. ROLL NO-
UNIV. REG. NO-
SESSION- 2022-2023

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

DAY

ENVIRONMENTAL STUDIES

TOPIC –

INDUSTRIAL POLLUTION

Name : Moumita Garai

Course : B.A. (Hist.Hons.)

Sem. : 1st

Roll: 660

Reg. No: 1222202256

Moumita Garai

Signature of the student

TOPIC – INDUSTRIAL POLLUTION

NAME – DIPIKA RUIDAS

SUBJECT – ENVS

COLLEGE ROLL NO – 644

REG NO – 1222201025

COURSE – B.A(HISTORY Hons)

VIVEKANANDA MAHAVIDYALAYA

VIVEKANANDA MAHAVIDYALAYA
BURDWAN
ESTD - 1964

SUBJECT : ENVIRONMENTAL STUDIES

COURSE : B.A (HONOURS, 1ST SEM) GEOGRAPHY

TOPIC NAME : ENVIRONMENTAL POLLUTION - INDUSTRIAL

NAME : ROHAN SAHA

COLLEGE ROLL : 613

REGISTRATION NO:

UNIVERSITY ROLL NO:

PAPER NAME : AECC-1

MOBILE NO : 8509453833

EMAIL ID : rohansaha2999@gmail.com

NAME OF THE UNIVERSITY : THE UNIVERSITY OF BURDWAN

SUBMISSION OF YEAR : 2022-23

Rohan Saha
Students signature

Vivekananda Mahavidyalaya, Burdwan

(Affiliated to The University Of Burdwan)

INTERNAL PROJECT

STUDENT'S NAME (Capital)- ARUNIMA MITTRA

SECTION - MORNING / DAY (TICK ANY ONE)

COURSE – SCIENCE / ARTS (TICK ANY ONE)

SEMESTER – II 1st (HONS / GENERAL) (TICK ANY ONE)

HONOURS SUBJECT (If Any) - BENGALI

COLLEGE ROLL NO. - 368

UNIVERSITY ROLL NO. – 2220112200052

REGISTRATION NO. - 1222200820 of 2022-2023

SUBJECT - ENVIRONMENTAL STUDIES

COURSE CODE - AEECC-1

MOBILE NO. 7551084177

Topic Study of common Insect

STUDENT'S SIGNATURE WITH DATE- Arunima Mittra

The University Of Burdwan

(Vivekananda Mahavidyalaya, Burdwan)

INTERNAL PROJECT

STUDENT'S NAME- **ADITI GHOSH**

SECTION – **DAY**

COURSE- **ARTS**

SEMESTER- **1ST SEMESTER**

HONOURS SUBJECT- **BENGALI**

COLLEGE ROLL NO. – **357**

UNIVERSITY ROLL NO. –

REGISTRATION NO. – **1222201360 OF 2022-2023**

SUBJECT – **ENVIRONMENTAL STUDIES (ENVS)**

TOPIC – **POND ECOSYSTEM**

Course Code – AECC – 1

STUDENT'S SIGNATURE WITH DATE - Aditi Ghosh • 22/12/22 .

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

STUDY OF COMMON INSECT

STUDENT NAME - TINA BISWAS

COLLEGE ROLL NO - 431

UNIVERSITY ROLL NO-

REGISTRATION NO -

SECTION - DAY

SEMESTER - " I" B. A (HONS)

HONOURS SUBJECT - BENGALI

PAPER - AECC-1

DATE OF SUBMISSION :- 22/12/2022

Tina Biswas

SIGNATURE OF THE STUDENT

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

SUBJECT: ENVIRONMENTAL STUDIES

COURSE : B.A (HONOURS,1ST Sem) GEOGRAPHY

TOPIC NAME : ENVIRONMENTAL **POLLUTION** – INDUSTRIAL

NAME : SUBHAJIT DAS

COLLEGE ROLL NO : 624

REG NO : **OF : 2022-23**

UNIVERSITY ROLL NO :

PAPER NAME : AECC-1

MOBILE NO : 9091161090

EMAIL ID : sd0248282@gmail.com

Subhajit Das
Students signature

SUBMISSION OF YEAR : 2022-23

VIVEKANANDA MAHAVIDYALAYA

BURDWAN UNIVERSITY

SUBJECT : - ENVS

TOPIC : -

POND ECOSYSTEM

NAME : - RAKHI ANKURE

REGISTRATION NO : -

ROLL NO [COLLEGE] : - 554

ROLL NO (ADMIT CARD) : -

.....

YEAR : - 2022-23

Signature of The Student...

Rakhi Ankure.

University Name: The University of Burdwan
College Name: Vivekananda Mahavidyalaya
Student Name: Tithi Pal
College Roll No: 432
Registration No:
University Roll No:
Semester: "I" B.A. (Hons.) in Bengali
Course Code: AECC-1

Topic Name → Urban Pollution

Date of Submission: 22/12/2022

Year of Submission: 2022

Session: 2022-23

Tithi Pal

Signature of the Student

Vivekananda Mahavidyalaya
INTERNAL PROJECT

Students Name — Ananya Chakraborty
Section — Day
Course — Arts
Semester — 1st (HONS)
Honours Subject — Bengali
College Roll NO — 359
University Roll NO —
Registration NO —
Subject — Environment Studies
course code —
Mobile NO — 8159929077
Topic — Environmental Assets — Forest

student's signature with Date —
Ananya Chakraborty
22/12/2022

The University of Burdwan

Vivekananda Mahavidyalaya

INTERNAL PROJECT

NAME	: SABARNA GHOSH
SEM.	: 1ST YEAR (SEM-I) B.A (HON.)
SECTION.	: DAY
COLLEGE ROLL NO.	: 931
UNIVERSITY ROLL NO.	:
REG. NO.	:
YEAR OF SUBMISSION	: 2022-2023
DEPARTMENT	: POLITICAL SCIENCE
TOPIC	: ENVIRONMENTAL POLLUTION URBAN
SUBJECT	: EVS [AECC - I]

Vivekananda Mahavidyalaya ESTD-1964 Burdwan

VIVEKANANDA MAHAVIDYALAYA (THE UNIVERSITY OF BURDWAN)

PROJECT OF ENVIRONMENTAL STUDIES (AECC-1)

NAME: SUDIPTA HAZRA

COLLEGE ROLLS NO: 947

REGISTRATION NO:

UNIVERSITY ROLL NO:

TOPIC: STUDY OF COMMON INSECT

SESSION: 2022 - 2023

VIVEKANANDA MAHAVIDYALAYA, BURDWAN

(Affiliated to The University Of Burdwan)

Internal Project

STUDENT'S NAME - RANU MONDAL

COURSE- ARTS

SEMESTER- HONS (1st sem)

