



SHRAMIK VIDYARTHI DNYANSEVA SANSTHA'S

## **AMDAR DEEPAKBHAI KESARKAR SCIENCE COLLEGE**

( AFFILIATED TO UNIVERSITY OF MUMBAI )

DODAMARG, DIST. – SINDHUDURG 416 512 ( M. S.)

EMAIL – [dkscsci@gmail.com](mailto:dkscsci@gmail.com)

TEL. NO. – 02363 256755

ESTD. – 2012

COLLEGE CODE – 166

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### **Criteria 1**

## **Curricular Aspects**

### **Key Indicator – 1.3 Curriculum Enrichment**



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## Criteria 2 - Curricular Aspects

### Key Indicator – 1.3 Curriculum Enrichment

**Metric No. 1.3.2. Percentage of students undertaking project work/field work/internships**  
(Data for the latest completed academic year)

Sr. No.	Documents
1	Syllabus having project work and Field work
2	Percentage of students undertaking project work/field work
3	Program wise list of students undertaking the project work/field work
4	Certificate of Completion
5	Field Visit Reports & sample copy of Project work





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## Criteria 1

### Curricular Aspects

**Key Indicator – 1.3 Curriculum Enrichment**

**Syllabus having project work and**  
**Field work**





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### Courses having project work/Field work/Internships

Sr. No.	Programme Name	Course Name	Semester	Course Code	project work/ Field work/ Internships
1	F.Y.B.Sc	Zoology	Semester I	USZOP1	Field Work
2	F.Y.B.Sc	Zoology	Semester II	USZOP2	Field Work
4	F.Y.B.SC.	Foundation Course	Semester II	USFC2C1	Project
5	S.Y.B.Sc	Zoology	Semester IV	USZOE2P4	Field Work
6	S.Y.B.SC.	Chemistry	Semester IV	USCHP4	Industrial Visit
7	T.Y.B.Sc	Chemistry (Drug & Dyes)	Semester VI	USACDD6P2	Project
8	T.Y.B.Sc	Zoology	Semester V	USZO504	Field Work
9	T.Y.B.Sc	Zoology	Semester VI	USZO604	Field Work
10	T.Y.B.Sc	Zoology	Semester VI	USACFBIO6P1	Field Work
11	T.Y.B.Sc	Zoology	Semester VI	USACFBIO6P1	Project



*(Signature)*  
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## SEMESTER I

### Practical USZOP1 (Course I)

1. Mounting of foraminiferan shells from sand (any 3)
  2. Study of types of Corals - Brain, Organ pipe, Stag Horn, Mushroom coral Study of
  - 3 Study of the following;
    - a. Symbiosis (Termite and Trychonympha, hermit crab and sea anemone)
    - b. Camouflage (leaf insect, chameleon)
    - c. Cannibalistic mate-eating animals (Spider and Praying Mantis)
    - d. Animal architects: Termites, Harvester ant and Baya weaver bird
    - e. Study of bioluminescent organisms – Noctiluca, glow worm, fire fly, angler fish.
  4. Breeding and parental care in Amphibia- *Rhacophorus*, Midwife toad, Darwin's frog, Caecilian.
  5. Mounting of scales of fish (placoid, cycloid and ctenoid )
  - 6
    - a) Study of Adaptive radiation in Reptiles - Turtle, Tortoise, *Phrynosoma*, *Draco* )
    - b) Identification and differentiation of venomous and non-venomous snakes (Scales, Fangs, Bite marks, etc.)
  7. Study of Types of feathers(contour, filoplume, down), beaks(Nectar feeding , Insect catching, Fruit eating, Scavenging, Filter feeding), claws (perching, wading, swimming, hopping) in birds
  - 8 a. Identification of birds - Coppersmith Barbet, Bulbul, Rose ringed Parakeet, Magpie Robin, two local birds.
  - b. Field Report – To be done in a group of ten students (submission of written / typed report preferably along with photographs/ tables/ graphs.
- Other Suggested topics for field observation/survey:**
- Butterflies/ Fishes/ Migratory birds of local area.
  - Variations in Human like Attached vs. Free Earlobes, Blood Groups, Eye colour, etc. using statistical method.
9. Observations of fauna in the field (with reference to theory syllabus).

**\*Note - The practicals may be conducted by using specimens authorised by the wild such other regulating authorities though it is strongly recommended that the same sh taught by using photographs/audio-visual aids/ simulations / models, etc. as recomme the UGC and as envisaged in the regulations of the relevant monitoring bodies. specimens, however, shall be procured for the purpose of conducting practicals m here-in-above.**

**#There shall be at least one excursion/field trip**

## SEMESTER II

### Practical USZOP2 ( Course III)

1. Interpretation of the given graphs/ tables and comment on pattern of population nature :
  - i. Survivorship curve
  - ii. Life tables
  - iii. Fecundity tables
  - iv. Age structure
  - v. Sex ratio
2. a) Calculation of Natality, Mortality, Population density from given data  
b) Estimation of population density by capture recapture method
3. Interpretation of Growth curves (Sigmoid and J shaped)
4. Estimation of hardness from given water sample (tap water v/s well water)
5. Estimation of Free carbon dioxide (Free CO<sub>2</sub>) from two different samples-aerated drinks(diluted) v/s tap water
6. Identification and interpretation of aquatic and terrestrial (Grassland) food chains and food webs
7. Construction of food chain/food web using given information/data.
8. a) Identification and interpretation of ecological pyramids of energy, biomass and number  
b) Construction of different types of pyramid from given data.
9. Study of the following:
  - a) Endangered (Great Indian Bustard, Asiatic lion, Blackbuck, Olive Ridley sea turtle) and critically endangered species (Slender-billed vulture, Gharial, Malabar civet) of Indian wildlife and state reasons for their decline
  - b) Study Biodiversity hotspots using world map (Western Ghats and Indo-Burma)Study of sanctuaries, national parks, biosphere reserves in India with respect to its brand fauna as listed in theory)

**\*Note - The practicals may be conducted by using specimens authorised by the wildlife and such other regulating authorities though it is strongly recommended that the same should be taught by using photographs/audio-visual aids/ simulations / models, etc. as recommended by the UGC and as envisaged in the regulations of the relevant monitoring bodies. No new specimens, however, shall be procured for the purpose of conducting practicals mentioned here-in-above.**

**#There shall be at least one excursion/field trip**



## Unit 5

### Managing Stress and Conflict in Contemporary Society:

Types of conflicts and use of coping mechanisms for managing individual stress;  
Maslow's theory of self-actualisation;  
Different methods of responding to conflicts in society;  
Conflict-resolution and efforts towards building peace and harmony in society.

(8 lectures)

## Unit 6

### Contemporary Societal Challenges:

- a) Increasing urbanization, problems of housing, health and sanitation;
- b) Changing lifestyles and impact on culture in a globalised world.
- c) Farmers' suicides and agrarian distress.
- d) Debate regarding Genetically Modified Crops.
- e) Development projects and Human Rights violations.
- f) Increasing crime/suicides among youth.

(15 lectures)

#### Note:

15 lectures will be allotted for **project** guidance

Unit Number 6 will not be assessed for the Semester End Exam

### Internal Assessment and Question Paper Pattern for FC- Semester I & II Course At the F Y B A Examinations

The student will be assessed on the basis of Internal Assessment of 40 marks and a Semester End Exam of 60 marks. The student will have to secure a minimum of 40% marks in aggregate and a minimum of 40% in each component of assessment i.e. 16 out of 40 in Internal Assessment and 24 out of 60 in Semester End Exam.

#### Internal Assessment:

There will be one mid-semester test of 10 marks on Units 1 and 2.

The test will, as far as possible, comprise of objective questions and/or short notes.

The student will have to submit an assignment/project for 20 marks before appearing for the Semester End Exam. This assignment/project will be entirely based on Unit 6 and can take the form of street-plays/exhibition/power-point presentations or similar other modes suitable to the topic selected; students can work in groups of not more than 8 for the purpose of this assignment. Students will have to submit a hard copy of the assignment before appearing for the Semester End Exam. The assignment will be assessed for 20 marks of which 10 marks may be allotted for a viva, to assess the level of engagement of the student with the topic assigned.

Unit 6 will not be included in the Semester End Exam.

10 marks will be assigned to the participation of the student in class discussions and the **projects** undertaken along with the leadership skills and presentation skills exhibited during the class sessions.

#### Semester End Exam:

  
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	<b>SEMESTER IV</b>
	<b>Practical USZOE2P4 (Course - XB) – Elective 2</b>
<b>1</b>	Estimation and comparison of protein content in Cow and Buffalo milk sample
<b>2</b>	Estimation and comparison of fat content in Cow and Buffalo milk sample
<b>3</b>	Preparation of falooda
<b>4</b>	Preparation of caramel custard
<b>5</b>	Restraining devices used in cattle farming- Halters, gags, bull-rings, muzzles, cradle, crush and ropes.
<b>6</b>	Study of life cycle of <i>Bombyx mori</i>
<b>7</b>	Study of commercially important fishery. (Catla, Rohu, Catfish, Mackerel, Pomfret, Bombay duck, Prawn/Shrimp, Crab, Lobster, Edible oyster)
<b>8</b>	Study of Crustacean fishery – common characters and sexual dimorphism in lobster ( <i>Panulirus spp.</i> ), prawn ( <i>Penaeus spp.</i> ), crab ( <i>Scylla spp.</i> )
<b>9</b>	Visit to dairy farm /aquaculture/ fish landing centre/fishery institute and submit report of the same

For Additional and Latest Information on the topics, various Web Sites can be visited.

**Note:** The practicals may be conducted by using specimens authorised by the wildlife and such other regulating authorities though it is strongly recommended that the same should be taught by using photographs/audio-visual aids/ simulations / models, etc. as recommended by the UGC and as envisaged in the regulations of the relevant monitoring bodies. No new specimens, however, shall be procured for conducting practicals mentioned here in above.

**# There shall be at least one excursion / field trip.**

  
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**Semester IV**  
**Chemistry Practicals:**

**Unit I: Physical Chemistry**

1. To determine standard EMF and the standard free energy change of Daniel cell potentiometrically.
2. To determine the amount of HCl in the given sample potentiometrically.
3. Compare the strengths of HCl and H<sub>2</sub>SO<sub>4</sub> by studying kinetics of acid hydrolysis of methyl acetate.
6. **Industrial visit report.**

**Unit II: Inorganic Chemistry**

1. Inorganic preparation – Nickel dimethyl glyoxime using microscale method.
2. Complex cation – *Tris* (ethylene diamine) nickel (II) thiosulphate.
3. Complex anion – Sodium Hexanitrocobaltate (III) The aim of this experiment is to understand the preparation of a soluble cation (sodium) and a large anion hexanitrocobaltate (III) and its use to precipitate a large cation (potassium)
4. Inorganic salt – Calcium or magnesium oxalate using PFHS technique

**Unit III: Organic Chemistry**

**Qualitative Analysis of bi-functional organic compounds on the basis of**

1. Preliminary examination
2. Solubility profile
3. Detection of elements C, H, (O), N, S, X.
4. Detection of functional groups
5. Determination of physical constants (M.P/B.P)

Solid or liquid Compounds containing not more than two functional groups from among the following classes may be given for analysis to be given: Carboxylic acids, phenol, carbohydrates, aldehydes, ketones, ester, amides, nitro, anilides, amines, alkyl and aryl halides.

Students are expected to write balanced chemical reactions wherever necessary. (Minimum 6 compounds to be analyzed)

  
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**University of Mumbai**  
**T. Y. B. Sc. Chemistry**

**The Regional Case-Study Project**  
**COURSE CODE: USACDD6P2/ USACPET6P2/ USACHFC6P2**  
**CREDITS: 02**  
**SEMESTER VI**

**Introduction:**

As per the guidelines from UGC, HEIs are expected to introduce a compulsory course to provide community engagement to all undergraduate students so that their appreciation of social realities is holistic, respectful and inspiring. Such course will enable students to learn about rural/urban challenges and develop understanding of social wisdom and life-style in a respectful manner.

**Objectives:**

- To develop an appreciation of rural/urban culture, life style and wisdom amongst students.
- To understand a real life situation about a problem.
- To apply classroom knowledge of Chemistry courses to field realities and thereby improve quality of learning.
- To interact with key stakeholders such as government officials, people representatives, common people etc.
- To communicate key findings of the study to stakeholders.

**Learning Outcomes:**

- After completing course, students will be able to
- Gain an understanding of rural/urban life, culture and social realities
  - Gain an understanding real-life problems
  - Develop a sense of empathy and bonds of mutuality with local community
  - Learn to value the local knowledge and wisdom of the community
  - Identify opportunities for contributing to community's socio-economic improvement

**Credits:** 2 credits, 30 hours

  
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15. Tissue culture media preparation, aseptic transfer & inoculation of culture
16. Streaking of butt, slant and plate (continuous and discontinuous methods) with E.coli (Demonstration only)

**T. Y. B. Sc. Zoology**  
**Semester V (Practical)**

**Course 14**  
**Course Code: USZO504**

1. To study T.S. of integument: amphibian, reptilian, avian, mammalian
2. To study horns, antlers
3. To study different types of scales: dermal, epidermal
4. To study epidermal glands: mucous, sebaceous, sweat, poison, uropygial
5. To study special integumentary derivatives
6. To study the histology of glands: T.S. of pituitary, thyroid, pancreas, adrenal, ovary, testis
7. To study human skeleton: study of axial skeleton
  1. Skull bone
  2. Ossicles of middle ear
  3. Hyoid bone
  4. Rib cage
  5. Sternum
  6. Vertebral column -
    - I. Cervical vertebrae
      - a. Typical cervical vertebrae (3-6)
      - b. Atlas or 1<sup>st</sup> cervical vertebra
      - c. Axis or 2<sup>nd</sup> cervical vertebra
      - d. 7<sup>th</sup> cervical vertebra
    - II. Thoracic vertebrae (8-19)
    - III. Typical lumbar vertebra (20-24)
    - IV. Sacral vertebrae and coccyx (synsacrum)
      - Sacrum (25-29)
      - Coccyx (30-33)
8. Observation of developing chick embryo -18 hours, 24 hours, 36 hours, 48 hours, 72 hours
9. To prepare temporary mounting of chick embryo up to 72 hours
10. To study the effect of temperature in the development of chick embryo upto 48 hours/ 72 hours

Note : short and long excursions / study tours / **field visits** / industrial visits in every semester, at least one of which shall be financially affordable to every student in the class; and that assessment and marks of field trips shall be solely based upon such where no student was restrained for financial limitations

**T. Y. B.Sc. Zoology**  
**Semester based Credit and Grading System**  
**(To be implemented from Academic Year 2017-18)**



**T. Y. B. Sc. Zoology**  
**Semester VI (Practical)**

**Course 18**  
**Course Code: USZO604**

1. To estimate phosphate phosphorus from sample water
2. To estimate COD, BOD from sample water
3. To estimate Nitrite Nitrogen and Nitrate Nitrogen from sample water
4. To study the intensity of sound by Decibel meter
5. To study acidity and alkalinity of sample water by methyl orange and phenolphthalein
6. To observe the animals in the chart and place them in endangered, vulnerable category
7. To study different types of mouth parts: cutting, chewing, lapping, sucking, sponging
8. To study metamorphosis in insects: ametabolic - lepidoptera, hemimetabolic - cicada, holometabolic - butterfly, mosquito
9. To study mechanism of bioluminescence in insects (Need to design practical)
10. Insect pests and control: rice weevil, flour moth, aphids, tribolium

**Note : short and long excursions / study tours / field visits / industrial visits in every semester, at least one of which shall be financially affordable to every student in the class; and that assessment and marks of field trips shall be solely based upon such where no student was restrained for financial limitations**



**Semester VI Practicals**  
**Course code: USACFBIO6P1**

Credits 2

## 1) Identification of marine fishes.

- *Stromateus cinereus* (Silver pomfret)
- *Stromateus niger* (Black pomfret)
- *Polynemus tetradactylus* (Threadfin)
- *Pseudosciaena diacanthus* (Two-spinned jewfish or Ghol)
- *Trichiurus haumela* (Ribbon fish)
- *Synagris japonicus* (Blackmouth splitfin)
- *Scomber microlepidotus* (Mackerel)
- *Cybius guttatum* (Seerfish or Surmai)
- *Sardinella longiceps* (Indian Oil Sardine)
- *Thunnus alalunga* (Longfin tuna)

## 2) Identification of Crustaceans and Molluscs.

- *Penaeus monodon* (Giant Tiger Prawn)
- *Metapenaeus affinis* (Jinga shrimp)
- *Parapenaeopsis styliifera* (Kiddi shrimp)
- *Acetes indicus* (Jawala paste shrimp)
- *Panulirus polyphagus* (Mud spiny lobster)
- *Scylla serrata* (Giant mud crab)
- *Crassostrea spp.* (Oyster)
- *Sepia pharaonis* (Pharaoh cuttlefish)
- *Loligo duvaucelii* (Indian squid)

## 3) Preparation of formulated feed for fish and prawn.

## 4) Identification of parasitic infections in aquatic organisms.

- Fungal – Dermatomycosis
- Bacterial – Fin/Tail rot and Dropsy
- Protozoan – Costiasis and White Spot
- Crustacean – Argulosis

## 5) Fish dressing, filleting, prawn peeling – PUD, DV and grading.

## 6) Fish morphometry – Length weight relationship of a suitable fish.

## 7) Preparation of Surimi, Fish protein concentrate.

## 8) Preparations of fish burger, fish fingers, fish/prawn pickle, fish chutney, fish curry.

  
Principal

- 9) Preparation of Chitin – Chitosan, Pearl essence.
- 10) Identification of various farm equipment such as:
  - Feeding cups / Trays
  - Paddle wheel aerator
  - Fountains
  - Sluice gate models
  - Elbow pipe outlets
- 11) Study of models of raft, pen, cage culture and materials used in rope culture.
- 12) **Project** – Feasibility / Scientific.
- 13) **Field Visit Report**.