HONOURS SUBJECT NAME - BENGALI

COLLEGE ROLL NO - 401

UNIVESITY ROLL NO-

REGISTRATION NO - OF

SUBJECT NAME - ENVIRONMENT STUDY

COURSE CODE -

MOBILE NO - 7557881309

TOPIC NAME - URBAN POLLUTION

Ranu Mondal

SINGNATURE OF STUDENT

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

SUBJECT – ENVS

SEMISTER - 1

B. A. 1ST YEAR (BENGALI HONOURS)

PROJECT NAME – POND ECO-SYSTEM

COURSE CODE – AECC - 1

SUBMITTED BY :

NAME – SUMANA SANTRA

COLLEGE ROLL NO –425

REG. NO –

SESSION – 2022-2023

Sumana Santra . 22/12/22

Student's Signature with Date

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

NAME: RISHAA CHAUDHURI

CLASS: BA(HONS) 1st SEMESTER

SECTION: DAY

COLLEGE ROLL NO: 927

DEPARTMENT: POLITICAL SCIENCE

SUBJECT: ENVIRONMENTAL SCIENCE (AECC-1)

REGISTRATION NO.:

UNIVERSITY ROLL NO.:

Year: 2022-2023

TOPIC: STUDY OF COMMON INSECTS

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

SUBJECT: ENVIRONMENTAL STUDIES

COURSE : B.A (HONOURS, GEOGRAPHY 1ST Sem)

TOPIC NAME : ENVIRONMENTAL POLLUTION – INDUSTRIAL

NAME : SUJAN PANJA

COLLEGE ROLL NO : 626

REG NO : 202201014939. OF : 2022-23

UNIVERSITY ROLL NO :

PAPER NAME : AECC-1

MOBILE NO : 8145672976

EMAIL ID : pánjasujan5703@gmail.com

SUBMISSION OF YEAR : 2022-23

Student's Signature – Sujan Panja

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA COLLEGE

SUB : ENVIRONMENTAL STUDIES

NAME : SATARUPA BARIK

STREAM : B.A 1st SEMESTER (H) (Geography)

COURSE : AECC-1

PROJECT TROPIC : ENVIRONMENT POLLUTION - URBAN

UNIVERSITY ROLL NO : 220112200298

COLLEGE ROLL NO : 619

REGISTRATION NO : 202201014863 of 2022-23

SESSION : 2022-23

MOBILE NO : 7908626940

STUDENTS SIGNATURE - Satarupa Barik

SATARUPA
Feb 29, 2024, 18:38

Topic: Study Of Common Birds

Name: Anwesha Hazra
College Roll NO : 363
University Roll NO:
Registration NO :

Name Of Institute : VIVEKANANDA MAHAVIDYALAYA

Name Of University : THE UNIVERSITY OF BURDWAN

Anwesha Hazra
student signature

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

B.A SEM-I EXAMINATION

NAME- TRISHA HOWLIK

DEPT. OF BENGALI

COLLEGE ROLL NO – 433

UNIVERSITY ROLL NO –

REGISTRATION NO –

OF 2022 - 23

SUB-ENVIRONMENTAL STUDIES

TOPIC

URBAN POLLUTION

Trisha Howlik

student signature

UNIVERSITY OF BURDWAN.

VIVEKANANDA MAHAVIDYALAYA.

NAME : SNEHA GHOSH

ROLL NO (COLLEGE) : 571

ENVIRONMENTAL POLLUTION - URBAN

HONS. SUB. - ENGLISH.

SUBMISSON DATE - 19.12.2022

SEMESTER - FIRST.

Vivekananda Mahavidyalaya, Burdwan

(Affiliated to The University Of Burdwan)

INTERNAL PROJECT

STUDENT'S NAME (Capital)- ARGHA GHOSH

SECTION - MORNING / DAY (TICK ANY ONE)

COURSE – SCIENCE / ARTS (TICK ANY ONE)

SEMESTER – 1 st (HONS / GENERAL) (TICK ANY ONE)

HONOURS SUBJECT (If Any) - Bengali

COLLEGE ROLL NO. - 364

UNIVERSITY ROLL NO. – .....

REGISTRATION NO. - ..... of .....

SUBJECT - ENVIRONMENTAL STUDIES

COURSE CODE - AECC - 1

MOBILE NO. 7718413948

TOPIC - Study of common insect

STUDENT'S SIGNATURE WITH DATE- Argha Ghosh 22/12/2022

Vivekananda Mahavidyalaya, Burdwan

(Affiliated to The University Of Burdwan)

INTERNAL PROJECT

STUDENT'S NAME (Capital)-JYOTI MONDAL

SECTION - MORNING / DAY (TICK ANY ONE)

COURSE – SCIENCE / ARTS (TICK ANY ONE)

SEMESTER – 1 (HONS / GENERAL) (TICK ANY ONE)

HONOURS SUBJECT (If Any) -BENGALI

COLLEGE ROLL NO. - 383

UNIVERSITY ROLL NO. – .....

REGISTRATION NO. - ..... of .....

SUBJECT - ENVIRONMENTAL STUDIES

Project Name – ECOSYSTEM OF POND

COURSE CODE - .....

MOBILE NO. 9883565944

STUDENT'S SIGNATURE WITH DATE- Jyoti mondal 22.12.2022

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

ENVIRONMENTAL STUDIES

TOPIC -

INDUSTRIAL POLLUTION

Name : Nasima Khatun

Course : B.A. (Hist. Hons.)

Sem : 1st

Roll : 663

Reg No : 1222207760

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

NAME : LAKSHMI RANI DE

COLLEGE ROLL NO - 598
REGISTRATION NO - 1222203207
UNIVERSITY ROLL NO - 220112200142

TOPIC - DOCUMENTATION OF ENVIRONMENTAL ASSETS : STUDY OF COMMON PLANTS

YEAR - 2022

SESSION - 2022-23

Lakshmi Rani De
Student's Signature

Vivekananda Mahavidyalaya, Burdwan

(Affiliated to The University Of Burdwan)

INTERNAL PROJECT

STUDENT'S NAME (Capital)- SHREYA PARAMANIK

SECTION - MORNING / DAY (TICK ANY ONE)

COURSE – SCIENCE / ARTS (TICK ANY ONE)

SEMESTER – ..... (HONS / GENERAL) (TICK ANY ONE)

HONOURS SUBJECT (If Any) - Benjali

COLLEGE ROLL NO. - 415

UNIVERSITY ROLL NO. – .....

REGISTRATION NO. - ..... **of** .....

SUBJECT - Environment of Science

COURSE CODE - .....

MOBILE NO. 7478793352

Topic :- 3

STUDENT'S SIGNATURE WITH DATE- Shreya Panamanik

VIVEKANANDA MAHAVIDYALAYA(THE UNIVERSITY OF BURDWAN)

PROJECT OF ENVIRONMENTAL STUDIES (AECC-1)

NAME : Ruma Ghosh

course:- science/Arts

COLLEGE ROLL NO : 409

REGISTRATION NO :

UNIVERSITY ROLL NO :

Name of the semester : 1st Hons/General

Honours subject name(If Any) Bengali

TOPIC → Environmental Pollution - Industrial

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

SUBJECT – ENVIRONMENTAL STUDIES

NAME OF THE STUDENT - NIRUPAM GAYEN

COLLEGE ROLL NO - 603

REGISTRATION NO -

UNIVERSITY ROLL NO -

TOPIC - ENVIRONMENTAL POLLUTION - INDUSTRIAL

PAPER NAME – AECC 1

COURSE - B.A 1ST SEM(GEOGRAPHY HONOURS)

SUBMISSION OF YEAR -2022-2023

Nirupam Gayen

STUDENT SIGNATURE

INTERNAL PROJECT

Vivekananda Mahavidyalaya, Burdwan

Name of the university : The University of Burdwan(E)

Name of the Institution : Vivekananda Mahavidyalaya, Burdwan

Name of the student : Arpita Ghosh

College Roll No : 367

Registration No :

University Roll No :

Subject :- Environment studies

Topic :- study of Common Insect

Honours Subject :- Bengali Honours

Year - 2022

Arpita Ghosh

Student's signature

The university of Burdwan.
Vivekananda Mahavidyalaya.
BA Sem-I Examination.

Name - Pritha Ghosh.
Dept. of Bengali.
Collage Roll no. - 396
university Roll no. -
Registration No. -

OF 2022-23

Sub - Envinomental studies.

Topic
URBAN POLLUTION

Pritha Ghosh.
student's signature.

Vivekananda Mahavidyalaya, Burdwan

(Affiliated to The University of Burdwan)

INTERNAL PROJECT

STUDENT'S NAME(CAPITAL) AMISHRA DHARA

COURSE ARTS

SEMESTER 1st SEM (Hon.)

COLLEGE ROLL NO 358

UNIVERSITY ROLL NO

REGISTRATION NO OF

SUBJECT ENS

COURSE CODE AE-CC-I

MOBILE NO 9883553073

TOPIC :- FOREST.

STUDENT SIGNATURE WITH DATE Amishra Dhara (22/12/22)

Vivekananda Mahavidyalaya, Burdwan

(Affiliated to The University Of Burdwan)

INTERNAL PROJECT

STUDENT'S NAME (Capital)- SUBHAJIT DAS

SECTION - MORNING / DAY (TICK ANY ONE)

COURSE – SCIENCE / ARTS (TICK ANY ONE)

SEMESTER – HONS (HONS / GENERAL) (TICK ANY ONE)

HONOURS SUBJECT (If Any) - BENGALI

COLLEGE ROLL NO. - 423

UNIVERSITY ROLL NO. – .....

REGISTRATION NO. - ..... of .....

SUBJECT - ENVIROMENTAL STUDIES

COURSE CODE - AEECC-1

MOBILE NO. 7478056254

Topic :- Envinonmental assets Forest

STUDENT'S SIGNATURE WITH DATE- Subhajit Das 22/12/22

Vivekananda Mahavidyalaya, Burdwan

Internal Project

Student's Name : Shurechchha Dikpati

Course : Arts

Section : Day

Semester : 1st (Hons)

Honours Subject Name : Bengali

College Roll No : 417

Subject Name : Environment Studies

Topic : Urban Pollution

Mob No :- ~~7865837~~ 7865836738

Shurechchha Dikpati

Student's Signature

Vivekananda Mahavidyalaya, Burdwan

(Affiliated to The University Of Burdwan)

INTERNAL PROJECT

STUDENT'S NAME (Capital)-.....SUPRITI MONDAL.....

COURSE – SCIENCE / ARTS (TICK) SECTION → DEY

SEMESTER – .....1..... (HONS / GENERAL) (TICK)

HONOURS SUBJECT NAME (If Any).....BENGALI.....

COLLEGE ROLL NO.- .....46 426.....

UNIVERSITY ROLL NO. – .....

REGISTRATION NO. - ..... of .....

SUBJECT NAME- ENVIRONMENT STUDIES

TOPIC – URBAN , POLLUTION

COURSE CODE - .....

Mob No .....9907760501.....

Supriti Mondal

.....

Signature of the Student

Vivekananda Mahavidyalaya, Burdwan

(Affiliated to The University Of Burdwan)

INTERNAL PROJECT

STUDENT'S NAME (Capital)-...FARIDA KHATUN.....

COURSE – SCIENCE / ARTS (TICK)

SEMESTER – ...1st... (HONS / GENERAL) (TICK)

HONOURS SUBJECT NAME (If Any)...BENGALI.....

COLLEGE ROLL NO.- .....380.....

UNIVERSITY ROLL NO. – ...22011200101.....

REGISTRATION NO. - ...20220104653... of ...2022-2023...

SUBJECT NAME- ...ENVIRONMENTAL STUDIES...BENGALI...2022-2023 HONS

COURSE CODE - ...AEECC-1...

MOBILE NO - 7432066041

topic - study of common insect

STUDENT'S SIGNATURE with DATE - Farida Khatun
22/12/2022

POCO
فرداسرف

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

SUBJECT : ENVIRONMENTAL STUDIES (AECC-1)

PROJECT NAME :-
RIVER ECOSYSTEM & EFFECTON ENVIRONMENT

NAME : SUBHAJIT RUIDAS

ROLL NO. - 399

UNIVERSITY ROLL NO. -

REG. NO. -

SUBMISSION YEAR - 2022-23

CERTIFICATE

This is to certify that the project submitted by ..... Environmental Studies. ..Subhasish Biswas..... B.A. 1st year(Morning Section), Roll No. ....399.... has been accomplished under my supervision as a part of curriculum in consideration of the objective stated therein for the PART/III Exam, for the present academic year.

Signature of Project Guide with date

Name :

Designation :

Department :EVS

College : Vivekananda Mahavidyalaya, Burdwan

5/1/23

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

ENVIRONMENTAL STUDIES

TOPIC:-FOREST AND GRASSLAND

NAME :-SHREOSI BHATTACHARYYA

CLASS:- B.A. 1st YEAR (MORNING)

SEM:-I

COURSE CODE:- AEECC1

COLLEGE ROLL NO:-198

REGISTRATION NO:-

SESSION:-2022-23

CERTIFICATE

This is to certify that the project submitted by .....
Environmental Studies .....
B.A. 1st year(Morning Section), Roll No. .....
has been accomplished under my supervision as a part of curriculum in consideration of the objective stated therein for the PART/III Exam, for the present academic year.