Please refer the Annexure II for the suggested field visits and Annexure – III for suggested topics for projects for Course code USACFBIO6P1.

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**N.B:**

- I) It is pertinent to note that we have to adhere strictly to the directions as given in the UGC Circular F14-4/2006 (CPP-II).
- II) Apart from the Institutional Animal Ethics Committee (IAEC) and any other Committee appointed by a Competent Authority / Body from time to time, every college should constitute the following Committees:
  - 1) A Committee for the Purpose of Care and Supervision of Experimental Animals (CPCSEA) and
  - 2) A Dissection Monitoring Committee (DMC) to ensure that no dissections or mountings are done using animals.

**Composition of DMC shall be as follows:**

- i) Head of the Concerned Department (Convener / Chairperson)
- ii) Two Senior Faculty Members of the concerned Department
- iii) One Faculty of related department from the same College
- iv) One or two members of related department from neighbouring colleges.

  
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**Key Indicator – 1.3 Curriculum Enrichment**

**Percentage of students undertaking  
project work/field work**







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## Criteria 2 - Curricular Aspects

### **Key Indicator – 1.3 Curriculum Enrichment**

#### **Metric No. 1.3.2. Percentage of students undertaking project work/field work/internships (Data for the latest completed academic year)**

##### **1. 3. 2. 1. Number of students undertaking project work/field work / Internships**

$$\text{Percentage} = \frac{\text{Number of students undertaking project work/field work / internships}}{\text{Total number of students during the latest completed academic year}} \times 100$$

$$\text{Percentage} = \frac{111}{118} \times 100 = 94.07\%$$







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### **Percentage of students undertaking project work /Field Work/Internship**

(Data for the latest completed academic Year)

Sr. No.	Class	Total number of students during the latest completed academic year	Total Number of Students undertaking in Project & Field Work	Percentage
1	F.Y.B.Sc.	51	46	90.20
2	S.Y.B.Sc.	32	29	90.63
3	T.Y.B.Sc.	36	36	100.00
<b>Total</b>		<b>118</b>	<b>111</b>	<b>94.07</b>



  
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**Key Indicator – 1.3 Curriculum Enrichment**

**Program wise list of Students**  
**Undertaking the Project Work/**  
**Field Work**





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### List of students undertaking project work / Field Work/ Internship

Programme Name	Sr. No.	Name of Students	Field Work 19/08/2023
T.Y.B.Sc Zoology USZOP05	01	Gawade Neha Narayan	Field Work
	02	Gawas Shailaja Dnyaneshwar	Field Work
	03.	Gawas Vedant Rukmangat	Field Work
	04.	Naik Aishwarya Sanjay	Field Work
	05.	Sutar Ninad Nandkumar	Field Work
F.Y.B.Sc Zoology USZOP1	01	Gawas Rutik Arun	Field Work
	02	Jangle Tushar Shamu	Field Work
	03	Gawade Vthoba Umesh	Field Work
	04	Naik Yogita Anand	Field Work
	05	Naik Nutan Sanjay	Field Work
	06	Bandekar Yogesh Nandkishor	Field Work
	07	Malik Vedant Sanjay	Field Work
	08	Desai Dilip Sanjay	Field Work
	09	Desai Vidyadhar Gurudas	Field Work
	10	Ghogale Sakshi Baburao	Field Work
	11	Jadhav Shailesh Chandrakant	Field Work
	12	Jadhav Asmita Ganpat	Field Work

Programme Name	Sr. No.	Name of Student	Field Work 20/12/2023
S.Y.B.Sc. Chemistry USCHP4	1	Gaichor Shubham Vasudev	Indutrial Visit
	2	Gawade Shivram Prakash	Indutrial Visit
	3	Gawas Diksha Digamber	Indutrial Visit





	4	Gawas Kameshwari Pandurang	Indutrial Visit
	5	Gawas Lavkesh Vasudev	Indutrial Visit
	6	Gawas Prathamesh Prabhakar	Indutrial Visit
	7	Gawas Roshan Gopi	Indutrial Visit
	8	Gawas Shubham Pandurang	Indutrial Visit
	9	Jeshtnaik Shraddha Bhanudas	Indutrial Visit
	10	Kharvat Janavi Janu	Indutrial Visit
	11	Khedekar Roshani A.	Indutrial Visit
	12	Patil Ganesh Gopal	Indutrial Visit
	13	Patil Navnath Dhondiram	Indutrial Visit
	14	Pedaneekar Madhusudan Rajaram	Indutrial Visit
	15	Raul Sushant Santosh	Indutrial Visit
	16	Sarvane Rushikesh Tanaji	Indutrial Visit
	17	Sawant Sanket Baburao	Indutrial Visit
	18	Sawant Sushmita Eknath	Indutrial Visit
	19	Shivngekar Kishori Jotiba	Indutrial Visit
	20	Sutar Ganga Balkrishna	Indutrial Visit
	21	Thakar Adhikesh Vilas	Indutrial Visit
	22	Gawas Roshani Ramesh	Indutrial Visit
	23	Kotekar Pranali Parshuram	Indutrial Visit
	24	Naik Sanchit Dayanand	Indutrial Visit
	25	Paryekar Pankaj Nanda	Indutrial Visit

Programme Name	Sr. No.	Name of Student	Programme Name
T.Y.B.Sc. Chemistry USACDD6P2	1	Betkekar Vaishnavi Sanjay	Preparation of BiVO <sub>4</sub> Photocatalyst By Solvothermal Method
	2	Desai Dhanashri Sabaji	
	3	Chavan Naresh Nandu	
	4	Desai Yogesh Dilip	
	5	Desai Aniket Manohar	
	6	Dhuri Sham Shivram	
	7	Lobo Lawrence Bavtis	Preparation of Cashew Apple Fenni
	8	Jadhav Pooja Nhanu	
	9	Gurav Suraj Sambhaji	





	10	Kadam Prasanna Rajaram	Studies On Effect of Cow Dung Ash, Groundnut Shell Ash, Wood Ash in aqueous medium as Follar Spray on Zea mays
	11	Gawas Sejal Sunil	
	12	Varak Ravindra Dhondur	
	13	Sadekar Omkar Namdev	
	14	Pawar Shivani Shankar	
	15	Rane Vaishnavi Vishwanath	
	16	Parmekar Hrutuja Sudhir	
	17	Patil Avinash Ashok	
	18	Parab Akash Arjun	Study on Hypertension Patient, Side Effect & How to Control
	19	Niralagi Gauri Vijay	
	20	Naik Dattaprasad Pandurang	
	21	Morajkar Sameer Uday	
	22	Mayekar saloni Byaneshwar	
	23	Gawas Pratik Prakash	
	24	Gawde Pooja eepak	Preparation of Cold Cream
	25	Gawas Ramchandra Narayan	
	26	Gawas Mahesh Gopal	
	27	Gawas Gurunath Amol	

Programme Name	Sr. No.	Name of Student	Field Work 22/02/2024
F.Y.B.Sc. Zoology USZOP2	1	Gawas Rutik Arun	Field Work
	2	Gawas Bhikaji Khemraj	Field Work
	3	Jangle Tushar Shamu	Field Work
	4	Gawade Vthoba Umesh	Field Work
	5	Sawant Divya Laxman	Field Work
	6	Mestry Sudarshan Dattaram	Field Work
	7	Naik Yogita Anand	Field Work
	8	Naik Dipti Dilip	Field Work
	9	Naik Nutan Sanjay	Field Work
	10	Bandekar Yogesh Nandkishor	Field Work
	11	Malik Vedant Sanjay	Field Work
	12	Desai Dilip Sanjay	Field Work



	13	Desai Vidyadhar Gurudas	Field Work
	14	Desai Samiksha Chandrashekhar	Field Work
	15	Ghogale Sakshi Baburao	Field Work
	16	Patil Akshay Anandrao	Field Work
	17	Jadhav Shailesh Chandrakant	Field Work
	18	Naik Prachi Prakash	Field Work
	19	Jadhav Asmita Ganpat	Field Work
	20	Gawas Mayur Mohan	Field Work
	21	Gawas Gaurish Mahadev	Field Work
	22	Gawade Reshma Laxman	Field Work
	23	Desai Viraj Sitaram	Field Work
	24	Sinari Chinmay Sandip	Field Work
	25	Warang Priya Prakash	Field Work
S.Y.B.Sc Zoology USZOE2P4	01	Gawas Roshani Ramesh	Field Work
	02	Naik Simanthini Prashant	Field Work
	03.	Kubal Ujjayani uttam	Field Work
	04.	Kotekar Pranali Parshuram	Field Work
	05.	Kharwat janavi Jawoo	Field Work
	06	Paryekar Pankaj Nanda	Field Work
	07	Sawant Loukik Subhash	Field Work
T.Y.B.Sc Zoology USACFBIO6P1	01	Chavan Gauri Shyamsundar	Field Work
	02	Gawade Neha Narayan	Field Work
	03.	Gawas Shailaja Dnyaneshwar	Field Work
	04.	Gawas Vedant Rukmangat	Field Work
	05.	Kubal Manali laxman	Field Work
	06	Naik Aishwarya Sanjay	Field Work
	07	Sutar Ninad Nandkumar	Field Work





Programme Name	Sr. No.	Name of Students	Name of Project
T.Y.B.Sc Zoology USACFBIO6P1	01	Gawade Neha Narayan	Probability report of maintenance of culture of chaetopteros & artemia by the fish farmers
	02	Gawas Shailaja Dnyaneshwar	Probability report of maintenance of culture of chaetopteros & artemia by the fish farmers
	03.	Naik Aishwarya Sanjay	Cultivation of commercially important nutritive algae
	04.	Sutar Ninad Nandkumar	Cultivation of commercially important nutritive algae
	05.	Chavan Gauri Shamsunder	Cultivation of commercially important nutritive algae
	06	Kubal Pooja Bhanudas	Shrimp Farming
	07	Gawas Vedant Rukmangat	Shrimp Farming

Programme Name	Sr. No	Name of the student	Name of the project
F.Y.B.Sc. Foundation Course USFC2C1	1	Shirodkar Arya Abhay	उच्च शिक्षण आणि भारत
	2	Gawas Bhikaji Khemraj	
	3	Gawas Rutik Arun	
	4	Gawas Bhakti Bhagawan	
	5	Kamble Pallavi Prakash	
	6	Jangale Tushar Shamu	
	7	Gawade Vithoba Umesh	
	8	Sawant Divya Laxman	पिण्याचे स्वच्छ पाणी व स्वच्छता सुविधा
	9	Panvelkar Amit Arun	
	10	Mestri Sudarshan Dattaram	
	11	Desai Saisha Sadanand	
	12	Gawade Neha Yalappa	
	13	Naik Yogita Anand	सार्वजनिक शिक्षणाधिकार
	14	Mayekar Shivram Suryakant	
	15	Naik Nutan Sanjay	
	16	Bandekar Yogesh Nandkishor	
	17	Malik Vedant Sanjay	
	18	Desai Dilip Sanjay	





19	Desai Vidhyadhar Gurudas	लैंगिक विषमता आणि भारत
20	Bagadi Prathamesh Pandurang	
21	Desai Samiksha Chandrashakar	
22	Ghogale Sakshi Baburao	
23	Uphalkar Sharan Parasharam	शहरातील आरोग्य सुविधा
24	Patil Akashay Anadrao	
25	Shetkar Rohan Hari	जैतापूरचा अणुऊर्जा प्रकल्प
26	Jadhav Shailesh Chandrakant	
27	Karol Sakib Suleman	
28	Jadhav Asmita Ganpat	
29	Chobe Rahul Rajendra	शहरीकरण आणि त्यांच्या समस्या
30	Gawas Gaurish Mahadev	
31	Gawade Reshma Laxman	
32	Desai Viraj Sitaram	
33	Sinari Chinmay Sandip	तिलारी धरण
34	Kavthankar Damodar Arjun	
35	Warang Priya Prakash	
36	Prasadi Vaishanvi Rajesh	
37	Patil Sucheta Vasant	



*(Signature)*  
Principal

Amdar, Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudrug



SHRAMIK VIDYARTHI DNYANSEVA SANSTHA'S

## AMDAR DEEPAKBHAI KESARKAR SCIENCE COLLEGE

( AFFILIATED TO UNIVERSITY OF MUMBAI )

DODAMARG, DIST. – SINDHUDURG 416 512 ( M. S. )

EMAIL – [dkscsci@gmail.com](mailto:dkscsci@gmail.com)

TEL. NO. – 02363 256755

ESTD. – 2012

COLLEGE CODE – 166

### Criteria 1

### Curricular Aspects

#### Key Indicator – 1.3 Curriculum Enrichment

### Certificate of Completion



**STUDIES ON EFFECT OF COW DUNG ASH,  
WOOD ASH, GROUNDNUT SHELL  
ASH IN AQUEOUS MEDIUM AS FOLIAR SPRAY  
ON ZEA MAYS**

**Submitted to the Mumbai University Mumbai  
Amdar Deepkbhai Kesarkar Science college,  
Dodamarg  
For degree of bachelor of science  
In  
Chemistry**

**Under the facilities of**

**Student name:-**

Omkar N. Sadekar

Vaishnavi V. Rane

Shivani S. Pawar

Hrutuja S. Parmekar

Avinash Patil

Ravindra D. Varak

**Under the guidance of**

**guide name - PROF. A. B. DHENGGE**

**Department of chemistry  
Amdar Deepkbhai Kesarkar Science college Dodamarg  
April 2024**



# Amdar Deepakbhai Kesarkar Science College Dodamarg

At/Post - Dodamarg, Tal. Dodamarg, Dist. Sindhudurg 416512

## Certificate

This is to certify that Ms/Mr Ramindya Dhondu Vareak

has worked and duly completed her/his Project Work for the degree of Bachelor under

the Faculty of Science in the subject of Drugs & Dyes and

her/his project is entitled, STUDIES ON EFFECT OF COW DUNG ASH,

WOOD ASH  
GROUNDNUT SHELL ASH IN " under my supervision.  
AQUEOUS MEDIUM AS FOLLAR SPRAY ON ZEAMAY

I further certify that the entire work has been done by the learner under my guidance.

It is her his own work and facts reported by her/ his personal findings and investigations.



Seal of the  
College

S. Dhenge  
Name and Signature of  
Guiding Teacher

Date of submission: 27/04/2024

Principal  
Amdar. Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg

# Amdar Deepakbhai Kesarkar Science College Dodamarg

At/Post - Dodamarg, Tal. Dodamarg, Dist. Sindhudurg 416512

## Certificate

This is to certify that Ms/Mr Omkar N. Sadekar

has worked and duly completed her/his Project Work for the degree of Bachelor under

the Faculty of Science in the subject of drugs & dyes and

her/his project is entitled, 'STUDIES ON EFFECT OF COW DUNG ASH, GROUNDNUT

SHELL ASH AQUEOUS MEDIUM

AS 'FOLLAR SPRAY ON zea mays" under my supervision.

I further certify that the entire work has been done by the learner under my guidance.

It is her his own work and facts reported by her/ his personal findings and investigations.



Seal of the  
College

S. Phenge

Name and Signature of  
Guiding Teacher

Sumit  
Principal

Amdar. Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg

Date of submission: 27/04/2024

# Amdar Deepakbhai Kesarkar Science College Dodamarg

At/Post - Dodamarg, Tal. Dodamarg, Dist. Sindhudurg 416512

## Certificate

This is to certify that Ms/Mr Shivani S. Pawar

has worked and duly completed her/his Project Work for the degree of Bachelor under the Faculty of Science in the subject of drugs and dyes and

her/his project is entitled, 'STUDIES ON EFFECT OF COW DUNG ASH, GROUNDNOT SHELL ASH IN AQUEOUS MEDIUM AS FOLIAR SPRAY ON Zea mays' under my supervision.

I further certify that the entire work has been done by the learner under my guidance.

It is her his own work and facts reported by her/ his personal findings and investigations.



College

S. D. Phenge

Name and Signature of

Guiding Teacher

C. S. S. S.

Principal

Date of submission: 27/04/2024

Amdar Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg



# Amdar Deepakbhai Kesarkar Science College Dodamarg

At/Post - Dodamarg, Tal. Dodamarg, Dist. Sindhudurg 416512

## Certificate

This is to certify that Ms/Mr Vaishnavi Vishwanath Rane

has worked and duly completed her/his Project Work for the degree of Bachelor under

the Faculty of Science in the subject of Drug & Dyes and

her/his project is entitled, STUDIES ON EFFECT OF COW DUNG ASH,

GROUNDNUT SHELL ASH

IN AQUEOUS MEDIUM AS FOLIAR SPRAY ON Zea mays

" under my supervision.

I further certify that the entire work has been done by the learner under my guidance.

It is her his own work and facts reported by her/ his personal findings and investigations.



Seal of the  
College

Name and Signature of  
Guiding Teacher

Principal

Date of submission: 27/04/2024

Amdar. Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg

# Amdar Deepakbhai Kesarkar Science College Dodamarg

At/Post - Dodamarg, Tal. Dodamarg, Dist. Sindhudurg 416512

## Certificate

This is to certify that Ms/Mr Hrutuja S. Parmekar

has worked and duly completed her/his Project Work for the degree of Bachelor under the Faculty of Science in the subject of drugs and dyes and

her/his project is entitled, STUDIES ON EFFECT OF COLD DUNG ASH, GRANO NOT

SHELL ASH IN AQUEOUS MEDIUM  
AS FOLLAR SPRAY ON zea mays under my supervision.

I further certify that the entire work has been done by the learner under my guidance.

It is her his own work and facts reported by her/ his personal findings and investigations.



Seal of the  
College

[Signature]

Name and Signature of  
Guiding Teacher

[Signature]  
Principal

Date of submission: 27/04/2024

Amdar. Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg

# Amdar Deepakbhai Kesarkar Science College Dodamarg

At/Post - Dodamarg, Tal. Dodamarg, Dist. Sindhudurg 416512

## Certificate

This is to certify that Ms/Mr Avinash Ashok Patil  
has worked and duly completed her/his Project Work for the degree of Bachelor under  
the Faculty of Science in the subject of drugs & dyes and  
her/his project is entitled, 'Study on effect of cow dung ASH groundnut  
ash as growth medium  
Foliar spray on Zea mays' under my supervision.