Signature of Project Guide with date

Name : Shreosi Bhattacharjya

Designation :

Department : EVS

College : Vivekananda Mahavidyalaya, Burdwan

9/1/23

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

TOPIC- URBON POLLUTION AND MITIYATION

NAME- **ROSHNI KHATUN**

CLASS – **B.A** 1st Year (Morning)

SUBJECT – **EVS**

SEM A AECC (ENVS)

COLLEGE RO NO – **34**

UNIVERSITY ROLL NO - 220412210489

REG NO - 202201015565

CERTIFICATE

This is to Certify that the project submitted by Roshni Khatun

POLLUTION AND MITYATION *Environmental Studies* URBAN

..... *B.A. 1st Year (Morning Section),*

SL NO..... *Roll No.* 34 ..... *Has been*

Accomplished Under My Supervision as a part of Curriculum in consideration of the objective stated there in for the PART / I Exam, for the present academic year.

Signature of Project Guide With Date

Name :

Designation :

Department : Environmental Studies .

03/01/23

College : Vivekananda Mahavidalaya , Purba Bardhaman .

THE UNIVERSITY OF BURDWAN
VIVEKANANDA MAHAVIDLAYA

TOPIC- RURAL POLLUTION AND MITIGATION

NAME - SK MUNMUN KHATUN

CLASS - B.A.1ST YEAR (MORNING)

SUBJECT - EVS

COLLEGE ROLL -20

REG – 202201015721

SESSION – 2022-23

UNIVERSITRY ROLL - 22041222 10623

CERTIFICATE

This is to certify that the project submitted by SK Munmun Khatun

Environmental Studies Rural pollution and mitigation

B.A. 1st year (Morning Section), Roll No 20

has been accomplished under my supervision as a part of curriculum in consideration of the objective stated therein for the PART-1 Exam, for the present academic year.

Signature of Project Guide with Date

03/01/23

Name :

Designation :

Department : *EVS*

College : *Vivekananda Mahavidyalaya, Burdwan*

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDLAYA

TOPIC:-URBAN POLLUTION
SUBJECT-ENVS

NAME- RIYA KONRA

COURSE:- B.A.GENERAL(MORNING)

SEMESTER:-1SEMESTERAECC(ENVS)

UNIV. ROLL:- 22041221047 5

RAGISTRATION NO:- 202201015549

COLLEGE ROLL NO:- 426

MOBILE NO:- 8710019310

SESSION:-2022-23

CERTIFICATE

This is to certify that the project submitted on Environmental studies, **RIYA KONRA,** *B.A.1ST SEMESTER(Morning Section) College Roll No : 426,University Reg.No:---------- has been accomplished under my supervision as a part of curriculum in consideration of the objective started therein for the part of exam for the present academy year.*

Signature of Project Guide with date

6/1/23

Name :

Designation :

Department :

College : **VIVEKANANDA MAHAVIDYALAYA**

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

ENVIRONMENTAL STUDIES

TOPIC:-SOLID WASTE MANAGMENT

NAME :-RIYA SANTRA

CLASS:- B.A. 1st YEAR (MORNING)

SEM:-I

COURSE CODE:- AEECC1

COLLEGE ROLL NO:-622

REGISTRATION NO:-

SESSION:-2022-23

CERTIFICATE

This is to certify that the project submitted On Environmental Studies,Riya Santra.A. Semester-I(Morning Section), Roll No:622 has been accomplished under my supervision as a part of curriculum in consideration of the objective stated therein for the Semester-I exam for the present academy year.

Signature of the Project guide with date

Name: Riya Santra

Designation:

Department:

College: Vivekananda Mahavidyalaya, Purba Bardhaman

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

Topic :- Municipality Solid Wastes and its Management

Name of the student :- Barsa Banerjee
Class :- 1st Year
College Roll No. :- 583
Session :- 2022-23

CERTIFICATE

This is to certify that the project Submitted by..... Environmental Studies..... B.A.1st Year (Morning Section), Roll No..... has been accomplished under my supervision as a part of curriculum in consideration of the objective stated therein for the PART-I, Exam, for the present academic year.

Signature of Project Guide with date

Name :

Designation :

Department :

College : Vivekananda Mahavidyalaya, Burdwan

5/1/23

*

THE UNIVERSITY OF BURDWAN
VIVEKANANDA MAHAVIDYALAYA

TOPIC – INDUSTRIAL POLLUTION

Name – GOURI SAHA

Class – B.A 1st Year (MORNING)

SEM 1

SUBJECT – ENVS

College Roll No – 487

Univ. Roll No - 2204122210190

Univ. Reg. No – 2022010152 16 of 2022-23

Session : 2022 – 2023

Student Signature

Teacher signature

CERTIFICATE

This is to certify that the project submitted On Environmental Studies, Rekha Debi Sing B.A. Semester-I(Morning Section), Roll No:227 has been accomplished under my supervision as a part of curriculum in consideration of the objective stated therein for the Semester-I exam for the present academy year.

Signature of the Project guide with date

Name: Rekha Debi Sing

Designation:

Department:

College: Vivekananda Mahavidyalaya, Purba Bardhaman

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

ENVIRONMENTAL STUDIES

TOPIC:-SOLID WASTE MANAGMENT

NAME :-JESMIN KHATUN

CLASS:- B.A. 1st YEAR (MORNING)

SEM:-I

COURSE CODE:- AEECC1

COLLEGE ROLL NO:-585

REGISTRATION NO:-

SESSION:-2022-23

CERTIFICATE

This is to certify that the project submitted by Jesmin Khatun ..... Environmental Studies B.A. 1st year (Morning Section), Roll No. 585 ..... has been accomplished under my supervision as a part of curriculum in consideration of the objective stated there in for the PART/I Exam, for the present academic year.

Signature of Project Guide with date

Name :

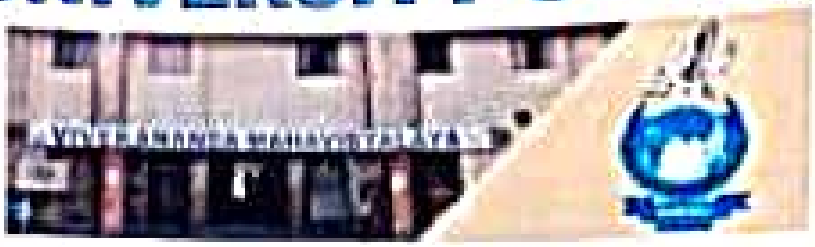
Designation :

Department :

College : Vivekananda Mahavidyalaya, Burdwan

6/2/23

THE UNIVERSITY OF BURDWAN



VIVEKANANDA MAHAVIDYALAYA

ENVIRONMENTAL STUDIES

TOPIC:-SOLID WASTE MANAGMENT

NAME :-SUPARNA SAHA

CLASS:- B.A. 1st YEAR (MORNING)

SEM:-I

COURSE CODE:- AEECC1

COLLEGE ROLL NO:-609

REGISTRATION NO:-

SESSION:-2022-23

CERTIFICATE

This is to certify that project submitted on Environmental Studies, Sajal Das B.A. General 1" Semester (Morning) Section Roll- C & 410 has been accomplished under my supervision as a part of curriculum in consideration of the objective stated therein for the SEMESTER -1 Exam for the present academic year.