I further certify that the entire work has been done by the learner under my guidance.

It is her his own work and facts reported by her/ his personal findings and  
investigations.



College

Name and Signature of  
Guiding Teacher

Principal

Amdar Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg

Date of submission: 27/04/2024



**PREPARATION OF CASHEW APPLE FENI**  
**Submitted to the Mumbai University Mumbai**  
**Amdar Deepakbhai Kesarkar Science College,**  
**Dodamarg**

**For the Degree of Bachelor of Science**  
**in Chemistry**

**Under the facilities of**

**Student name:**

**Lawrence Lobo**

**Prasanna Kadam**

**Sejal Gawas**

**Pooja Jadhav**

**Suraj Gurav**

**Under the guidance of**  
**PROF. A. B. DHENGE sir**

**Department of chemistry**

**Amdar Deepakbhai Kesarkar Science college**  
**Dodamarg April-2024**

# Amdar Deepakbhai Kesarkar Science College Dodamarg

At/Post - Dodamarg, Tal. Dodamarg, Dist. Sindhudurg 416512

## Certificate

This is to certify that Ms/Mr Lawrence B. Lobo  
has worked and duly completed her/his Project Work for the degree of Bachelor under  
the Faculty of Science in the subject of Org. and Dyes and  
her/his project is entitled, 'Preparation of Cashew apple Feeni  
....." under my supervision.

I further certify that the entire work has been done by the learner under my guidance.

It is her his own work and facts reported by her/ his personal findings and  
investigations.



Seal of the  
College

S. Bherge

Name and Signature of  
Guiding Teacher

G. K. Kulkarni  
Principal

Amdar. Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg

Date of submission: 27/04/2024

# Amdar Deepakbhai Kesarkar Science College Dodamarg

At/Post - Dodamarg, Tal. Dodamarg, Dist. Sindhudurg 416512

## Certificate

This is to certify that Ms/Mr ..... POOJA NHANU JADHAV .....  
has worked and duly completed her/his Project Work for the degree of Bachelor under  
the Faculty of Science in the subject of Drugs and Dyes ..... and  
her/his project is entitled, 'Preparation of cashew apple Feni .....  
....." under my supervision.

I further certify that the entire work has been done by the learner under my guidance.

It is her his own work and facts reported by her/ his personal findings and  
investigations.



Seal of the  
College

Sabherwal  
Name and Signature of  
Guiding Teacher

Principal  
Amdar. Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg

Date of submission: 27/09/2024



# Amdar Deepakbhai Kesarkar Science College Dodamarg

At/Post - Dodamarg, Tal. Dodamarg, Dist. Sindhudurg 416512

## Certificate

This is to certify that Ms/Mr ..... Ms. Sudeej Sambhaji Gurech .....  
has worked and duly completed her/his Project Work for the degree of Bachelor under  
the Faculty of Science in the subject of Drug and Dyes ..... and  
her/his project is entitled, Preparation of cashew apple Ferri .....  
....." under my supervision.

I further certify that the entire work has been done by the learner under my guidance.

It is her his own work and facts reported by her/ his personal findings and  
investigations.



Seal of the  
College

Principal

Amdar. Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg

S. G. Gurech

Name and Signature of  
Guiding Teacher

Date of submission: 27/05/2024

# Amdar Deepakbhai Kesarkar Science College Dodamarg

At/Post - Dodamarg, Tal. Dodamarg, Dist. Sindhudurg 416512

## Certificate

This is to certify that Ms/Mr Paasanna Rajaram Kadam  
has worked and duly completed her/his Project Work for the degree of Bachelor under  
the Faculty of Science in the subject of Drugs and Dyes and  
her/his project is entitled, 'Preparation of cashew apple  
fenni' under my supervision.

I further certify that the entire work has been done by the learner under my guidance.

It is her his own work and facts reported by her/ his personal findings and  
investigations.



Seal of the  
College

Ganesh  
Principal

Amdar. Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg

S. S. S. S.

Name and Signature of  
Guiding Teacher

Date of submission: 27/04/2023

# Amdar Deepakbhai Kesarkar Science College Dodamarg

At/Post - Dodamarg, Tal. Dodamarg, Dist. Sindhudurg 416512

## Certificate

This is to certify that Ms/Mr ..... Sejal Sunil Godas .....  
has worked and duly completed her/his Project Work for the degree of Bachelor under  
the Faculty of Science in the subject of ..... Drug and Dyes ..... and  
her/his project is entitled, '..... Preparation of cashew apple Puri .....  
....." under my supervision.

I further certify that the entire work has been done by the learner under my guidance.

It is her his own work and facts reported by her/ his personal findings and  
investigations.



Seal of the  
College

A handwritten signature in blue ink, appearing to read 'D. Kesarkar', written over the printed name 'Principal'.

Amdar. Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg

A handwritten signature in blue ink, appearing to read 'S. Phange', written over the printed name 'Name and Signature of Guiding Teacher'.

Name and Signature of  
Guiding Teacher

Date of submission: 27/04/2024



Project Name

**TO STUDY THE  
PREPARATION OF  $\text{BiVO}_4$   
PHOTOCATALYST BY SOLVOTHERMAL  
METHOD.**

Project work  
Submitted to the  
**Mumbai University, Mumbai**

For the Degree of  
Batchelor of Science in Chemistry  
Under the Faculty of Science

By

**Vaishnavi Betkekar**

**Dhanashri S. Desai**

**Naresh Chavan**

**Yogesh Desai**

**Aniket Desai**

**Shyam Dhuri**

Under the Guidance of  
Prof. Mr. N.M. Chaugule  
Department of Chemistry

**AMDAR DEEPAKBHAI KESARKAR SCIENCE  
COLLAGE DODAMARG**

**APRIL – 2024**

# Amdar Deepakbhai Kesarkar Science College Dodamarg

At/Post - Dodamarg, Tal. Dodamarg, Dist. Sindhudurg 416512

## Certificate

This is to certify that Ms/Mr Vaishnavi Sanjay Betkekar  
has worked and duly completed her/his Project Work for the degree of Bachelor under  
the Faculty of Science in the subject of Drugs and dyes and  
her/his project is entitled, 'Preparation of BiVO<sub>4</sub> photocatalyst by  
salvothermal method' under my supervision.

I further certify that the entire work has been done by the learner under my guidance.

It is her his own work and facts reported by her/ his personal findings and  
investigations.



Seal of the  
College

  
Principal

Amdar, Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg



Name and Signature of  
Guiding Teacher

Date of submission: 27/09/2024

# Amdar Deepakbhai Kesarkar Science College Dodamarg

At/Post - Dodamarg, Tal. Dodamarg, Dist. Sindhudurg 416512

## Certificate

This is to certify that Ms/Mr Dhanashri Sabaji Desai  
has worked and duly completed her/his Project Work for the degree of Bachelor under  
the Faculty of Science in the subject of Drugs and Dyes and  
her/his project is entitled, 'Preparation of BiVO<sub>4</sub> photocatalyst by  
solvothermal method.' under my supervision.

I further certify that the entire work has been done by the learner under my guidance.

It is her his own work and facts reported by her/ his personal findings and  
investigations.



College

*(Signature)*  
Principal

Amdar Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg

*(Signature)*

Name and Signature of  
Guiding Teacher

Date of submission: 27/04/2024



# Amdar Deepakbhai Kesarkar Science College Dodamarg

At/Post - Dodamarg, Tal. Dodamarg, Dist. Sindhudurg 416512

## Certificate

This is to certify that Ms/Mr Narash Nandu Chavan  
has worked and duly completed her/his Project Work for the degree of Bachelor under  
the Faculty of Science in the subject of Drugs and Dyes and  
her/his project is entitled, 'Preparation of BiVO<sub>4</sub> photocatalyst by  
solvothermal method.' under my supervision.


I further certify that the entire work has been done by the learner under my guidance.

It is her his own work and facts reported by her/ his personal findings and  
investigations.



  
Principal

Amdar Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg

  
Name and Signature of  
Guiding Teacher

Date of submission: 27/09/2024

# Amdar Deepakbhai Kesarkar Science College Dodamarg

At/Post - Dodamarg, Tal. Dodamarg, Dist. Sindhudurg 416512

## Certificate

This is to certify that Ms/Mr Yogesh Dilip Desai  
has worked and duly completed her/his Project Work for the degree of Bachelor under  
the Faculty of Science in the subject of Drugs and Dyes and  
her/his project is entitled, 'Preparation of  $\text{BiVO}_4$  photocatalyst by  
solvothermal method' under my supervision.

I further certify that the entire work has been done by the learner under my guidance.

It is her his own work and facts reported by her/ his personal findings and  
investigations.



Seal of the  
College

Name and Signature of  
Guiding Teacher

Amdar Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg

Date of submission:

27/04/2024

# Amdar Deepakbhai Kesarkar Science College Dodamarg

At/Post - Dodamarg, Tal. Dodamarg, Dist. Sindhudurg 416512

## Certificate


This is to certify that Ms/Mr .....DESAI ANIKET MANOHAR.....  
has worked and duly completed her/his Project Work for the degree of Bachelor under  
the Faculty of Science in the subject of Drugs and Dye..... and  
her/his project is entitled, '.....Preparation of BiVO<sub>4</sub> Photocatalyst By.....  
Solvothermal Method....." under my supervision.

I further certify that the entire work has been done by the learner under my guidance.

It is her his own work and facts reported by her/ his personal findings and  
investigations.



Seal of the  
College

  
Name and Signature of  
Guiding Teacher

  
Principal  
Amdar. Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg

Date of submission: 27/09/2024



# Amdar Deepakbhai Kesarkar Science College Dodamarg

At/Post - Dodamarg, Tal. Dodamarg, Dist. Sindhudurg 416512


## Certificate

This is to certify that Ms/Mr SHAM SHIVRAM DHURI.  
has worked and duly completed her/his Project Work for the degree of Bachelor under  
the Faculty of Science in the subject of Drugs & Dyes and  
her/his project is entitled, '.....Preparation of BiVO<sub>4</sub> photocatalyst by Solvo-  
Thermal Method.....' under my supervision.

I further certify that the entire work has been done by the learner under my guidance.

It is her his own work and facts reported by her/ his personal findings and  
investigations.



  
Name and Signature of  
Guiding Teacher

  
Principal  
Amdar Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg

Date of submission: 27/04/2024

**Project name -:** Preparation of cold cream

**Project Work**

Submitted to the :

Mumbai university, Mumbai

For the degree of

**BACHELOR OF SCIENCE**

In chemistry

**Under the faculty of science by :**

PRATIK PRAKASH GAWAS

POOJA DEEPAK GAWDE

RAMCHANDRA NARAYAN GAWAS

MAHESH GOPAL GAWAS

GURUNATH AMOL GAWAS

**Under the guidance of :prof. m.s. patil sir**

**DEPARTMENT OF CHEMISTRY**

**Amdar Deepakbhai Kesarkar Science Collage**

**Dodamarg**

**April -2024**

**Amdar Deepakbhai Kesarkar Science Collage Dodamarg**

**At/post- Dodamarg Tal-Dodamarg Dist-Science 416512**

## ***Certificate***

This is to certify that Ms/Mr Poulk. Prakash Gawas

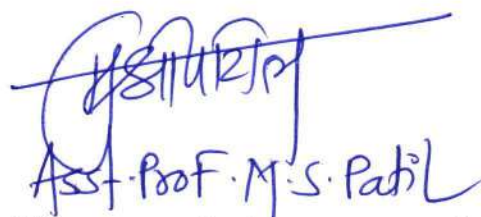
Has worked and duly completed her/his project work for the degree of bachelor under the faculty of science in the subject of Drug and Dyes and

her/his project is entitled, "Preparation of Cold Cream

" under my supervision .

I further certify that the entire work has been done by the learner under my guidance . it is her/his own work and facts reported by her/his personal findings and investigations.



  
Asst. Prof. M.S. Patil  
Name and signature of  
Guiding Teacher



Date of Submission :- 27/04/2024



Amdar Deepakbhai Kesarkar Science Collage Dodamarg  
At/post- Dodamarg Tal-Dodamarg Dist-Science 416512

## *Certificate*

This is to certify that Ms/Mr Pooja Deepak Gawde

Has worked and duly completed her/his project work for the degree of bachelor under the faculty of science in the subject of Drug and Dyes. and

her/his project is entitled," Preparation of Cold Cream  
" under my supervision .

I further certify that the entire work has been done by the learner under my guidance . it is her/his own work and facts reported by her/his personal findings and investigations.



  
Asst. Prof. M. S. Patil

Name and signature of

  
Principal  
Amdar Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg

Date of Submission :- 27/09/2024

Amdar Deepakbhai Kesarkar Science Collage Dodamarg

At/post- Dodamarg Tal-Dodamarg Dist-Science 416512

## *Certificate*


This is to certify that ~~Ms~~/Mr Maresh Gopal Gaurus

Has worked and duly completed her/his project work for the degree of bachelor under the faculty of science in the subject of Drug and Dyes and

her/his project is entitled," Preparation of Cold Cream  
" under my supervision .

I further certify that the entire work has been done by the learner under my guidance . it is her/his own work and facts reported by her/his personal findings and investigations.



  
Asst. Prof. M. S. Patil

Name and signature of

Guiding Teacher



Amdar, Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg

Date of Submission :- 27/06/2012



Amdar Deepakbhai Kesarkar Science Collage Dodamarg

At/post- Dodamarg Tal-Dodamarg Dist-Science 416512

## *Certificate*

This is to certify that Ms/Mr *Ramchandra Narayan Gawus*

Has worked and duly completed her/his project work for the degree of bachelor under the faculty of science in the subject of *Drug and Dyes* and

her/his project is entitled, " *Preparation of Cold Cream* " under my supervision .

I further certify that the entire work has been done by the learner under my guidance . it is her/his own work and facts reported by her/his personal findings and investigations.



*[Signature]*  
Asst. Prof. M. S. Patil

Name and signature of

Guiding Teacher

*[Signature]*  
Principal

Amdar. Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg

Date of Submission :- *27/04/2023*



**Amdar Deepakbhai Kesarkar Science Collage Dodamarg**

**At/post- Dodamarg Tal-Dodamarg Dist-Science 416512**

## ***Certificate***

This is to certify that Ms/Mr *Gurunath Amal Gawas.*

Has worked and duly completed her/his project work for the degree of bachelor under the faculty of science in the subject of *Drug and Dyes.* and

her/his project is entitled," *preparation of Cold Cream*  
" under my supervision .

I further certify that the entire work has been done by the learner under my guidance . it is her/his own work and facts reported by her/his personal findings and investigations.



*[Signature]*  
Assf. Prof. M. S. Patil

Name and signature of

*[Signature]*  
Principal

Amdar Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudrug

Date of Submission :- *27/04/2024*

Shramik Vidyarthi Dnyanaseva Sanstha's

# Amdar Deepakbhai Kesarkar Science College Dodamarg

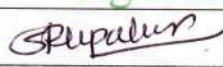

At/ Post – Dodamarg, Tal. Dodamarg, Dist. Sindhudurg


(Affiliated to Mumbai University)

## CERTIFICATE

This is to certify that the following students have  
satisfactory carried out the project work titled as  
..... City's and health facilities..... for the  
..... F.Y. BSc. Sem I<sup>st</sup>..... class in  
Foundation Course & this report represent there  
Bonafide work during the Academic Year 2023-24.

Submitted By

Sr. No.	Students Name	Signature
01.	Mr. Uphalkar Sharan P.	
02.	Mr. Patil Akshay Anandrao	



Mr. S. V. More  
Project Guide



Mr. M. V. Golase  
Principal  
Amdar Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg



Shramik Vidyarthi Dnyanseva Sanstha's

# Amdar Deepakbhai Kesarkar Science College Dodamarg

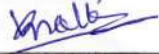

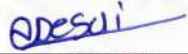

At/ Post – Dodamarg, Tal. Dodamarg, Dist. Sindhudurg

(Affiliated to Mumbai University)

## CERTIFICATE

This is to certify that the following students have  
satisfactory carried out the project work titled as  
..... Gender disparity and India. .... for the  
..... F.Y. BSc. Sem II<sup>nd</sup> ..... class in  
Foundation Course & this report represent there  
Bonafide work during the Academic Year 2023-24.

Submitted By

Sr. No.	Students Name	Signature
01.	Mr. Malik Vedant Sanjay	
02.	Mr. Desai Dilip Sanjay	
03.	Mr. Desai Vidyadhar Gurrudas.	
04.	Mr. Bagadi Prathmesh Pandurang.	



Mr. S. V. More  
Project Guide



Mr. M. V. Galas  
Principal  
Amdar Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg



Shramik Vidyarthi Dnyanaseva Sanstha's

# Amdar Deepakbhai Kesarkar Science College Dodamarg

At/ Post – Dodamarg, Tal. Dodamarg, Dist. Sindhudurg

(Affiliated to Mumbai University)

## CERTIFICATE

This is to certify that the following students have  
satisfactory caried out the project work titled as  
..... Higher Education and India ..... for the  
..... F.Y. BSc. Sem II<sup>nd</sup>. ..... class in  
Foundation Course & this report represent there  
Bonafide work during the Academic Year 2023-24.

Submitted By

Sr. No.	Students Name	Signature
01.	Ms. Shirodkar Arya Abhay.	Arya
02.	Mr. Gawas Bhikaji Khemraj	Gawas Bhikaji
03.	Mr. Gawas Rutik Arjun.	Gawas
04.	Ms. Gawas Bhakti Bhagwan.	Bhakti



Mr. S. V. More  
Project Guide



Mr. M. V. Golase  
Principal  
Amdar Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg

Shramik Vidyarthi Dnyanaseva Sanstha's

# Amdar Deepakbhai Kesarkar Science College Dodamarg

At/ Post – Dodamarg, Tal. Dodamarg, Dist. Sindhudurg

(Affiliated to Mumbai University)

## CERTIFICATE

This is to certify that the following students have  
satisfactory caried out the project work titled as  
..... Higher education and India. .... for the  
..... F.Y. B.Sc. Sem II<sup>nd</sup> ..... class in  
Foundation Course & this report represent there  
Bonafide work during the Academic Year 2023-24.

Submitted By

Sr. No.	Students Name	Signature
05.	Ms. Kamble Pallavi Prakash.	Pp.Kamble.
06.	Mr. Jangle Tushar Shamu.	Tshmi.
07	Mr. Gawade Vithoba Umesh.	Gawade



Mr. S. V. More  
Project Guide



  
Principal  
Amdar Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg



Shramik Vidyarthi Dnyanaseva Sanstha's

# Amdar Deepakbhai Kesarkar Science College Dodamarg

At/ Post – Dodamarg, Tal. Dodamarg, Dist. Sindhudurg


(Affiliated to Mumbai University)

## CERTIFICATE

This is to certify that the following students have  
satisfactory caried out the project work titled as  
..... Public education athority & India. .... for the  
..... F-Y-Bsc. sem II<sup>nd</sup> ..... class in  
Foundation Course & this report represent there  
Bonafide work during the Academic Year 2023-24.

Submitted By

Sr. No.	Students Name	Signature
01.	Ms. Naik Yogita Anand.	Naik
02.	Mr. Mayekar Shriram Suryakant.	Mayekar
03.	Ms. Naik Nutan Sanjay.	Naik.
04.	Mr. Bandekar Yogesh Haridkumar	

  
Mr. S. V. More  
Project Guide



  
Mr. M. V. Golase  
Principal  
Amdar Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg



Shramik Vidyarthi Dnyanseva Sanstha's

# Amdar Deepakbhai Kesarkar Science College Dodamarg

At/ Post – Dodamarg, Tal. Dodamarg, Dist. Sindhudurg

(Affiliated to Mumbai University)

## CERTIFICATE

This is to certify that the following students have  
satisfactory caried out the project work titled as  
..... Gender desparnity 4 India. .... for the  
..... F.Y. BSc. Sem II<sup>nd</sup> ..... class in  
Foundation Course & this report represent there  
Bonafide work during the Academic Year 2023-24.

Submitted By

Sr. No.	Students Name	Signature
05.	Ms Desai Samiksha Chandrashekr.	Sam Desai
06.	Ms. Ghogale Sakshi Baburao.	Ghobale



Mr. S. V. More  
Project Guide



Mr. M. V. Polase  
Principal  
Amdar Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg

Shramik Vidyarthi Dnyanaseva Sanstha's

# Amdar Deepakbhai Kesarkar Science College Dodamarg

At/ Post – Dodamarg, Tal. Dodamarg, Dist. Sindhudurg

(Affiliated to Mumbai University)

## CERTIFICATE

This is to certify that the following students have  
satisfactory carried out the project work titled as  
..... Tehari Dam ..... for the  
..... F.Y. BSc. Sem. II<sup>nd</sup> ..... class in  
Foundation Course & this report represent there  
Bonafide work during the Academic Year 2023-24.

Submitted By

Sr. No.	Students Name	Signature
01	Mr. Karthamkar Damodar Arjun.	Karthamkar DA.
02	Ms. Waring Priya Prakash.	P. Puany
03	Ms. Prasadi Vaishavi Rajesh.	Prasadi
04	Ms. Patil Sucheta Vasant.	Sucheta Patil

  
Mr. S. V. More  
Project Guide



  
Principal  
Mr. M. V. Golase  
Amdar Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg



Shramik Vidyarthi Dnyanseva Sanstha's

# Amdar Deepakbhai Kesarkar Science College Dodamarg

At/ Post – Dodamarg, Tal. Dodamarg, Dist. Sindhudurg

(Affiliated to Mumbai University)

## CERTIFICATE

This is to certify that the following students have  
satisfactory caried out the project work titled as  
..... Clean drinking water and health facilities..... for the  
..... F.Y. BSc. Sem II<sup>nd</sup>..... class in  
Foundation Course & this report represent there  
Bonafide work during the Academic Year 2023-24.

Submitted By

Sr. No.	Students Name	Signature
01.	Ms. Sawant Divya Laxman.	Disant
02.	Mr. Panvelkar Amit Arun.	Panvelkar
03.	Mr. Mestry Sudarshan Dattaram.	Someshy
04.	Ms. Desai Saisha Sadanand.	Desai



Mr. S. V. More  
Project Guide





Mr. M. V. Golase  
Principal  
Amdar Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg



Shramik Vidyarthi Dnyanaseva Sanstha's

# Amdar Deepakbhai Kesarkar Science College Dodamarg


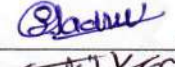
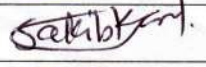
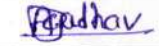
At/ Post – Dodamarg, Tal. Dodamarg, Dist. Sindhudurg

(Affiliated to Mumbai University)

## CERTIFICATE

This is to certify that the following students have  
satisfactory caried out the project work titled as  
.....  
Jadlapur atomic energy project..... for the  
.....  
F.Y. BSc. sem II<sup>nd</sup>..... class in  
Foundation Course & this report represent there  
Bonafide work during the Academic Year 2023-24.

Submitted By

Sr. No.	Students Name	Signature
01.	Mr. Shetkar Rohan Hari	
02.	Mr. Jadhav Shailesh C.	
03.	Mr. Karol Sakib Suleman.	
04.	Ms. Jadhav Armita Gampat.	



Mr. S. V. More  
Project Guide



Mr. M. V. Golase  
Principal  
Amdar Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg

Shramik Vidyarthi Dnyanaseva Sanstha's

# Amdar Deepakbhai Kesarkar Science College Dodamarg

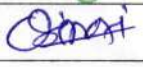
At/ Post – Dodamarg, Tal. Dodamarg, Dist. Sindhudurg

(Affiliated to Mumbai University)

## CERTIFICATE

This is to certify that the following students have  
satisfactory carried out the project work titled as  
..... Urbanization & it's problems..... for the  
..... F.Y.Bsc. Sem. II<sup>nd</sup>..... class in  
Foundation Course & this report represent there  
Bonafide work during the Academic Year 2023-24.

Submitted By

Sr. No.	Students Name	Signature
05.	Mr. Sinceri Chimay Sandip.	



Mr. S. V. More  
Project Guide



Mr. M. V. Golase  
Principal  
Amdar Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg



Shramik Vidyarthi Dnyanaseva Sanstha's

# Amdar Deepakbhai Kesarkar Science College Dodamarg

At/ Post – Dodamarg, Tal. Dodamarg, Dist. Sindhudurg

(Affiliated to Mumbai University)

## CERTIFICATE

This is to certify that the following students have  
satisfactory carried out the project work titled as  
..... Urbanization & its problem. .... for the  
..... F.Y. BSc. Sem II<sup>nd</sup> ..... class in  
Foundation Course & this report represent there  
Bonafide work during the Academic Year 2023-24.

Submitted By

Sr. No.	Students Name	Signature
01.	Mr. Chobe Rahul Rayendra.	
02.	Mr. Gaurav Gourish Mahadev.	
03.	Ms. Gawade Reshma Laxman.	
04.	Mr. Desai Viraj Sharam.	

Mr. S. V. More  
Project Guide



Mr. M. V. Golase  
Principal  
Amdar Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg



Shramik Vidyarthi Dnyanaseva Sanstha's

# Amdar Deepakbhai Kesarkar Science College Dodamarg

At/ Post – Dodamarg, Tal. Dodamarg, Dist. Sindhudurg

(Affiliated to Mumbai University)

## **CERTIFICATE**

This is to certify that the following students have  
satisfactory caried out the project work titled as  
..... Clean drinking water and health facilities..... for the  
..... F.Y. BSc. sem- II<sup>nd</sup>..... class in  
Foundation Course & this report represent there  
Bonafede work during the Academic Year 2023-24.

Submitted By

Sr. No.	Students Name	Signature
05	Ms. Gawade Neha Yallappa.	<u>Neha</u>



Mr. S. V. More  
Project Guide



Mr. M. V. Golase  
Principal  
Amdar Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg



University of Mumbai

Saramik Vidyarthi Dnyanseva Sanstha's

**AMDAR DEEPAKBHAI KESARKAR SCIENCE  
COLLEGE, DODAMARG**

Tal. - Dodamarg, Dist. - Sindhudurg - 416 512.

Department of Zoology

**CERTIFICATE**

Class: - T.Y. Bsc

Year :- 2023

*This is to certify that, the work entered in this  
~~journal~~ <sup>project</sup> is the work of Shri / Smt / Kum Manali  
Laxman Kubal who has worked for the Sem IV  
of the year 2023 -2024 in the college laboratory.*

  
05/12/23  
Teacher-In-Charge

  
Head  
Department of Zoology  
D K.Sc. College Dodamarg

Examiner :

  
Officer

Date :-







University of Mumbai

Sarvamik Vidyarthi Dnyanaseva Sanstha's

**AMDAR DEEPAKBHAI KESARKAR SCIENCE  
COLLEGE, DODAMARG**

Tal - Dodamarg, Dist. - Sindhudurg - 416 512

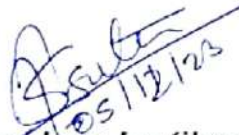
Department of Zoology


**CERTIFICATE**

Class: - T.Y.B.S.C


Year :- 2023-24

*This is to certify that, the work entered in this  
journal is the work of Shri / Smt / Kum. Gauri  
Shamsunder Chavan who has worked for the Sem V  
of the year 2023 -2024 in the college laboratory.*

  
Teacher-In-Charge

  
Head  
D Head of Department  
D.K.Sc. College Dodamarg

Examiner :

  
11/12/23

Date :-







University of Mumbai

Saramik Vidyarthi Dnyanaseva Sanstha's

**AMDAR DEEPAKBHAI KESARKAR SCIENCE  
COLLEGE, DODAMARG**

Tal. - Dodamarg, Dist. - Sindhudurg - 416 512.

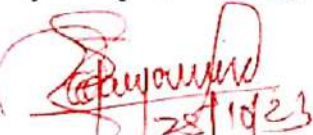
Department of Zoology

**CERTIFICATE**

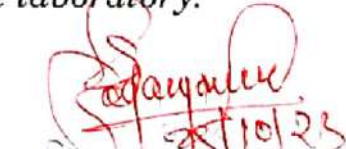
Class: - T.Y. Bsc

Year :- 23-24

This is to certify that, the work entered in this  
journal is the work of Shri/Smt/Kum Aishwarya a.  
Sanjay Naik who has worked for the Sem .....  
of the year 20 23 -20 24 in the college laboratory.

  
28/10/23

Teacher-In-Charge

  
28/10/23

Head of Department

Examiner :

  
11/12/23

Date :- 25/10/23





University of Mumbai

Shramik Vidyarthi Dnyanaseva Sanstha's

**AMDAR DEEPAKBHAI KESARKAR SCIENCE  
COLLEGE, DODAMARG**

Tal. - Dodamarg, Dist. - Sindhudurg - 416 512.

Department of Zoology

**CERTIFICATE**

Class: - T.Y. BSc

Year :- 23-24

This is to certify that, the work entered in this  
~~journal~~ is the work of Stri / Smt / Kum ... Neha .....  
project  
Narayan. Gawade.. who has worked for the Sem V  
of the year 2023 -20 24 in the college laboratory.

25/10/23

Teacher-In-Charge

25/10/23

Head of Department

Examiner :

11/12/23

Date :-





University of Mumbai

Shramik Vidyarthi Dnyanaseva Sanstha's

**AMDAR DEEPAKBHAI KESARKAR SCIENCE  
COLLEGE, DODAMARG**

Tal. - Dodamarg, Dist. - Sindhudurg - 416 512.

Department of Zoology

**CERTIFICATE**

Class: - T.Y. BSc

Year :- 2023-24

*This is to certify that, the work entered in this  
journal is the work of Shri / Smt / Kum. Gawas Shailaja  
Dnyaneshwar..... who has worked for the Sem V  
of the year 2023 - 2024 in the college laboratory.*

*Asule*  
25/10/23  
Teacher-In-Charge

Examiner :

*Asule*  
25/10/23  
Head of Department

Department of Zoology  
D.K.Sc. College Dodamarg

Date :- 26/10/2023







University of Mumbai

Saramik Vidyarthi Dnyanaseva Sanstha's

**AMDAR DEEPAKBHAI KESARKAR SCIENCE  
COLLEGE, DODAMARG**

Tal. - Dodamarg, Dist. - Sindhudurg - 416 512.

Department of Zoology

**CERTIFICATE**

Class: - T.Y. BSc

Year: - 2023

This is to certify that, the work entered in this  
journal is the work of Shri/Smt/Kum. Nimad  
project  
Nandkumar Salor who has worked for the Sem V  
of the year 2023 -2024 in the college laboratory.

D. Guler  
10/12/23  
Teacher-In-Charge

D. Guler  
Head  
Department of Zoology  
D.K.Sc. College Dodamarg

Examiner: D. Guler  
10/12/23

Date :-





University of Mumbai

Shramik Vidyarthi Dnyanaseva Sanstha's

**AMDAR DEEPAKBHAI KESARKAR SCIENCE  
COLLEGE, DODAMARG**

Tal. - Dodamarg, Dist. -Sindhudurg - 416 512.

Department of Zoology

**CERTIFICATE**

Class: - T.Y. BSc

Year :- 2023 -2024

*This is to certify that, the work entered in this  
journal is the work of Shri/Smt/Kum Kubal Pooja  
project  
Bhanudas who has worked for the Sem IV  
of the year 2023 -2024 in the college laboratory.*

DBS  
12/12/23  
Teacher-In-Charge

DBS  
12/12/23  
Head of Department  
Department of Zoology  
D K.Sc. College Dodamarg

Examiner :

Date :-





University of Mumbai

Shramik Vidyarthi Dnyanaseva Sanstha's  
**ANDAR DEEPAKBHAI KESARKAR SCIENCE  
COLLEGE, DODAMARG**

Tal. - Dodamarg, Dist. - Sindhudurg - 416512.

Department of Zoology

**CERTIFICATE**

Class :- T.Y. BSC

Year :- 2023-24

This is to certify that, the work entered in this <sup>journal</sup> ~~project~~  
is the work of Shri / Smt / Kum Vedant. Rukmangal. Gaudas  
who has worked for the Sem V of the year 2023-2024 in  
the college laboratory.

*[Signature]*  
27/10/23

Teacher-in-Charge

Examiner:

Date :-

*[Signature]*  
28/10/23  
Head of Department  
Department of Zoology  
D.K.Sc. College Dodamarg







University of Mumbai

Shramik Vidyarthi Dnyanaseva Sanstha's  
**AMDAR DEEPAKBHAI KESARKAR SCIENCE  
COLLEGE, DODAMARG**

Tal. - Dodamarg, Dist. - Sindhudurg - 416 512.

Department of Zoology

**CERTIFICATE**

Class: - TY

Year :- 2024

*This is to certify that, the work entered in this journal  
is the work of Shri/Smt/Kum. Aishwarya Sanjay Naik  
who has worked for the Sem VI<sup>th</sup> of the year 2023-2024 in  
the college laboratory.*

Teacher-In-Charge

Head of Department

Examiner :

Date :- 19 8 APR 2024





University of Mumbai

Shramik Vidyarthi Dnyanaseva Sanstha's

**AMDAR DEEPAKBHAI KESARKAR SCIENCE  
COLLEGE, DODAMARG**

Tal. - Dodamarg, Dist. - Sindhudurg - 416 512.

Department of Zoology

**CERTIFICATE**

Class: - 1<sup>st</sup> BSc

Year :- 2023-24

*This is to certify that, the work entered in this  
journal is the work of Shri/Smt/Kum Chawan Gauri  
Shamsunder who has worked for the Sem V  
of the year 2023 -2024 in the college laboratory.*

S. Sutar

Teacher-In-Charge

Examiner :

R. Sutar

Head of Department

Head  
Department of Zoology  
D.K.Sc. College Dodamarg

Date :- 12 8 APR 2024



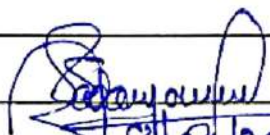


## Certificate

This is certifying that the project work entitled "Packaging material" is being submitted here with for the partial fulfilment of degree of bachelar of science in zoology in the faculty of science is the results of the original research work completed by Vedant Rukmangat Gawas under the my guidance and to the best of my knowledge and belief the work embodied in this project not formed earlier the basis of the award of any degree or similar title of the or examining body.

Place

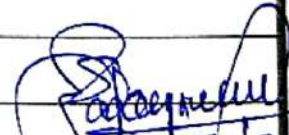
Date

  
8/04/2024

Forworeded through

HOD

Head  
Department of Zoology  
D.K.Sc. College Dodamarg

  
8/04/2024

Project  
Guide.



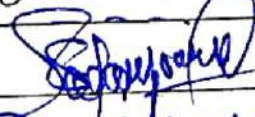


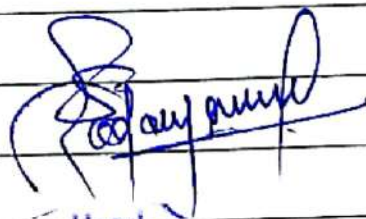
# CERTIFICATE

This is to certify that Mr Nimad Nandkumar  
Sutar of Bsc 6th semester, Department Zoology.  
Roll No 333 of Amdar Deepak bhai Kesarkar  
Science College, Dodamarg has carried out project  
titled \_\_\_\_\_ and successfully  
Completed it under my supervision.

Date: 23/4/24

Place: Dodamarg

  
Teacher in Charge

  
Head  
Department of Zoology  
D.K.Sc. College Dodamarg





University of Mumbai

Shramik Vidyarthi Dnyanaseva Sanstha's  
**AMDAR DEEPAKBHAI KESARKAR SCIENCE  
COLLEGE, DODAMARG**

Tal. - Dodamarg, Dist. - Sindhudurg - 416 512.

Department of Zoology

**CERTIFICATE**

Class: - T.Y.