Name: Sajal Das
Designation: URBAN POLLUTION
Department: ENVS

6/1/23

Vivekananda Mahavidyalaya, Purba Bardhaman

Sajal Das / 6.1.2023

Signature of the student and date

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

শিল্পাঞ্চল দূষণ

Name :- Shayanti Ghosh

Class :- B.A 1ST Year(Morning)

Subject :- ENVS

College Roll No :- 471

Regestration No :- 202201015664 of 2022-23

Session :- 2022-23

Section:- C

CERTIFICATE

This is to certify that the project submitted On Environmental Studies,Suparna Saha_A-Semester-I(Morning Section), Roll No:609 has been accomplished under my supervision as a part of curriculum in consideration of the objective stated therein for the Semester-I exam for the present academy year.

Signature of the Project guide with date

Name: Suparna Saha

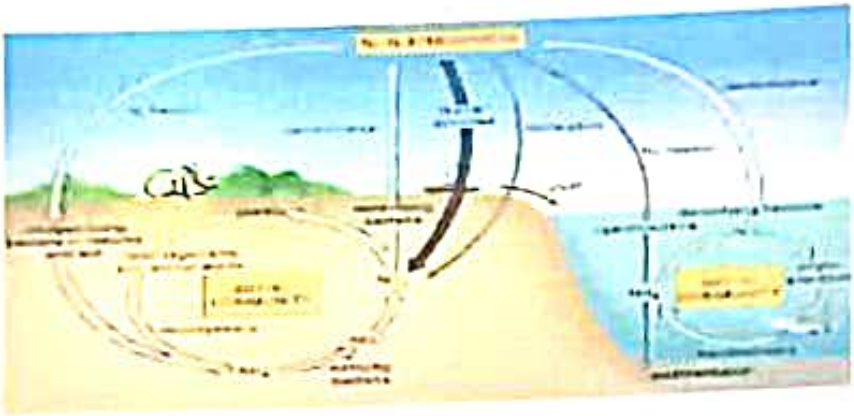
Designation:

Department:

College: Vivekananda Mahavidyalaya, Purba Bardhaman

6/2/22

THE UNIVERSITY OF BURDWAN
VIVEKANANDA MAHAVIDYALAYA



TOPIC – FOREST ECO-SYSTEM

Name – SUPRIYA BISWAS

Class – B.A 1st Year (MORNING)

SEM 1

SUBJECT – ENVS

College Roll No – 174

Univ. Roll No -

Univ. Reg. No –

Session : 2022 – 2023

CERTIFICATE

This is to certify that project submitted on Environmental Studies. Shayanti Ghosh B.A. General I" Semester (Morning) Section Roll- C & 471 has been accomplished under my supervision as a part of curriculum in consideration of the objective stated therein for the SEMESTER -I Exam for the present academic year.

Name: Shayanti Ghosh

Designation: Industial Pollution

Department: ENVS

6/7/23

vekananda Mahavidyalaya, Purba Bardhaman

Shayanti Ghosh/06/01/2023

Signature of the student and date

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

RIVER ECO-SYSTEM

NAME – TUSHAR DAS

SEMISTER - 1ST SEMISTER

COLLEGE ROLL NO – 378

UNIVERSITY ROLL

REGD NO. -

SECTION - "C"

SUBJECT - ENVIRONMENT STUDIES

COURSE – B.A. (GENERAL-MORNING)

YEAR – 2022-23

CERTIFICATE

THIS IS CERTIFICATE THAT THE PROJECT SUBMITTED ON ENVIRONMENTAL STUDIES. TUSHAR DAS B.A 1ST YEAR (MORNING SECTION) ROLL NO-378 HAS BEEN ACCOMPLISHED UNDER MY SUPERVISION AS A PART OF CURRICULAM IN CONSIDERATION OF THE OBJECTIVE STATED THEIRN FOR THE PART EXAM FOR THE PRESENT ACADEMY YEAR.

5/7/23

Signature of the project guide with date

NAME :

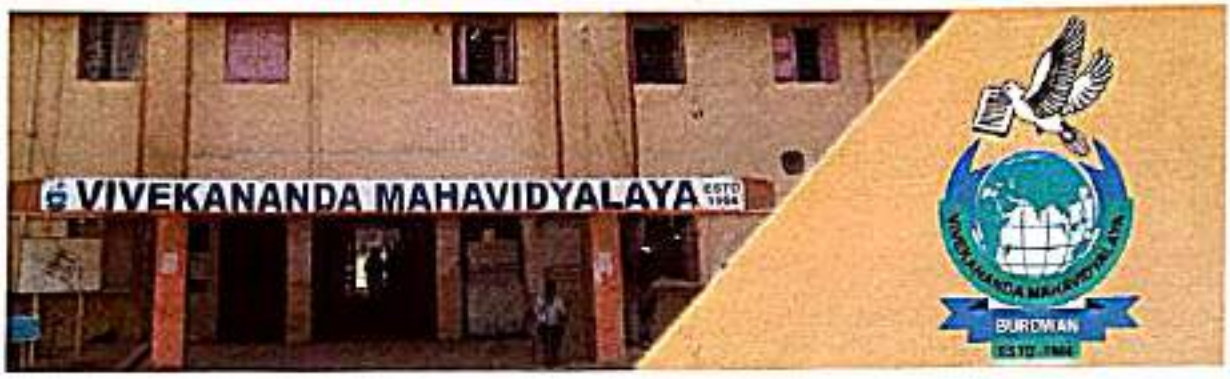
DESIGNATION:

DEPARTMENT:

COLLEGE : VIVEKANANDA MAHAVIDYALAYA

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA



TOPIC:-AGRICULTURAL POLLUTION AND THEIR SOLUTION

NAME	:-	SUPARNA BARIK
CLASS	:-	B.A 1ST YEAR (MORNING)
SEM	:-	1 AECC (ENVS)
COLLEGE ROLL	:-	97
REG. NO	:-	2022010158 50, Univ Roll - 22041221073 7
SESSION	:-	2022-2023

CERTIFICATE

This is to certify that project submitted by. Suparna. Barik
Environmental Studies .Agriculture. Pollution. and. their so
B.A 1st year,1st semester (morning Section,) roll no:- ...97..
has been accompanied under my supervision as a part of curriculum consideration of the objective stated therein for the part /III Exam . For the present academic year.