Year: - 2024

*This is to certify that, the work entered in this journal  
is the work of Shri/Smt/Kum Aishwarya Sanjay Naik  
who has worked for the Sem VI of the year 2023-2024 in  
the college laboratory.*

Teacher-In-Charge

Examiner :

Date :-

Head of Department  
Department of Zoology  
D.K.Sc. College Dodamarg



Principal

Amdar. Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg





University of Mumbai

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Tal. - Dodamarg, Dist. - Sindhudurg - 416 512.

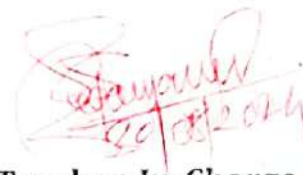
Department of Zoology

**CERTIFICATE**

Class: - T.Y. BSc

Year :- 2023-2024


*This is to certify that, the work entered in this journal  
is the work of Shri / Smt / Kum Garvas Shailaja Dnyaneshwar  
who has worked for the Sem ..... of the year 2023-20 24 in  
the college laboratory.*

  
Teacher-In-Charge

  
Examiner



Date :- 18 APR 2024

  
Head of Department  
B.K.Sc. College Dodamarg

  
Principal

Amdar, Deepakbhai Kesarkar Science College,  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg







University of Mumbai

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COLLEGE, DODAMARG**

Tal. - Dodamarg, Dist. - Sindhudurg - 416 512.


Department of Zoology

**CERTIFICATE**

Class: -


Year :-

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is the work of Shri/ Smt/ Kum. Nimad Nandhumon Sutar  
who has worked for the Sem VI of the year 2023-2024 in  
the college laboratory.*

  
Teacher-In-Charge

  
Examiner:



  
Head of Department  
D K.Sc. College Dodamarg

Date :-

Principal  
Amdar. Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg





University of Mumbai

Shramik Vidyarthi Dnyanaseva Sanstha's

**AMDAR DEEPAKBHAI KESARKAR SCIENCE  
COLLEGE, DODAMARG**

Tal. - Dodamarg, Dist. - Sindhudurg - 416 512.

Department of Zoology

**CERTIFICATE**

Class: - T. Y. BSc

Year: 2023-24

*This is to certify that, the work entered in this <sup>Project</sup> journal  
is the work of Shri / Smt / Kum. Gawas, Shailaja Dnyaneshwar  
who has worked for the Sem VI of the year 2023-2024 in  
the college laboratory.*

Teacher-In-Charge

Head of Department

Examiner:

Head  
Department of Zoology  
D K.Sc. College Dodamarg

Date :-

8 APR 2024



SHRAMIK VIDYARTHI DNYANSEWA SANSTHA'S

AAM. DEEPAKBHAI KESARKAR SCIENCE COLLEGE, DODAMARG.

DIST. : SINDHUDURG

DEPARTMENT OF ZOOLOGY

## CERTIFICATE

DATE :     /     / 2024

This is to certify that,

Mr./Miss. Manali Laxman kumar

Exam no.

Has satisfactorily completed visit to 'Tour Report' in subject "ZOOLOGY" prescribed by  
Mumbai University, for T.Y.B.Sc. Semester VI during the year 2023-2024.

Teacher in charge

Head,

Dept. of Zoology

A.D.K.S.C. Dodamarg

Examiner's Sign.

Head  
Department of Zoology  
D K. Sc. College Dodamarg





# Certificate.

This is to certify that Mr. Vedant Rukmangat Gawas, BSc III, sem VI, whose Roll no - 315 had duly participated in necessary study tour at 'KSR Global Aquarium Kesari, Maharashtra, conducted by department of zoology Amdar Deepakbhai Kesarkar science college, dodamarg. 21/feb/2024 in part of completion of semester Examination as per syllabus of BSc III<sup>rd</sup>, VI<sup>th</sup> semester, Mumbai university. Mr Vedant Rukmangat Gawas is student of this college Completed the all field work satisfactorily.

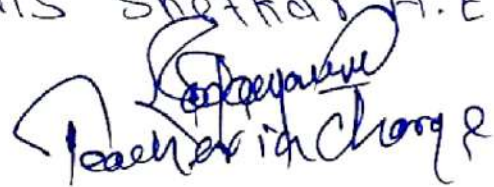
Teacher in charge.

Dr more S.V. (HOD)

Ms Sutar S.B. (Asst Prof)

Mr Sinari A.S (Asst Prof)

Ms Shethkar A.E (Asst Prof).

  
Teacher in Charge

  
Principal



Principal  
Amdar. Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg



Dr More S.V.  
Head  
Department of Zoology  
Amdar Deepakbhai Kesarkar  
Science college, dodamarg.



University of Mumbai

Saramik Vidyarthi Dnyanaseva Sanstha's

**AMDAR DEEPAKBHAI KESARKAR SCIENCE  
COLLEGE, DODAMARG**

Tal. - Dodamarg, Dist. - Sindhudurg - 416 512.

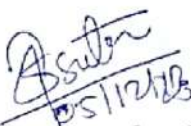
Department of Zoology

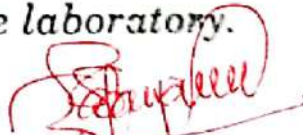
**CERTIFICATE**

Class: - T.Y.B.S.C

Year :- 2023-24.

*This is to certify that, the work entered in this  
journal is the work of Shafi / Shri / Kum. Gauri Shamsunder  
Chawan ..... who has worked for the Sem V  
of the year 2023 -2024 in the college laboratory.*

  
Teacher-In-Charge

  
Head  
Department of Zoology  
D.K. Head of Department

Examiner :

Date :-







University of Mumbai

Shramik Vidyarthi Dnyanaseva Sanstha's

**AMDAR DEEPAKBHAI KESARKAR SCIENCE  
COLLEGE, DODAMARG**

Tal. - Dodamarg, Dist. - Sindhudurg - 416 512.

Department of Zoology

**CERTIFICATE**

Class: - T. Y. Bsc

Year :- 2023

*This is to certify that, the work entered in this  
journal is the work of Shri / Smt / Kum Manali  
Laxman Kubal..... who has worked for the Sem V.  
of the year 2023 -20 24 in the college laboratory.*

Teacher-In-Charge

Head  
Head of Department  
D.K.S. College De...

Examiner :

1) Shruti  
6/12/2023  
3) Shruti  
6/12/2023

Date :-







University of Mumbai

Shramik Vidyarthi Dnyanaseva Sanstha's  
**AMDAR DEEPAKBHAI KESARKAR SCIENCE  
COLLEGE, DODAMARG**

Tal. - Dodamarg, Dist. - Sindhudurg - 416 512.

Department of Zoology

**CERTIFICATE**

Class: - T.Y. B.Sc.

Year :- T.Y 2023-24

*This is to certify that, the work entered in this  
journal is the work of Sh/ri / S/mt / Kum ... KUBAL POOJA  
..... BHANUDAS ..... who has worked for the Sem V  
of the year 2023 -2024 in the college laboratory.*

Teacher-In-Charge

Head of Department

Examiner :

Date :-





University of Mumbai

Saramik Vidyarthi Dnyanaseva Sanstha's

**AMDAR DEEPAKBHAI KESARKAR SCIENCE  
COLLEGE, DODAMARG**

Tal. - Dodamarg, Dist. - Sindhudurg - 416 512.

Department of Zoology

**CERTIFICATE**

Class: - T.Y.BSc

Year :- 2023

This is to certify that, the work entered in this  
journal is the work of Shri / Smt / Kum Himad Nandkum-  
ar. Sutar..... who has worked for the Sem V.....  
of the year 2023-2024 in the college laboratory.

  
Teacher-In-Charge

  
Head of Department  
D.K.Sc. College Dodamarg

Examiner :

Date :-



PRINCE



University of Mumbai

Sramik Vidyarthi Dnyanaseva Sanstha's

**AMDAR DEEPAKBHAI KESARKAR SCIENCE  
COLLEGE, DODAMARG**

Tal. - Dodamarg, Dist. - Sindhudurg - 416 512.

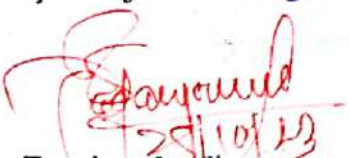
Department of Zoology

**CERTIFICATE**

Class: - T.Y. BSC

Year :- 23 - 24

*This is to certify that, the work entered in this  
journal is the work of Shri/Smt/Kum ..Neha.....  
Narayan..Gawade.. who has worked for the Sem ..V..  
of the year 20 23 -20 24 in the college laboratory.*

  
Teacher-In-Charge

  
Head of Department  
Department of Zoology  
D.K.Sc. College Dodamarg

Examiner :

Date :-







University of Mumbai

Shramik Vidyarthi Dnyanaseva Sanstha's  
**ANDAR DEEPAKBHAI KESARKAR SCIENCE  
COLLEGE, DODAMARG**

Tal. - Dodamarg, Dist. - Sindhudurg - 416512.

Department of Zoology

**CERTIFICATE**

Class: - T.Y. BSC

Year :- 2023-2024

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who has worked for the Sem VI. of the year 2023-2024 in  
the college laboratory.*

  
Teacher in-Charge

Examiner:

Date:-

  
Head of Department  
Department of Zoology  
D.K.Sc. College Dodamarg





University of Mumbai

Sramik Vidyarthi Dnyanaseva Sanstha's

**AMDAR DEEPAKBHAI KESARKAR SCIENCE  
COLLEGE, DODAMARG**

Tal. - Dodamarg, Dist. - Sindhudurg - 416 512.

Department of Zoology

**CERTIFICATE**

Class: - T.Y. BSc

Year :- 2023-24

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25/10/23

Teacher-In-Charge

  
25/10/23

Head of Department  
Department of Zoology  
D.K.Sc. College Dodamarg

Examiner :

  
6/11/2023

Date :- 26/10/2023

  
26/10/2023





University of Mumbai

Shramik Vidyarthi Dnyanaseva Sanstha's

**AMDAR DEEPAKBHAI KESARKAR SCIENCE  
COLLEGE, DODAMARG**

Tal. - Dodamarg, Dist. - Sindhudurg - 416 512.

Department of Zoology

**CERTIFICATE**

Class: - T.Y. Bsc

Year :- 23-24

*This is to certify that, the work entered in this  
journal is the work of Shri/Smt/Kum ...Aishwarya a...  
Sanjay Naik..... who has worked for the Sem .....  
of the year 2023 -20 24 in the college laboratory.*

*A. S. Sutar*  
25/10/23  
Teacher-In-Charge

Examiner :

*Chingal*  
6.12.2023

*S. S. Sutar*  
6/12/2023

Date :- 25/10/23

*S. S. Sutar*  
25/10/23  
Head of Department  
Department of Zoology  
D.K.Sc. College Dodamarg





SHRAMIK VIDYARTHI DNYANSEWA SANSTHA'S

**AAM. DEEPAKBHAI KESARKAR SCIENCE COLLEGE, DODAMARG.**

DIST. : SINDHUDURG

**DEPARTMENT OF ZOOLOGY**

## **CERTIFICATE**


DATE : 19/04/ 2024


This is to certify that,

Mr./Miss. Kubal Manali Laxman

Exam no.

Has satisfactorily completed visit to 'Tour Report' in subject "ZOOLOGY" prescribed by Mumbai University, for T.Y.B.Sc. Semester VI during the year 2023-2024.

  
Teacher in charge

  
Head,

Dept. of Zoology

A.D.K.S.C. Dodamarg

**Head**  
Department of Zoology  
D K.Sc. College Dodamarg

Examiner's Sign.





**Principal**

Amdar. Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg

18 APR 2024



SHRAMIK VIDYARTHI DNYANSEWA SANSTHA'S

**AAM. DEEPAKBHAI KESARKAR SCIENCE COLLEGE, DODAMARG.**

**DIST. : SINDHUDURG**

**DEPARTMENT OF ZOOLOGY**

## **CERTIFICATE**

DATE : 18 / 4 / 2024


This is to certify that,

Mr./Miss. Neha. Narayan. Gawade

Exam no. 1014250

Has satisfactorily completed visit to 'Tour Report' in subject "ZOOLOGY" prescribed by Mumbai University, for T.Y.B.Sc. Semester VI during the year 2023-2024.

  
Teacher in charge

  
Head,

Dept. of Zoology

A.D.K.S.C. Dodamarg

Examiner's Sign.   
22/4/2024

Head  
Department of Zoology  
D.K.Sc. College Dodamarg

18 APR 2024



Principal  
Amdar. Deepakbhai Kesarkar Science College  
Dodamarg, Tal.Dodamarg, Dist.Sindhudrug

SHRAMIK VIDYARTHI DNYANSEWA SANSTHA'S

**AAM. DEEPAKBHAI KESARKAR SCIENCE COLLEGE, DODAMARG.**

DIST. : SINDHUDURG

**DEPARTMENT OF ZOOLOGY**

## **CERTIFICATE**


DATE : 19 / 4 / 2024

This is to certify that,

Mt./Miss. Chawan Gaun' Shamsunder

Exam no.

Has satisfactorily completed visit to 'Tour Report' in subject "ZOOLOGY" prescribed by Mumbai University, for T.Y.B.Sc. Semester VI during the year 2023-2024.

  
Teacher in charge

  
Head,

Dept. of Zoology

A.D.K.S.C. Dodamarg

Examiner's Sign.

  
22/4/24



18 APR 2024





SHRAMIK VIDYARTHILAY ANSARWAK SANSTHA'S

AAM. DEEPAKBHAI KESARKAR SCIENCE COLLEGE, DODAMARG.

DIST. : SINDHUDURG

DEPARTMENT OF ZOOLOGY

## CERTIFICATE

DATE : 19 / 04 / 2024

This is to certify that,

Mr. Miss. KUBAL POOJA BHANUDAS Exam no. 320

Has satisfactorily completed visit to 'Tour Report' in subject "ZOOLOGY" prescribed by Mumbai University, for T.Y.B.Sc. Semester VI during the year 2023-2024.

  
Teacher in charge

  
Head,

Dept. of Zoology

A.D.K.S. Dodamarg  
Department of Zoology  
D K.Sc. College Dodamarg

Examiner's Sign.

  
22/4/24

18 APR 2024



## Certificate.

This is to certify that Mr. Vedant Rukmanga Gawas, BSC III, Sem VII whose Roll No. - 319 had duly participated in necessary study tour at 'KSR Global Aquarium Kesari, Maharashtra. Conducted by department of zoology Ambar Deepakbhai Kesarkar Science College, Dodamang. 21/feb/2024 in part of completion of Semister Examination as per syllabus of BSC III<sup>rd</sup> & VII<sup>th</sup> Semister, Mumbai University. Mr. Vedant Rukmanga Gawas is student of this college completed the all field work to satisfactory.

Teacher in charge:

Dr More S.V. (HOD)

MS Sutar S.B (Asst Prof)

Mr Sinari A.S. (Asst Prof)

MS Shetkar A.E. (Asst Prof).

(19/2/24)  
19/4/2024

Dr More S.V.  
19/4/2024

Dr More S.V.

Department of zoology  
Ambar Deepakbhai Kesarkar  
Science College, Dodamang.





# Certificate.

This is to certify that Mr. Vedant Rukmangat Gawas, Bsc III, Sem VII whose Roll No. 315 had duly participated in necessary study tour at 'Koyana wild life sanctuary' 'Koyana'. Conducted by department of zoology Andar Deepakbhai Kesarkar Science College, Dodamarg. 21 Feb 2024 in part of completion of Semister Examination as per syllabus of Bsc III<sup>rd</sup> & VI<sup>th</sup> Semister, Mumbai University. Mr. Vedant Rukmangat Gawas is student of this college completed the all field work satisfactorily.

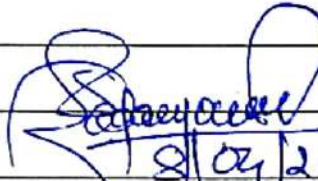
Teacher in charge:

Dr More S.V. (HOD)

Ms Sutar S.B. (Asst Prof)

Mr Sinari A.S. (Asst Prof)

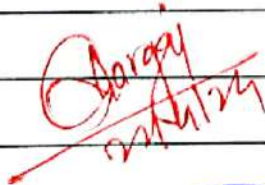
Ms Shetkar A.E. (Asst Prof)

  
8/02/2024

Dr more S.V.

Department of zoology  
Andar Deepakbhai Kesarkar  
D.K.Sc. College Dodamarg  
Science College, Dodamarg

- org







SHRAMIK VIDYARTHI DNYANSEWA SANSTHA'S

**AAM. DEEPAKBHAI KESARKAR SCIENCE COLLEGE, DODAMARG.**

DIST. : SINDHUDURG

**DEPARTMENT OF ZOOLOGY**

## **CERTIFICATE**

DATE : 19/04/2024

This is to certify that,

Mr./Miss. Kubal Manali Laxman

Exam no.

Has satisfactorily completed visit to 'Tour Report' in subject "ZOOLOGY" prescribed by  
Mumbai University, for T.Y.B.Sc. Semester VI during the year 2023-2024.



Teacher in charge



Head,

Dept. of Zoology

A.D.K.S.C. Dodamarg

Examiner's Sign.



19-4-2024

Head  
Department of Zoology  
D.K.Sc. College Dodamarg

18 APR 2024



**AAM. DEEPAKBHAI KESARKAR SCIENCE COLLEGE, DODAMARG.**

**DIST. : SINDHUDURG**

**DEPARTMENT OF ZOOLOGY**

# **CERTIFICATE**

DATE : 18 / 04 / 2024

This is to certify that,

Mr./Miss. Gawas Shailaja Dnyaneshwar

Exam no. 1014251

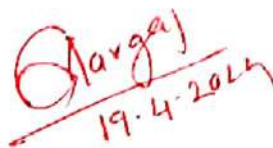
Has satisfactorily completed visit to 'Tour Report' in subject "ZOOLOGY" prescribed by Mumbai University, for T.Y.B.Sc. Semester VI during the year 2023-2024.

  
Teacher in charge

  
Head, Head  
Department of Zoology  
D.K.Sc. College Dodamarg  
Dept. of Zoology

A.D.K.S.C. Dodamarg

Examiner's Sign.

  
19.4.2024

18 APR 2024



SHIRAMIK VIDYARTHI DNYANSEWA SANSTHA'S

AAM. DEEPAKBHAI KESARKAR SCIENCE COLLEGE, DODAMARG.

DIST. : SINDHUDURG

DEPARTMENT OF ZOOLOGY

## CERTIFICATE

DATE : 18/4/2024

This is to certify that,

Mr./Miss. Chawan Gauri Shamsunder

Exam no.

Has satisfactorily completed visit to 'Tour Report' in subject "ZOOLOGY" prescribed by Mumbai University, for T.Y.B.Sc. Semester VI during the year 2023-2024.

  
Teacher in charge

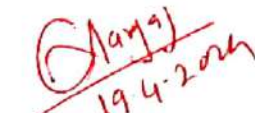
  
Head,

Dept. of Zoology

A.D.K.S.C. Dodamarg

Head,  
Department of Zoology  
A.D.K.S.C. College Dodamarg

Examiner's Sign.

  
19-4-2024



18 APR 2024





SHRAMIK VIDYARTHI DNYANSEWA SANSTHA'S

AAM. DEEPAKBHAI KESARKAR SCIENCE COLLEGE, DODAMARG.

DIST. : SINDHUDURG

DEPARTMENT OF ZOOLOGY

## CERTIFICATE

DATE : 19 / 04 / 2024

This is to certify that,

Mr./Miss. KUBAL POOJA BHANUDAS Exam no.

Has satisfactorily completed visit to 'Tour Report' in subject "ZOOLOGY" prescribed by  
Mumbai University, for T.Y.B.Sc. Semester VI during the year 2023-2024.



Teacher in charge



Head,

Dept. of Zoology

A.D.K.S.C. Dodamarg

Department of Zoology  
D.K.Sc. College Dodamarg

Examiner's Sign.

Gargi  
19.4.2024

18 APR 2024



SHRAMIK VIDYARTHI DNYANSEWA SANSTHA'S

**AAM. DEEPAKBHAI KESARKAR SCIENCE COLLEGE, DODAMARG.**

**DIST. : SINDHUDURG**

**DEPARTMENT OF ZOOLOGY**


## **CERTIFICATE**

DATE : 18 /04/ 2024

This is to certify that,

Mr./Miss. *Sutar Ninad Nandkumar* Exam no. 1014256

Has satisfactorily completed visit to 'Tour Report' in subject "ZOOLOGY" prescribed by Mumbai University, for T.Y.B.Sc. Semester VI during the year 2023-2024.

  
Teacher in charge

  
Head,

Dept. of Zoology

A.D.K.S.C. Dodamarg

Examiner's Sign.

  
19.4.2024



Principal  
Amdar. Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg





SHRAMIK VIDYARTHI DNYANSEVA SANSTHA'S

**AMDAR DEEPAKBHAI KESARKAR SCIENCE COLLEGE**

( AFFILIATED TO UNIVERSITY OF MUMBAI )

DODAMARG, DIST. – SINDHUDURG 416 512 ( M. S.)

EMAIL – [dkscsci@gmail.com](mailto:dkscsci@gmail.com)

TEL. NO. – 02363 256755

ESTD. – 2012

COLLEGE CODE – 166

## Criteria 1

### Curricular Aspects

**Key Indicator – 1.3 Curriculum Enrichment**

### Field Visit Reports & Sample copy of Project Work







SHRAMIK VIDYARTHI DNYANSEVA SANSTHA'S

# AMDAR DEEPAKBHAI KESARKAR SCIENCE COLLEGE

( AFFILIATED TO UNIVERSITY OF MUMBAI )

DODAMARG, DIST. - SINDHUDURG 416 512 ( M. S. )

EMAIL - [dkscsci@gmail.com](mailto:dkscsci@gmail.com)

TEL. NO. - 02363 256755

ESTD. - 2012

COLLEGE CODE - 166

## Report On

### One-Day Monsoon Trip at Tilari Nagar - Tilari Ghat, Western Ghats

Date: 19/08/2023

Location: Tilari Nagar - Tilari Ghat, Western Ghats

Participants: 17 students from the Department of Zoology at Amdar Deepakbhai Kesarkar Science College, along with the Head of Department and other teaching and non-teaching staff.

Introduction: The one-day monsoon trip to Tilari Nagar - Tilari Ghat in the Western Ghats organized by the Department of Zoology and Nature Club committee at Amdar Deepakbhai Kesarkar Science College was an educational and enriching experience. The primary focus of this trip was to observe and study the diverse flora and fauna of this region.

#### Activities and Highlights:

1. Flora and Fauna Observation: The day began with an early morning nature walk through the dense rainforest of Tilari Ghat. Students and faculty members had the opportunity to observe and document the various plant and animal species present in their natural habitat. The lush greenery and vibrant biodiversity of the Western Ghats were truly mesmerizing.
2. Photography and Identification: The participants were encouraged to capture photographs of the wildlife and plant species they encountered. These photographs were later used for species



*C. S. S.*  
Principal

Amdar, Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg

identification and documentation. The trip allowed students to develop their skills in wildlife photography and research.

3. **Interactive Sessions:** Throughout the day, there were interactive sessions conducted by faculty members, offering insights into the behaviour and ecology of the species encountered. These sessions enhanced the participants' understanding of the Western Ghats' unique ecosystems.

4. **Swapanawel Waterfall:** One of the trip's highlights was the visit to the stunning Swapanawel Waterfall in Tilari Nagar. The participants enjoyed the breathtaking scenery and had the opportunity to cool off in the refreshing waters of the waterfall.

5. **Group Discussions and Knowledge Sharing:** The trip fostered an atmosphere of learning and knowledge sharing. Group discussions were held at various locations to share observations and insights. These discussions proved invaluable in broadening the participants' understanding of the region's biodiversity.

#### Conclusions:

The one-day monsoon trip to Tilari Nagar - Tilari Ghat provided a unique opportunity for students and staff to connect with nature and gain practical knowledge in the field of zoology. The Western Ghats, known for its rich biodiversity, did not disappoint, as participants had the privilege of witnessing various species of animals and plants in their natural habitat.

This trip not only facilitated academic learning but also instilled a sense of environmental conservation and a deep appreciation for the beauty of the Western Ghats. The experience at Swapanawel Waterfall added an element of fun and relaxation to the educational journey.

The event was a resounding success, and the Department of Zoology at Amdar Deepakbhai Kesarkar Science College looks forward to organizing more such excursions in the future to promote ecological awareness and research in this ecologically significant region.





*Cune*  
Principal  
Amdar. Deepakbhai Kesarkar Science College  
Dodamarg, Tal.Dodamarg, Dist.Sindhudrug



**Amdar Deepakbhai Kesarkar Science College, Dodamarg**

**Department of Chemistry**

**Activity Report**

Name of Activity	Industrial Visit
Date	20 <sup>th</sup> December 2023
Organized By	Department of Chemistry
Activity For	S.Y.B.Sc. Students
Number of Participants	25
Objectives of Activity	<ul style="list-style-type: none"><li>-Provide an exposure to students about practical working environment.</li><li>-Opportunity to interact with big businesses</li><li>- To appreciate industry best practices in chemical safety, handling, and disposal, and to understand the importance of adherence to chemical regulations and standards in environmental protection.</li></ul>
Outcomes	<ul style="list-style-type: none"><li>-Students appreciated the interactive nature of the visit, which allowed for active participation and learning.</li><li>-Students expressed gratitude for the valuable insights gained during the visit, especially regarding the practical applications of chemistry in environmental pollution prevention and control</li></ul>



  
Coordinator



  
Principal  
Amdar Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg

# **Am.Deepakbhai Kesarkar Science College,Dodamarg**


## Department Of Chemistry

Notice

Date 16/12/2023

All the S.Y.B.Sc students hereby inform you that, their industrial visit is organized on Wednesday, 20th Dec.2023 at Sadekar Enviro.Engineering Goa.

Note. Request to all the students gather at college campus sharply on 8:30 am



HoD  
Head  
Department of Chemistry  
D.K.Sc. College Dodamarg



Principal  
Amr. Deepakbhai Kesarkar Science College  
Dodamarg, Tal.Dodamarg, Dist.Sindhudurg

Date-16/12/2023

To,

Prof. M. V. Golase

I/C Principal,

Amdar Deepakbhai Kesarkar Science College,  
Dodamarg.

**Subject-Seeking Permission for Industrial visit**


Respected Sir,

Department of Chemistry has organised Industrial Visit on 20/12/2023 to Sadekar Enviro.Pvt.Ltd Goa.

This visit might help the students in attaining good knowledge in desired fields making it easy for them to understand the practical working in industry. I ensure all students will definitely maintain the decorum at the place. I eagerly await your positive response.

Thank you,

Yours Faithfully,

  
Head  
Department of Chemistry  
D.K.Sc. College Dodamarg

  
Principal  
Amdar. Deepakbhai Kesarkar Science College  
Dodamarg, Tal.Dodamarg, Dist.Sindhudurg





# SHRAMIK VIDYARTHI DNYANSEVA SANSTHA'S AMDAR DEEPAKBHAI KESARKAR SCIENCE COLLEGE

(AFFILIATED TO UNIVERSITY OF MUMBAI)

DODAMARG, DIST - SINDHUDURG - 416 512 (M.S)

E-mail - dkscsci@gmail.com

ESTD. - 2012

Tel. No. - 02363-256755

COLLEGE CODE - 166

Ref. No. DKSC/2023-24/105

Date : 19/12/2023

To,

CEO,

Sadekar Enviro. Engineering Pvt. Ltd.

Bardez, Porvorim,

Goa.

## Subject- Visitor list

Respected Sir,

As per our discussion, following Students & Teachers are will come for Industrial Visit on 20/12/2023.

Sr. No.	Name	Designation	Sr. No.	Name	Designation
1	Gaichor Shubham Vasudev	Student	15	Patil Ganesh Gopal	Student
2	Gawade Shivram Prakash	Student	16	Patil Navnath Dhondiram	Student
3	Gawas Diksha Digamber	Student	17	Pedaneekar Madhusudan Rajaram	Student
4	Gawas Kameshwari Pandurang	Student	18	Raul Sushant Santosh	Student
5	Gawas Lavkesh Vasudev	Student	19	Sarvane Rushikesh Tanaji	Student
6	Gawas Prathamesh Prabhakar	Student	20	Sawant Sanket Baburao	Student
7	Gawas Roshan Gopi	Student	21	Sawant Sushmita Eknath	Student
8	Gawas Shubham Pandurang	Student	22	Shivngekar Kishori Jotiba	Teacher
9	Jeshtnaik Shraddha Bhanudas	Student	23	Sutar Ganga Balkrishna	Student
10	Kharvat Janavi Janu	Student	24	Thakar Adhikesh Vilas	Student
11	Khedekar Roshani A.	Student	25	Gawas Roshani Ramesh	Student
12	Kotekar Pranali Parshuram	Student	26	Mr. N. M. Chougale	Teacher
13	Naik Sanchit Dayanand	Student	27	Mrs. S. B. Malik	Teacher
14	Paryekar Pankaj Nanda	Student	28	Mr. Amol Jadhav	Non-Teach

Thank you,

Yours Faithfully,



20/12/2023

*Ganesh*  
Principal

Amdar. Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg

# **STUDY ON HYPERTENSION PATIENT, SIDE EFFECTS & HOW TO CONTROL**



  
Principal  
Amdar, Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudrug

# **HYPERTENSION SURVEY**

## **TO STUDY CAUSE OF HYPERTENSION**

SUBMITTED TO THE MUMBAI UNIVERSITY MUMBAI

FOR THE DEGREE OF

BACHELOR OF SCIENCE

IN

CHEMISTRY

UNDER THE FACULTY OF SCIENCE

BY

**SALONI DNYANESHWAR MAYEKAR**

**GAURI VIJAY NIRALAGI**

**AAKASH ARJUN PARAB**

**SAMEER UDAY MORAJKAR**

**DATTAPRASAD PANDURANG NAIK**

UNDER THE GUIDANCE OF


**MRS. S.B. MALIK MADAM**

DEPARTMENT OF CHEMISTRY

**AMDAR DEEPAKBHAI KESARKAR SCIENCE COLLAGE**

**DODAMARG**

**APRIL - 2024**

  
Head  
Department of Chemistry  
D.K.Sc. College Dodamarg



  
Principal  
Amdar. Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudrug



# Amdar Deepakbhai Kesarkar Science College Dodamarg

At/Post - Dodamarg, Tal. Dodamarg, Dist. Sindhudurg 416512


## Certificate

This is to certify that Ms/Mr Saloni Dnyaneshwar Magekar  
has worked and duly completed her/his Project Work for the degree of Bachelor under  
the Faculty of Science in the subject of Drugs and Dyes and  
her/his project is entitled, 'Hypertension survey  
....." under my supervision.

I further certify that the entire work has been done by the learner under my guidance.

It is her his own work and facts reported by her/ his personal findings and  
investigations.



  
Head  
Department of Chemistry  
D.K.Sc. College Dodamarg

  
(Mr. S. B. Malik)  
Name and Signature of

Date of submission:

25/04/2024



  
Principal  
Amdar. Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg

# Amdar Deepakbhai Kesarkar Science College Dodamarg

At/Post - Dodamarg, Tal. Dodamarg, Dist. Sindhudurg 416512

## Certificate

This is to certify that Ms/Mr Sameer Uday Moralkar  
has worked and duly completed her/his Project Work for the degree of Bachelor under  
the Faculty of Science in the subject of Drugs and Dyes and  
her/his project is entitled, 'Hypertension Survey  
....." under my supervision.

I further certify that the entire work has been done by the learner under my guidance.

It is her his own work and facts reported by her/ his personal findings and  
investigations.



Head  
Department of Chemistry  
D.K.Sc. College Dodamarg

Date of submission:

25/04/2024

S. B. Malik  
Name and Signature of

Principal  
Amdar Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg

# Amdar Deepakbhai Kesarkar Science College Dodamarg

At/Post - Dodamarg, Tal. Dodamarg, Dist. Sindhudurg 416512

## Certificate

This is to certify that Ms/Mr .....Rattaprasad Pandurang Naik.....  
has worked and duly completed her/his Project Work for the degree of Bachelor under  
the Faculty of Science in the subject of .....Drugs and Dyes..... and  
her/his project is entitled, '.....Hypertension Survey.....  
....." under my supervision.

I further certify that the entire work has been done by the learner under my guidance.

It is her his own work and facts reported by her/ his personal findings and  
investigations.



S. B. Malik  
(Mr. S. B. Malik)

Name and Signature of

Head  
Department of Chemistry  
D.K.Sc. College Dodamarg

Date of submission:

25/04/2024

G. S. G. S.  
Principal

Amdar. Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg



# Amdar Deepakbhai Kesarkar Science College Dodamarg

At/Post - Dodamarg, Tal. Dodamarg, Dist. Sindhudurg 416512

## Certificate

This is to certify that Ms/Mr Aravai Vijay Muralagi  
has worked and duly completed her/his Project Work for the degree of Bachelor under  
the Faculty of Science in the subject of Drugs and Dyes and  
her/his project is entitled, 'Hyperextension Survey  
....." under my supervision.

I further certify that the entire work has been done by the learner under my guidance.

It is her his own work and facts reported by her/ his personal findings and  
investigations.



S. B. Malik  
Mrs. S. B. Malik

Name and Signature of

[Signature]

Head  
Department of Chemistry  
D.K.Sc. College Dodamarg

Date of submission:

25/04/2024

[Signature]  
Principal

Amdar, Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg

# Amdar Deepakbhai Kesarkar Science College Dodamarg

At/Post - Dodamarg, Tal. Dodamarg, Dist. Sindhudurg 416512

## Certificate

This is to certify that Ms/Mr ..... Aakash Arjun Parab .....  
has worked and duly completed her/his Project Work for the degree of Bachelor under  
the Faculty of Science in the subject of ..... Drugs and Dyes ..... and  
her/his project is entitled, '..... Hypertension Survey .....  
....." under my supervision.

I further certify that the entire work has been done by the learner under my guidance.

It is her his own work and facts reported by her/ his personal findings and  
investigations.



S. B. Malik  
(Mr. S. B. Malik)  
Name and Signature of

[Signature]  
Head  
Department of Chemistry  
D.K.Sc. College Dodamarg

Date of submission:  
25/04/2024

[Signature]  
Principal  
Amdar Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg

## *Acknowledgment*

I would like to acknowledge the following as being idealistic channels and fresh dimensions in the completion of this project.

I take this opportunity to thank the **University of Mumbai** for giving me chance to do this project.

I would like to thank my **Principal**, ..... Mr. M. V. Golare .....  
for providing the necessary facilities required for completion of this project.

I would also like to express my sincere gratitude towards my project guide  
..... Mrs. Suchita Malik ..... whose guidance and  
care made the project successful.

  
Principal

Amdar. Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg



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# Introduction

High Blood Pressure also known as Hypertension, is a widespread health issue affecting millions of individuals world wide. It is significant risk factor for caediovascular disease, stroke and other complications. Making its management crusial for overall health and well-being.

This project aims to search into various aspects of Blood Pressure management and it's implication's for patient care. The objective of the project is to comprehensively understand the factor contributing to high BP and to find effective strategies for this prevention and management.

Through a multidisciplinary approach we aim to investigate the rate of lifestyle modificationns, medication, and other interventions in achieving optimal BP control. We seek to evaluate the impact of socioeconomics factorr, genetic prediposition and BP management strategies with the ultimate goal of improving patient outcome and reduce burden of hypertension complicatoin. Through the systematic analysis of available data and case studies we aim to identify the gap in current practice. Ultimately this project aims to study and enhance our understanding of high blood pressure and the way for more personalized and effective approaches to it's prevention and treatment.



# HYPERTENSION

Blood Pressure is the pressure of circulating blood against the wall of blood vessels. Most of this pressure results from the heart pumping blood through the circulatory system.