Signature of the project guide with date

03/01/2023

NAME :-

DESIGNATION :-

DEPARTMENT :-EVS

COLLEGE:- VIVEKANANDA MAHAVIDYALAYA, BURDWAN

THE UNIVIERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

TOPIC – RIVER ECO-SYSTEM

NAME – SUDIP DEY

CLASS – B.A 1st YEAR (MORNING)

SEM - 1 AECC – 1(ENVS)

COLLEGE ROLL NO – 367

REG. NO – 1222200572

SESSION – 2022 - 2023

CERTIFICATE

This is certify that the project submitted by ....Environmental studies...Mahammad Irfan.....B.A 1st year (Morning Section), Roll Number...205.....has been accomplished under my super vision as a part of curriculum in consideration of the objective started theirin for the part exam for the present academy year (2022-2023)

Signature of the project guide with date

01/01/23

Name : Mahammad Irfan

Designation :

Department : Environmental Stadies

College : Vivekananda Mahavidyala

CERTIFICATE

This is to certify that project submitted on Environmental Studies, NASIMA KHATUN B.A. General 1st year Morning Section Roll- 146 has been accomplished under my supervision as a part of curriculum in consideration of the objective stated therein for the Semester-1 Exam for the present academic year 2022-2023

Signature of Project Guide With date

03/01/23

Name:

Designation:

Department: ENVS

Collage: Vivekananda Mahavidyalaya, Purba Bardhman

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

NAME :- BUDDHADEV MUKHERJEE

CLASS:- B.A 1ST YEAR (MORNING)

SUBJECT:- BENGALI

REG NO:- 202201015152 of 2022-23

COLLEGE ROLL NO:- 607

UNIVERSITY ROLL NO:- 22041221 0135

SESSION:- 2022-2023

Certificate

This is certify that the project submitted on Environment Studies. **Arpan Mondal** B.A 1st year (Morning Section) **Roll no- 342** has been accomplished under my supervision as a part of curriculum in consideration of the objective stated their in for the part exam for the present academy year.

.....

Signature of the project guide with date

5/1/23

Name :

Designation :

Department :

College : VIVEKANANDA MAHAVIDYALAYA

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

ENVIRONMENTAL STUDIES

TOPIC:-URBAN POLLUTION AND EFFECT ON ENVIROMENT

NAME :-SANIA KHATUN

CLASS:- B.A. 1st YEAR (MORNING)

SEM:-I

COURSE CODE:- AEECC1

COLLEGE ROLL NO:-418

REGISTRATION NO:-202201015618

SESSION:-2022-23

CERTIFICATE

This is to certify that the project submitted On Environmental Studies, Sumit Pandit B.A. Semester-I(Morning Section), Roll No:382 has been accomplished under my supervision as a part of curriculum in consideration of the objective stated therein for the Semester-I exam for the present academy year.

Signature of the Project guide with date

Name:

Designation:

Department:

College: Vivekananda Mahavidyalaya, Purba Bardhaman

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

TOPIC – MOUNTAIN ECOSYSEEM ON ENVIRONMENT

SUBJECT	: ENVIRONMENT STUDIES
NAME	: SK ASRAFUL
STREAM	: B.A. GENERAL (MORNING)
CLASS	: 1ST SEMESTER
COLLAGE ROLL	: 65
SECTION	: A
REG. NO	: 202201015703
UNIVERSITY ROLL	:
SESSION	: 2022-2023

SK Asraful

CERTIFICATE

This is to certify that the project submitted by Raghabeswar Bagdi ..... *Environmental Studies* Solid waste management *B.A. 1st year (Morning Section), Roll No.* 562 ..... *has been accomplished under my supervision as a part of curriculum in consideration of the objective stated there in for the PART/I Exam, for the present academic year.*

Signature of Project Guide with date

Name :

Designation :

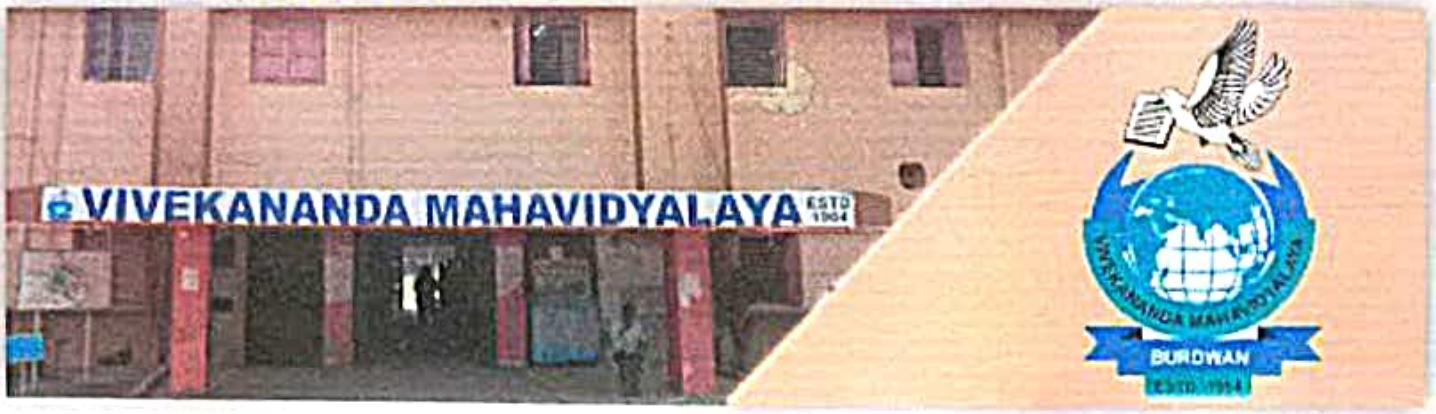
Department :

College : *Vivekananda Mahavidyalaya, Burdwan*

6/2/23

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA



Topic – Municipality Solid wastes and its management

NAME – SONALI MAL

PROJECT NAME - MUNICIPALITY SOLID WASTES AND ITS MANAGEMENT

Class – B.A 1ST YEAR

(ENVS)

College Roll No. – 592

University Reg. no.-

Session – 2022 – 2023

CERTIFICATE

This is to certify that project submitted on Environmental Studies, SK ASRFUL B.A. General 1st year Morning Section Roll- 65 has been accomplished under my supervision as a part of curriculum in consideration of the objective stated therein for the Semester-1 Exam for the present academic year 2022-2023

Signature of Project Guide With date

03/01/23

Name:

Designation:

Department: ENVS

Collage: Vivekananda Mahavidyalaya, Purba Bardhman

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

TOPIC - solid waste management on environment

SUBJECT	: ENVIRONMENT STUDIES
NAME	: SK NASIMA KHATUN
STREAM	: B.A. GENERAL (MORNING)
CLASS	: 1ST SEMESTER
COLLAGE ROLL	: 146
SECTION	: A
REG. NO	: 2022010 15723
UNIVERSITY ROLL	: 2204122106 24
SESSION	: 2022-2023 SK Nasima Khatun

CERTIFICATE

This is to certify that the project submitted On Environmental Studies,Riya Santra.A. Semester-I(Morning Section), Roll No:622 has been accomplished under my supervision as a part of curriculum in consideration of the objective stated therein for the Semester-I exam for the present academy year.