In simple hypertension is a common condition where the force of blood against our artery wall is consistently too high. it leads to the serious diseases like heart disease, stroke and kidney problems if not managed.

Hypertension usually does not cause symptoms itself. It is however a major risk factor for stroke, caronary artery disease, heart faliure, vision loss and chronic kidney disease. Hypertenison is a major cause of premature death worldwide.





# INCREASING HYPERTENSION

In most cases its not clear exactly what causes high blood pressure but there are something that can increase high blood pressure.

- Over Weight
- Eating Too much Salt & not taking enough of fruits and vegetables
- Drink too much alcohol and coffee
- Smoke
- Have lot of stress
- Have a relative with high blood pressure



## Differents types of Tablets available for Hypertension

sr.no.	Tablet Name	Active Pharmaceutical Ingredient	price
1.	Amlosev-5	Amlodipine	rs.
2.	Amlip-5	Amlodipine	rs.27
3.	Amlokind-5	Amlodipine	rs.34
4.	Amlodep-5	Amlodipine	rs.24
5.	Aztor-20	Atorvastatin	rs.
6.	Losakind-25	Losartan	rs.29
7.	Losar-25	Losartan	rs.38
8.	Macsart-40	Telmisartan	rs.
9.	Telmikind-40	Telmisartan	rs.
10.	Aten-50	Atenolol	rs.









# Hypertension Survey Form

Name :- \_\_\_\_\_

Age :- \_\_\_\_\_

Sex :- \_\_\_\_\_

Weight :- \_\_\_\_\_

1. Are you currently taking any medication for your high blood pressure? If yes please list the name of medicine.

Ans: \_\_\_\_\_

2. What is the dose?

Ans: \_\_\_\_\_

3. Which active pharmaceutical ingredients present in the given tablet?

Ans: \_\_\_\_\_

4. Brand name and company name of the medicine

Ans: \_\_\_\_\_

5. What is the price of the one strip of tablet?

Ans: \_\_\_\_\_

6. What are the Side effect of tablet ?

Ans: \_\_\_\_\_

7. Do you have any family history of this?

Ans: \_\_\_\_\_

8. From how many years you are consuming tablet?

Ans: \_\_\_\_\_

9. Have you made any lifestyle changes to help manage your high blood pressure?

Ans: \_\_\_\_\_

10. Are you involved in regular physical activity or exercise ?

Ans: \_\_\_\_\_



11. Do you feel any symptoms if you miss your tablet for one day

Ans: \_\_\_\_\_  
\_\_\_\_\_

12. Have you experienced any complications related to your High blood pressure

Ans: \_\_\_\_\_  
\_\_\_\_\_

13. On average how often do you check your blood pressure

Ans: \_\_\_\_\_  
\_\_\_\_\_

14. Do you Smoke or Consume alcohol ?

Ans: \_\_\_\_\_

## LIST OF BLOOD PRESSURE PATIENTS

Sr. No.	Name of Patient	Age	Weight	Sex	Medicine Name
1.	Sonu Gopal Kubal	55	70	M	M tech – 40
2.	Shrikant Shantaram Gawas	63	42	M	Amlosev - 5
3.	Vidyadhar Vasant Salkar	63	55	M	Losar – 25
4.	Subhash Arjun Naik	62	52	M	Amlosev – 5
5.	Sakharam Bhikaji Naik	78	55	M	Amlosev – 5
6.	Shantabai Lakhappa Niralagi	86	28	F	Amlosev – 5
7.	Vitthal Krishna Gawas	55	62	M	Amlip – 5
8.	Jaywanti Jayram Paryekar	60	28	F	Amlosev – 5
9.	Bharti Santosh Fatak	50	65	F	M-Tech – 40
10.	Ladu Vithu Jadhav	55	78	M	Telmikind – 40
11.	Milind Keshav Manerikar	57	80	M	M-Tech-40
12.	Vidya Vilas Sutar	42	61	F	Verifia-50
13.	Shrimati Ramdas Gawas	55	65	F	Losar – 25
14.	Eknath Pandurang Sawant	46	66	M	M-Tech – 40
15.	Sulochana Tukaram Malik	65	50	F	Amlosev- 5
16.	Ramdas Vasudev Parab	72	65	M	Amlokind-5
17.	Gangaram Rama Ghogale	68	55	M	Losar – 25
18.	Vijay Baburao Dalvi	52	50	M	Mascart – 40
19.	Manisha Mahadev Dhauskar	62	49	F	Losakind-25
20.	Kavita Krishna Dhauskar	57	48	F	Losakind-25
21.	Kavita Govind Dhauskar	56	45	F	Losar – 25
22.	Dattaram Narayan Dhauskar	70	60	M	Amlip-5
23.	Anil Kakul Parab	43	55	M	Telmikind-40
24.	Babu Rajaram Chavan	68	70	M	Losar-25
25.	Shrimati Narayan Bordekar	72	48	F	Amlokind- 5
26.	Vinita Uttam Parab	69	52	F	Amlosev – 5
27.	Shubhangi Pandurang Bhujbal	68	56	F	Amlip – 5
28.	Gajanan Narayan Naik	67	64	M	Amlokind-5
29.	Deepali Dayanand Dhauskar	55	70	F	Amlokind-5
30.	Dayanand Uttam Dhauskar	69	65	M	Losar-25

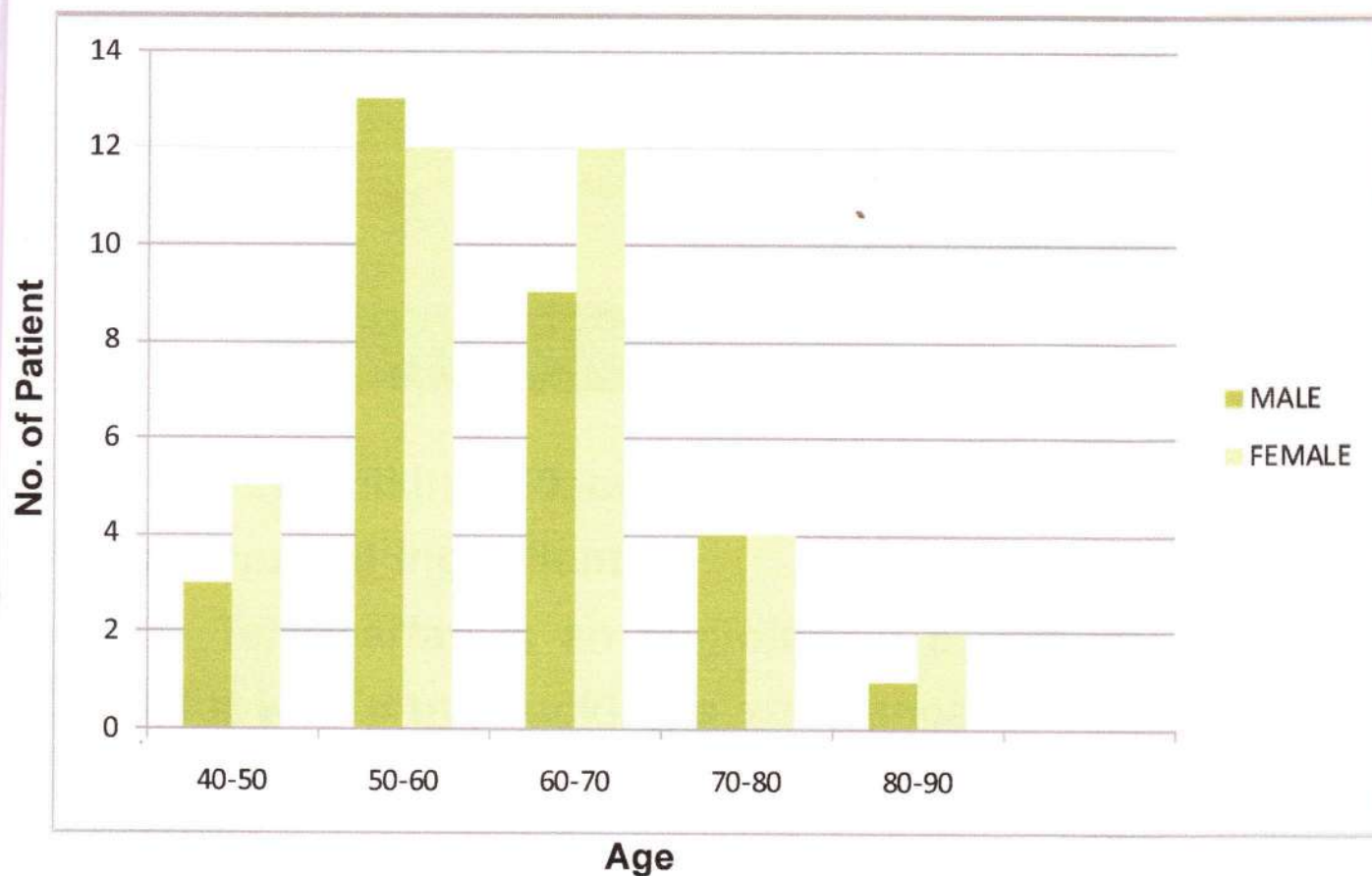




31.	Devanand Amrut Mayekar	58	82	M	Telmikind- 40
32.	Sitabai Sakharam Mayekar	50	56	F	Amlosev-5
33.	Ashwini Ashok Mayekar	47	65	F	Amlokind – 5
34.	Mamta Mangesh Mayekar	51	50	F	Telmikind-40
35.	Sumitra Soma Mayekar	68	72	F	Amlosev-5
36.	Ashwini Ashok Bidaye	65	60	F	Amlip-5
37.	Padmavati Prakash Gad	59	68	F	Verifica-M-50
38.	Rajeshri Rajaram Gawade	65	55	F	Losakind-25
39.	Bhagyashri Bharat Mayekar	47	69	F	Amlip-5
40.	Vaishali Jaywant Kubal	61	63	F	Telmikind-40
41.	Rajeshri Rajaram Mayekar	56	66	F	Telmikind-40
42.	Vitthal Vishnu Mayekar	75	64	M	Amlosev-5
43.	Darshana Tanaji Gawade	57	79	F	Verifica-M-50
44.	Kalpana Baban Budkule	50	71	F	Amlokind-5
45.	Suhasini Sudhakar Tople	70	61	F	Losakind- 25
46.	Rukmini Pandurang Bhise	74	73	F	Telmikind- 40
47.	Sudhir Mahadev Morajkar	52	63	M	AZTOR-20
48.	Ravindra Mangesh Kabade	74	68	M	Amlosev-5
49.	Bipin Pundalik Gaundalkar	57	74	M	Cilniblue-5
50.	Supriya Narayan Narvekar	64	79	F	Telmikind-40
51.	Shivram Krishna Rane	71	80	M	Mascart-40
52.	Pratibha Shivram Rane	47	58	F	Amlip -5
53.	Pushpa Satish Tople	57	65	F	Amlosev-5
54.	Vinod Atmaram Dangi	63	70	M	Telmikind-40
55.	Eknath Shankar Dangi	57	81	M	Losakind-25
56.	Rupavati Ramesh Pednekar	56	72	F	Macsart-40
57.	Usha Santosh Kesarkar	58	63	F	Telmikind-40
58.	Nilesh Suresh Kubde	53	71	M	Amlodep-5
59.	Vikas Mangesh Karmalkar	53	67	M	Amlokind-5
60.	Aruna Ashok Juvekar	60	80	F	Amlosev-5



## Graph from the collected data





## Telmikind 40



Telmikind 40 contains "Telmisartan" as active pharmaceutical ingredient.

Telmisartan is an angiotensin II receptor blocker (ABR) It works by blocking a substance in the body that causes blood vessels to tighten. In result it relaxes the blood vessel. This lowers blood pressure and increases the supply of blood and oxygen to the heart

**Common Side Effects :-** Difficulty or Painful Urination, Increased Heartbeat, Diarrhoea, Back Pain, Weakness, Muscle Pain, Fever

**Similar Tablet :-**





# Losakind 25

Losakind 25 contains "Losartan" as active pharmaceutical ingredient.

Losartan is used to treat high blood pressure and help to protect the kidneys from damage due to diabetes. It is an angiotensin receptor blocker (ARB). Its widely used to treat high blood pressure and heart failure. It also used to protect diabetic kidney disease.

**Common Side Effects :-** Dizziness, Diarrhoea, Tiredness



## COMMON WAYS TO PREVENT HYPERTENSION

We can prevent high blood pressure by changing our lifestyle.

Like:

- 1) **Eating Healthy Diet** – To help Manage our Blood Pressure we should limit the amount of Sodium that we eat and increase the amount of Potassium in our life. it also important to eat foods that are lowering fats.
- 2) **Getting Regular Exercise** – Exercise can help us maintain a healthy weight and lower our pressure.
- 3) **Being at Healthy Weight** – Being over weight or having obesity increases our risk for High Blood Pressure and also reduces risk of other health Problems.
- 4) **Limiting Alcohol** – Drinking Too Much alcohol can raise our Blood Pressure. It add extra Calories which may results in weight gain. Which would initially increase the risk of BP and other diseases.
- 5) **No Smoking** – Cigarettee smoking raises our Blood Pressure and put us at higher risk of Heart Attack and Stroke.
- 6) **Managing Stress** – We should learn how to relax and manage stress which can help to improve our emotional and mental or physical health and which will result in lowering our Blood Pressure. Some stress managing technics like exercise, listening to music and meditation Etc.

If you already have High Blood Pressure it is important to prevent from getting worse which can cause other complications. We should get regular medical care and a great plan including healthy lifestyle habbit and active life.





## Amlosev 5



**Amlosev 5 contains “Amlodipine Besylate” as active ingredient**

Amlosev tablet works by relaxing blood vessel so that the blood can flow more easily around your body. This lowers blood pressure and reduce your risk of having a stroke, a heart attack or kidney problem in future. Do not usually feel any direct benefit from taking this medicine but it works in the long term to keep you well. It is a calcium channel blocker. In high blood pressure it normalises the blood pressure by relaxing the blood vessel to reduce the pressure on them. Thereby improving the blood flow in the body.

**Common Side effect :- Headache, Fatigue, Nausea, Abdominal pain, Sleepiness.**

**similar Tablet :**





## CONCLUSION

From the whole project/ Survey which we have done we came to a conclusion that hypertension does not have any symptoms most of the times. But over a time if it is untreated it can cause major health issues like heart diseases.

There is no cure for high blood pressure. But treatment can lower blood pressure that is too high. If it is mild, high blood pressure may sometimes be brought under control by making changes to a healthier lifestyle.

From the survey we came to know that people above 60 years take amlose,amlip ect tablets which contains "Amlodipine" as active pharmaceutical ingredient.

"Amlodipine" is a calcium Chanel blocker. In case of hypertension it normalises the blood pressure by relaxing the blood vessels to reduce the pressure on them

According to our survey we conclude that Hypertension problem starts from the age of 35 only due to changing lifestyle.

So it must to take precautions and to control Blood Pressure from the Age of 35 - 40 before it get worse.

Theirs no medicine from which you can get rid of hypertension. Medication and yoga only controls the High blood pressure, but no changing our lifestyle we can control it and can lead to a healthy life.



  
Principal  
Amdar, Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudrug

## REFERENCE:

[https://www.who.int/news-room/fact-sheets/detail/hypertension/?gad\\_source=1&gclid=CjwKCAjwoa2xBhACEiwA1sb1BOu2ysZTfBZ0ZuOhY32hf0FAHqx-BV3jtipgVtJomnmPTJq35wSJ3Ro](https://www.who.int/news-room/fact-sheets/detail/hypertension/?gad_source=1&gclid=CjwKCAjwoa2xBhACEiwA1sb1BOu2ysZTfBZ0ZuOhY32hf0FAHqx-BV3jtipgVtJomnmPTJq35wSJ3Ro)

<https://www.cdc.gov/bloodpressure/about.htm#:~:text=Blood%20pressure%20is%20measured%20using,your%20heart%20rests%20between%20beats.>



## *Declaration by learner*

I the undersigned Miss / Mr. Saloni Dnyaneshwar Mayekar..... here by,  
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Survey.....",

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Name and signature of the Guiding Teacher

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work.

I, here by further declare that all information of this document has been obtained and presented in accordance with academic rules and ethical conduct.

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Aakash Arjun Parab  
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SHRAMIK VIDYARTHI DNYANSEVA SANSTHA'S

# AMDAR DEEPAKBHAI KESARKAR SCIENCE COLLEGE

( AFFILIATED TO UNIVERSITY OF MUMBAI )

DODAMARG, DIST. - SINDHUDURG 416 512 ( M. S.)

EMAIL - [dkscsci@gmail.com](mailto:dkscsci@gmail.com)

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ESTD. - 2012

COLLEGE CODE - 166

## Report On Study Tour 2023-2024

### **Introduction:**

Amdar Deepakbhai Kesarkar College, Dodamarg, organized an enriching study tour to Mahabaleshwar and Koyna Wildlife Sanctuary from February 22, 2024, to February 23, 2024. The tour was designed to offer 45 students, accompanied by 4 teachers and 2 non-teaching staff, practical exposure to the fields of flora and fauna as well as wildlife conservation.

### **Tour Overview:**

#### **1. Mahabaleshwar:**

The first leg of the journey took the group to Mahabaleshwar, a scenic hill station renowned for its natural beauty and biodiversity.

#### **Activities and Learning:**

**Exploration of Flora:** Students engaged in a detailed study of the diverse plant species in the area, including medicinal herbs and endemic plants. This provided them with insights into plant diversity and the ecological significance of various species.

**Observation of Fauna:** During the visit, students observed the region's wildlife, including common species and their habitats. This hands-on experience helped them understand animal behaviour and the challenges they face in their natural environment.

#### **2. Koyna Wildlife Sanctuary:**

The tour continued to the Koyna Wildlife Sanctuary, a crucial protected area known for its rich biodiversity and conservation efforts.





### **Activities and Learning:**

**Wildlife Observation:** Students participated in guided safaris and wildlife observation sessions. They had the opportunity to view a range of species, including tigers, leopards, and various types of deer. This experience provided practical insights into wildlife conservation and habitat management.