Signature of the Project guide with date

Name: Buddhadev Mukherjee

Designation:

Department:

College: Vivekananda Mahavidyalaya, Purba Bardhama

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

TOPIC- HILL ECO- SYSTEM

NAME – RIKTA GHOSH

CLASS- B.A 1ST YEAR (MORNING)

SEM-1 AECC-1(ENVS)

COLLEGE ROLL NO – 78

UNIVERSITY ROLL NO.- 22041221046 1

UNIVERSITY REG. NO.- 2022010155 31

SESSION - 2022-2023

Rikta Ghosh

CERTIFICATE

This is to certify that the project submitted by Rikta Ghosh
Environmental Studies Hill eco-system
BA. 1ST year(Morning Section), Roll No. 78
has been accomplished under my supervision as a part of curriculum in consideration of the objective stated therein for the PART/III Exam, for the present academic year.

Signature of Project Guide with date

Name:-

Designation:-

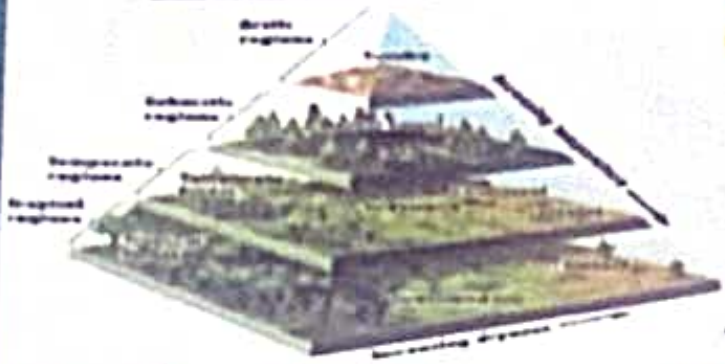
Department :- EVS

College :- Vivekananda Mahavidyalaya, Burdwan

03/2/23

THE BURDWAN UNIVERSITY

VIVEKANANDA MAHAVIDYALAY



Topic: Significance of forest Ecosystem and their Effect on Environment.

Name: Amrita Chatterjee

Class: 1st Year General (Morning)

Semester: 1Sem ACC (BNVS)

University Roll number

College Roll number 72 [172]

University reg no:

Project guid Amita Sarkar

2022-2023

CERTIFICATE

This is to certify that the project submitted by Ammita chatterjee ..... Environmental Studies Significance of Forest ecosystem B.A. 1st year (Morning Section), Roll No. 172 ..... has been accomplished under my supervision as a part of curriculum in consideration of the objective stated there in for the PART/I Exam, for the present academic year.
(ISM)

Signature of Project Guide with date

Name : Ammita chatterjee

Designation :

Department : Environmental studies

College : Vivekananda Mahavidyalaya, Burdwan

9/01/23

THE UNIVERSITY OF BURDWAN

TOPIC - municipality solid wastes and its management

STUDENT'S NAME : CHAITALI DAS

SEMESTER : 1 AECC - 1 (ENVS)

COLLEGE ROLL NO. : 525

MOBILE NO. : 8348585669

SUBJECT : ENVS

CLASS : B.A 1st YEAR (MORNING)
2022 - 2023

STUDENT SIGNATURE

Chaitali Das.

CERTIFICATE

This is to certify that the project submitted on Environmental Studies. ...Chaitali Das....., B.A. 1st Sem (Morning Section) Roll No.....525, has been accomplished under my supervision as a part of curriculum in consideration of the objective stated therein for the part exam for the present academy year.

Signature of the project Guide with date

Name :- Chaitali Das.

Designation :-

Department :- ENVS

06/01/23

College :- VIVEKANANDA MAHAVIDYALAYA

CERTIFICATE

This is to certify that the project submitted by ..... Environmental Studies. ...Rahul Ruidas..... B. A. 1st year (Morning Section), Roll No. ...530..... has been accomplished under my supervision as a part of curriculum in consideration of the objective stated therein for the PART/[redacted]II Exam, for the present academic year.

Signature of Project Guide with date

Name :

Designation :

Department : EVS

College : Vivekananda Mahavidyalaya, Burdwan

03/0/22

CERTIFICATE

This is to certify that the project submitted by
Subhojit Das ..... Environmental Studies
.....**B.A.1st YEAR** (Morning section),
Roll No : 94..... has been accomplished under my supervision as a part of curriculum in consideration of the objective started there in for the part 1 Sem for the present academic year .

.....
Signature of project guide with date

Name :

04/01/23

Designation :

Department : EVS

College : Vivekananda Mahavidyalaya , Burdwan

THE UNIVERSITY OF BURDWAN

VIVEKANDA MAHAVIDYALAYA

TOPIC NAME : - SOLID WASTE MANAGEMENT

NAME : - RAHUL RUIDAS
CLASS :- B.A GENERAL 1ST SEM(MORNING)
SUBJECT :- ENVIROMENTAL SCINCE
COLLEGE ROLL NO : 530
REGISTRATION NO : 2022010155 01 of 2022-23
SESSION : 2022-23

Rahul Ruidas

CERTIFICATE

This is to certify that the project submitted by ..... Environmental Studies Enamulhoque Mondal B.A. 1st year (1 Sem) (Morning Section), Roll No.....101 ..... has been accomplished under my supervision as a part of curriculum in consideration of the objective stated there in for the PART/I Exam, for the present academic year.

Signature of Project Guide with date

Name :

Designation :

Department :

College : Vivekananda Mahavidyalaya, Burdwan

03/0/22

THE UNIVERSITY OF BURDWAN

VIVEKANDA MAHAVIDYALAYA

TOPIC NAME : - SOLID WASTE MANAGEMENT

NAME : - SEKH ABDUL AHAD
CLASS :- B.A GENERAL 1ST SEM(MORNING)
SUBJECT :- ENVIROMENTAL SCINCE
COLLEGE ROLL NO : 531
REGISTRATION NO : 2022010155658 of 2022-23
SESSION : 2022-23

Sekh Abdul Ahad

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

ENVIRONMENTAL STUDIES

TOPIC:-AGRICULTURE POLLUTION AND THFEIR SOLUTION

NAME :-SUBHAJIT DAS

CLASS:- B.A. 1st YEAR (MORNING)

SEM:-I

COURSE CODE:- AEECC1

COLLEGE ROLL NO:-94

REGISTRATION NO:- 202201015799 of- 2022-23

SESSION:-2022-23

VIVEKANANDA MAHAVIDYALAYA

PROJECT NAME - AGRICULTURE POLLUTION AND REMEDIES

NAME : Lipi Das
COLLEGE ROLL NO. :96
SECTION :A (Morning)
REG. NO. :
SUBJECT :ENVIRONMENTAL STUDIES PROJECT
YEAR :B.A. GENERAL Sem-I
SESSION :2022

CERTIFICATE

This is to certify that the project submitted on Environmental Studies Lipi Das B.A. (General) Sem- I Morning Section, Roll No. -96 has been accomplished under my supervision as a part of curriculum in consideration of the objective stated therein for the exam, for the academic year.

Signatuer of Project Guide with date

Name	:	Lipi Das
Designation	:	Department Lecturer
Department	:	EVS
College	:	Vivekananda Mahavidyalaya, Burdwan

03/02/23

Signature

NAME:- ISHA BISWAS

ROLL:- 314

SEC:- B

SUB:- ENVS

Registration No - 202201015225 of 2022 - 23

ROLL NO - 220412210120

COURSE CODE:- AECC1

Isha Biswas

CERTIFICATE

This to certify that Project Submitted on Environmental Studies, Sania Khatun B.A. General 1st Semester (Morning) Section-C Roll - 418 has been accomplished under my supervision as part curriculum in consideration of the objective stated therein for the SEMESTER - 1 Exam for the Present academic year.

Signature of Project Guide with date

Name :

Designation:

Department:

College : Vivekananda Mahavidyalaya, Purba Bardhaman.

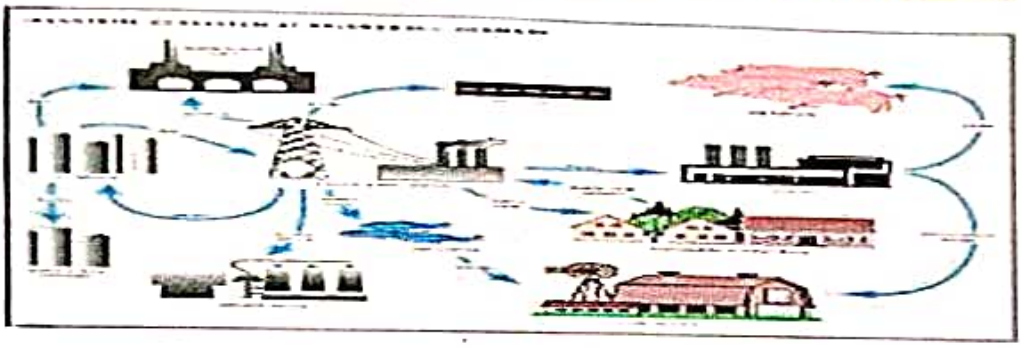
6/1/23

Signature

THE UNIVERSITY OF BURDWAN

ESTD-1964

VIVEKANANDA MAHAVDIYALAYA



SUB:- ENVS

TOPIC - INDUSTRIAL POLLUTION

NAME :- ARPAN MONDAL

CLASS :- B.A 1ST YEAR 1ST SEM (MORNING)

COLLEGE ROLL NO :- 342

UNIVERSITY REG. NO:-

UNIVERSITY ROLL NO:-

PAPER NAME:- AECC1

SUBMISSION OF YEAR:- 2022-23

SESSION : 2022-23

VIVEKANANDA MAHAVIDYALAYA

PROJECT NAME - AGRICULTURE POLLUTION AND REMEDIES

NAME	: Suparna Nandi
COLLEGE ROLL NO.	:89
SECTION	:A (Morning)
REG. NO.	:
SUBJECT	:ENVIRONMENTAL STUDIES PROJECT
YEAR	:B.A. GENERAL Sem-I
SESSION	:2022

CERTIFICATE

This is to certify that the project submitted on Environmental Studies Supama Nandi B.A. (General) Sem- I Morning Section, Roll No. -89 has been accomplished under my supervision as a part of curriculum in consideration of the objective stated therein for the exam, for the academic year.

Signatuer of Project Guide with date

03/01/22

Name	:	
Designation	:	**Department Lecturer**
Department	:	**EVS**
College	:	**Vivekananda Mahavidyalaya, Burdwan**

Signature

VIVEKANANDA MAHAVIDYALAYA

Topic : Rural Pollution

Name : MAHAMMAD IRFAN

Class : BA (1st SEM)

Roll : 205

Section : MORNING

Session : 2022-2023

Subject : Environment Project

CERTIFICATE

This is to certify that the project ubmitted On Environmental Studies, Bikram Pal B.A. emester-I(Morning Section), Roll No:348 has been ccomplished under my supervision as a part of curriculum n consideration of the objective stated therein for the emester-I exam for the present academy year.

Signature of the Project guide with date

Name:

Designation:

Department:

College: Vivekananda Mahavidyalaya, Purba Bardhaman

5/1/23

THE UNIVERSITY OF BURDWAN
VIVEKANANDA MAHAVIDYALAYA

TOPIC- RIVER ECOSY STEM

NAME - LABONI CHOWDHARY

CLASS - B.A.1ST YEAR (ENVS)

COLLEGE ROLL -363

REG –

SESSION – 2022-23

UNIVERSITRY ROLL -

CERTIFICATE

This is to certify that the project submitted by Labani Chowdhury

Environmental Studies River ecosystem

B.A. 3rd Year (Morning Section), Roll No 363

has been accomplished under my supervision as a part of curriculum in consideration of objective stated therein for the Semester-I Exam, for the present academic year.

Signature of Project Guide with date

5/1/23

Name :

Designation :

Department : *ENVS*

College : *Vivekananda Mahavidyalaya, Burdwan.*

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

TOPIC:- SOLID WASTE MANAGEMENT

NAME:- RAGHABESWAR BAGDI
CLASS:- B.A GENERAL 1 SEM(MORNING)
SUBJECT:- ENVIROMENTAL SCIENCE
COLLEGE ROLL NO:- 562
REGESTRATION NO:- 202201015491
SESSION:- 2022-23

CERTIFICATE

This is certify that the project submitted on Environmental Studies, GOURI SAHA B.A 1st year (Morning Section) Roll no – 487 has been accomplished under my supervision as a part of curriculum in consideration of the objective stated their in for the part exam for the present academy year. (2022 - 2023)

Signature of the project guide with date

6/1/23

Name :

Designation :

Department : ENVS

College : VIVEKANANDA MAHAVIDYALAYA

THE UNIVERSITY OF BURDWAN

VIVEKANANDA MAHAVIDYALAYA

Name :- Sajal Das

Class :- B.A 1ST Year(Morning)

Subject :- ENVS

College Roll No :- 410

Regestration No :- 2022010155 96

Session :- 2022-23 Section:- C

CERTIFICATE

This is to certify that the project submitted On Environmental Studies, Sudip Dey B.A. Semester-I(Morning Section), Roll No:367 has been accomplished under my supervision as a part of curriculum in consideration of the objective stated therein for the Semester-I exam for the present academy year.

Signature of the Project guide with date

5/1/23

Name:

Designation:

Department:

College: Vivekananda Mahavidyalaya, Purba Bardhaman