**Conservation Practices:** The group interacted with forest rangers and conservationists, gaining knowledge about the sanctuary's conservation strategies, anti-poaching measures, and efforts to preserve endangered species.

### **Educational Outcomes:**

The study tour achieved its objectives by offering valuable practical experience and insights into flora, fauna, and wildlife conservation. The key outcomes included:

**Enhanced Knowledge:** Students developed a deeper understanding of plant and animal species, their ecological roles, and the importance of conservation efforts.

**Real-World Experience:** The tour bridged the gap between classroom learning and real-world application, providing students with hands-on experience in environmental science.

**Increased Awareness:** Participants gained awareness of conservation challenges and the significance of protecting natural habitats.

### **Conclusion:**

The study tour to Mahabaleshwar and Koyna Wildlife Sanctuary was a highly successful educational initiative by Amdar Deepakbhai Kesarkar College. It provided students with invaluable practical knowledge and a greater appreciation for flora and fauna. The experiences and insights gained during this tour will significantly enhance their academic understanding and contribute to their personal growth.



### Acknowledgments:

The college extends its sincere thanks to the tour organizers, guides, and conservation experts who facilitated this enriching experience. Their support was essential in making the study tour a memorable and educational journey.



*C. S. S.*  
**Principal**  
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SHRAMIK VIDYARTHI DNYANSEWA SANSTHA'S

AAM. DEEPAKBHAI KESARKAR SCIENCE COLLEGE, DODAMARG.

DIST. : SINDHUDURG

DEPARTMENT OF ZOOLOGY

## CERTIFICATE

DATE : 18/04/2024

This is to certify that,

Mr./Miss. GAWAS SHAILAJA DNYANESHWAR Exam no. 1014251

Has satisfactorily completed visit to 'Tour Report' in subject "ZOOLOGY" prescribed by Mumbai University, for T.Y.B.Sc. Semester VI during the year 2023-2024. US 20604

  
Teacher in charge

  
Head,

Dept. of Zoology

A.D.K.S.C. Dodamarg

Examiner's Sign.

  
22/4/2024

11 8 APR 2024




  
Head  
Department of Zoology  
D.K.Sc. College Dodamarg

  
Principal  
Amdar. Deepakbhai Kesarkar Science College  
Dodamarg, Tal. Dodamarg, Dist. Sindhudurg

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# A Field Tour Report On Zoology

Dated on 22/02/2024

at

MAHABALESHWAR & KOYNA

Submitted to,

The dept. of. zoology, Aamdar  
Deepakbhai Kesarkar Science College Dodamarg  
for the T.Y. BSc - Sem VI<sup>th</sup> in zoology paper  
IV /- Examination 2023-24,  
University of Mumbai.

Submitted by -

Name - Grawas Shailaja Dnyaneshwar.

Roll No. - 314

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Year - 2023-2024 T.Y. BSc

Dept of zoology

Aamdar Deepakbhai Kesarkar

Science College, Dodamarg



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# Acknowledgement

I am highly privileged to submit my report on the topic "Visit to sanctuary"

This field report is successfully completed due to the efforts of the many people, who gave their valuable time & advice. I sincerely appreciate inspiration, support and guidance of all those people who have been instrumental in making this report a success.

I am very grateful to our dept. of zoology of zoology of Aamdar Deepakbhai Kesarkar Science College. I would like to express my sincere thank to my field work guiders - Dr. S.V. More

Asst. prof. Mr. A.S. Sindori

Asst. prof Ms. A. E. Shetkar

Asst. prof Ms. S.B. Sutar.

and all the team and staff, for helping me in observation & Identification of species.

I would like to thank our HOD Dr. More S.V. for the field trip.

Last but not the least I place a deep sense of gratitude to my classmate & my friends who have been constant source of inspiration during the preparation of this report work.



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# Value of field Study

The value of a field study visit to a wildlife sanctuary is immense. It offers firsthand experience and observation opportunities for us to learn about biodiversity, ecosystems, conservation efforts and the importance of preserving natural habitat.

Additionally, such visits can instill a sense of responsibility towards the environment, fostering a deeper understanding and appreciation for wildlife and their habitat.




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# Objective

- To study the diversity of animals found in Koyna Wildlife Sanctuary.
- To investigate habit and habitat, environmental conditions of the species found in an area.



  
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# Introduction

Shramik Vidyarthi Dnyanaseva Sanstha's Amdar Deepakbhai Kesarkar Science College have conducted field visit for the student of T.Y. BSc Semester VI<sup>th</sup> for the academic year 2023-2024 under the subject "Environmental Management and zoogeography" on the topic "Visit to Sanctuary" to observe diversity of animals and prepare a report.

We have visited 'Koyna Wildlife Sanctuary' at Satara, Maharashtra.

The Koyna Wildlife Sanctuary stands as a testament to the majestic wonders of nature, nestled in the heart of the Western Ghats of India. This haven of biodiversity spans across approximately 423 sq km in the Satara districts of Maharashtra, Established in 1985.

This place has variety of variability of flora and fauna for observation and study, so we have selected this place to get most benefit out of this visit.



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# Accessories for Species Observation

- Smartphone Camera.
- Notepad
- Pen
- Guidebook
- First aid kit
- Sunscreen
- Water Bottle
- Backpack
- Comfortable Footwear.
- Hat and Sunglasses.
- Compass.



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# Assessing the Operation

Assessing the Operation

Assessing the Operation



# Zoological Excursion

## Koyna Wildlife Sanctuary.

Koyna Wildlife Sanctuary is a wildlife sanctuary & natural World Heritage site, which is located in Satara district of the Indian state of Maharashtra. The sanctuary is nestled in the Western Ghats.

Location	- Satara, Maharashtra India
Nearest city	- Kolhapur and Pune
Latitude	- $17^{\circ}32'56''$ N
Longitude	- $73^{\circ}45'11''$ E
Area	- 423.55 Sq Km (163.53 sqmi)
Established	- 1985
Governing body	- Maharashtra State Forest Department
Forest type	- Tropical evergreen & semi evergreen
Soil type	- lateritic soil, red & black, alluvial
average altitude	- 897 m (2,943 ft)
annual rainfall	- 5,500 mm (220 in).

This wildlife sanctuary is designated as an Important Bird area. The sanctuary includes eastern and western catchments of the Koynadarn. The sanctuary is well protected by the large extent of Shivasagar Reservoir and steep slopes of the Western Ghats on both the sides.



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# Indian Gaur



Kingdom : Animalia  
Phylum : Chordata  
Class : Mammalia  
Order : Artiodactyla  
Family : Bovidae  
Genus : Bos  
Species : gaurnil

- The gaur is the largest extant bovid.
- It is a strong and massively build bovine with a strong high convex ridge on the forehead between the horns, which protrudes anteriorly.
- In Central India, they are most active at night and are rarely seen in the open after 8'o clock in the morning.
- The gaur grazes and browses mostly the upper portion of plants, such as leaf blade stems, seeds and flowers of gaur species.



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# Malabar Pied hornbill



Kingdom - Animalia

Phylum - Chordata

Class - Aves

Order - Bucerotiformes

Family - Bucerotidae

Genus - Anthracoceros

Species - Coronatus

- The Malabar pied hornbill is a large hornbill, at 65cm in length.
- It has mainly black plumage apart from its white belly, throat patch, tail sides and trailing edge to the wings
- The weigh around 1 kg.
- The Malabar pied hornbill is a common resident breeder in India.



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# Grey Langoor



Kingdom - Animalia  
Phylum - Chordata  
Class - Mammalia  
Order - Primates  
Family - Cercopithecidae  
Genus - Semnopithecus  
Species : entellus

- The langoor are largely gray with a black face and ears.
- Externally, the various species mainly differ in the darkness of the hands, feet the overall colour and the presence or absence of a crest.
- They sleep during the night in tree, when resting in trees they prefer highest branches.
- Grey langoor are primarily herbivorous.



# Sambar deer



Kingdom - Animalia  
Phylum - Chordata  
Class - mammalia  
Order - Artiodactyla  
Family - cervidae  
Genus - Rusa  
Species - unicolor

- The appearance and size of the sambar vary widely across its range, which has lead to considerable taxonomic confusion. in the part.
- Height is 102 to 160 cm.
- Head and body length varies from 1.62 to 2.7 m with tail.
- They often congregatt near water and are good swimmers, sambar are generally quiet.
- Sambar feeds on wide variety of vegetation, including grasses, browse, fruit and water plants.



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# Conclusion

Field visit is an effective method for education promotion, where we learn through diverse experience in vital life situation.

We have successfully placed a field visit to Koyna Wildlife Sanctuary. Through it is very difficult to study habit, habitat of each and every species and comment on them, but our teamwork and co-operation and guidance between teachers made it possible.

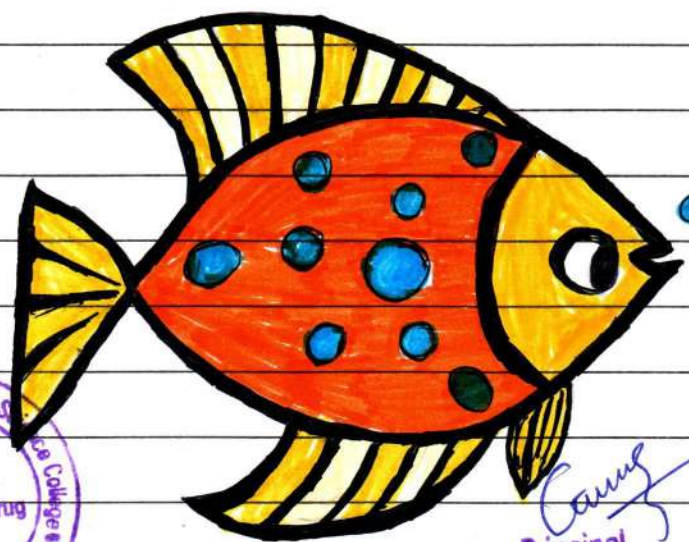
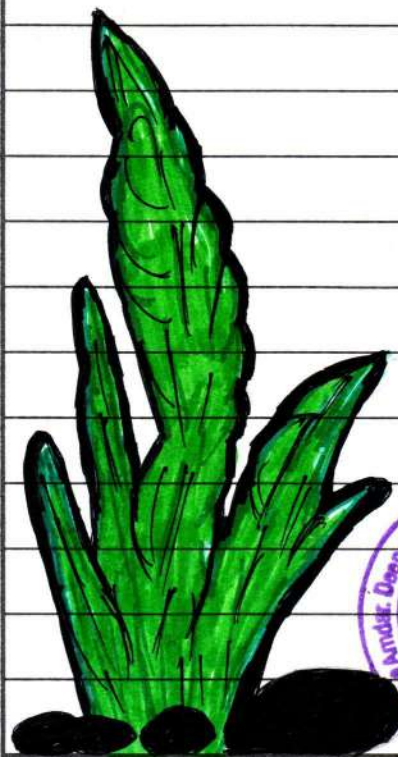
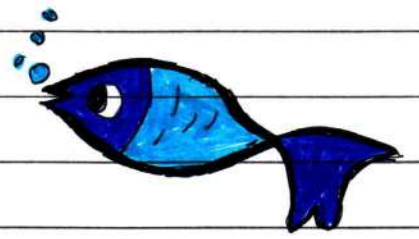
During the survey we found variety of animal and plant species, which were new to us. Lastly we have enjoyed the field trip & learned a lot on this aspect.



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# Fishery Project



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Student Name : Nena. Narayan. Gawade

College Name : Amdar Deepakbhai Kesarkar  
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Std : T.Y BSc (zoology), Semester VI  
(USACFBIO6P1)

Roll no :

Subject : ~~fishery~~

S.



  
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# Probability Report Of Maintenance Of Culture Of .....

Chaetopteros and  
Artemia by the  
Fish Farmers.



PRINCE

*Caush*  
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# Introduction

The cultivation of chaetopteros and Artemia holds immense potential for enhancing the nutritional value of aquaculture feed and, consequently improving the overall health and growth of farmed fishes. As fish farming continues to be a vital component of global food production, the integration of these live organisms into aquaculture systems presents an opportunity to elevate the quality of fish nutrition.

This probability report delves into the feasibility and benefits of incorporating chaetopteros and Artemia into the maintenance practices of fish farmers aiming to shed light on the potential advantages, challenges, and probabilities associated with this innovative approach.

Through a comprehensive examination of the current aquaculture landscape and the characteristics of chaetopteros and Artemia, this report seeks to provide valuable insights for fish farmers contemplating the integration of these organisms into their cultivation.



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# Species Characteristic

## Chaetopteros

### 1) characteristics:

- chaetopteros is a genus of marine phytoplankton, comprising diatom species.
- Diatoms are unicellular algae with a unique cell wall made of silica, forming intricate and beautiful patterns.
- They are essential components of the marine food chain, providing nutrition for various marine organisms.



### 2) Nutritional Value:

- Rich in essential nutrients such as proteins, carbohydrates, lipids, vitamins and minerals.
- Contains omega-3 fatty acids, important for the growth & health of marine animals.

### 3) Benefits:

- Serve as a primary food source for many marine organisms, including copepods, small fish larvae and bivalves.
- Play a crucial role in supporting the early stages of marine food webs.
- Their abundance influences the health of larger marine species, making them an important component in aquaculture and marine ecosystem.



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## Artemia

### 1) characteristics :

- Artemia, commonly known as brine shrimp are small, aquatic crustaceans.
- They inhabit hypersaline environments such as salt pans, and their eggs can withstand desiccation, allowing for easy storage and transportation.



### 2) Nutritional Value:

- High protein content, making them an excellent source of nutrition for aquatic organisms.
- Rich in essential amino acids, vitamins especially Vitamin A & Vitamin C and minerals.
- The nutritional profiles of Artemia makes them a valuable live feed for fish larvae and shrimp - post larvae.



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### 3) Benefits:

- Widely used in aquaculture as live feed for larval stages of marine and fresh water fish, as well as invertebrates.
- *Artemia nauplii* (larvae) are easily digestible and stimulate the feeding response in fish and shrimp.
- Used in the aquarium trade as a nutritional food source for ornamental fishes.

Both chaetopteros and *artemia* contribute significantly to the aquaculture industry by providing essential nutrition during critical development stages of various aquatic organisms. Incorporating these organisms into aquaculture practices supports the growth and health of fish and invertebrates.



  
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# Cultural Requirement

For culturing chaetopteras (marine worms) and Artemia (brine shrimp), specific environmental conditions are crucial, Here's detailed information on the required parameters.

## Chaetopteros

### • Temperature:

- Optimal temp :  $18-22^{\circ}\text{C}$  ( $64-72^{\circ}\text{F}$ )
- Ensure stability to avoid stress on chaetopteros.

### • Salinity:

- Marine environment with salinity ranging from 30 to 35 ppt (Parts per thousands)
- Consistent salinity levels are crucial for chaetopteros health.

### • Water Quality:

- Maintain high water quality with minimal pollutants
- Regular water changes and filtration are essential.



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- Substrate:

- Provide a sandy substrate, as Chaetopteros constructs tubes in the sediment.

- Feeding:

- Feed with small particulate organic matter such as microalgae and detritus.
- Ensure a constant, slow flow to bring food particles to chaetopteros.

- Lighting:

- chaetopteros is generally nocturnal, so provide low-intensity lighting.

- Oxygen levels:

- Maintain well-aerated water to ensure sufficient oxygen.

### Artemia

- Temperature:

- Ideal temperature range: 25-30°C (77-86°F)
- Higher temperature may accelerate growth but require increased oxygen levels.

- Salinity:

- Suitable Salinity range: 25-35 ppt.
- Adjust Salinity based on the developmental stage of Artemia.



## Water Quality:

- Use dechlorinated water with a pH level between 8 and 8.5.
- Regularly monitor ammonia, nitrite and nitrate levels.

## Aeration:

- Provide continuous aeration to ensure proper oxygenation.
- Artemia larvae are sensitive to low oxygen levels.

## Feeding:

- feed Artemia microalgae or a suitable commercial diet.
- Adjust feeding rates based on the developmental stages.

## Lighting:

- Use low-intensity lighting for hatching artemiacysts.
- Continuous light during the first 24 hrs stimulates hatching.

## Harvesting:

- Harvest nauplii at the desired developmental stage for feeding to other organisms.



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Remember to monitor and adjust these conditions based on the specific life stages of chaetopteros & dextemia, as their requirements may vary during different developmental phases. Regular testing and observation are essential for successful culture.



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# Feasibility Analysis

Let's delve into the feasibility of maintaining chaetopteros (marine worm) and Artemia (brine shrimp) cultures in the context of local fish farming practices:

## 1) Purpose and Importance:

- Determine the Specific goals for incorporating chaetopteros and Artemia in fish farming such as providing live feed for fish larvae.
- Understand the nutritional benefits these organism offer to fish fry.

## 2) Cultural Requirement:

- Investigate the environmental conditions required for chaetopteros and Artemia cultures including temperature, salinity and PH levels.
- Assess the availability and cost effectiveness of maintaining these conditions locally.

## 3) Infrastructure:

- Evaluate the space and equipment needed for culturing both organisms.



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- Consider the feasibility of constructing or adapting facilities for optimal culture conditions.

#### 4) Sourcing and Quality Control:

- Identify reliable suppliers for initial cultures or chaetopteros and Artemia.
- Implement quality control measures to ensure the health and nutritional value of the live feed.

#### 5) Integration with fish-farming Practices:

- Examine the compatibility of chaetopteros and Artemia with local fish species.
- Develop feeding protocols to integrate live feed in to existing fish farming routines.

#### 6) Cost-Benefits Analysis:

- Calculate the overall costs associated with maintaining chaetopteros and artemia culture, including initial setup, ongoing operational expenses and labour.
- Evaluate the economic benefits such as improved fish growth rates and survival.

#### 7) Training and Education:

- Provide training for fish farmers on the proper handling and utilization of

*Ganesh*  
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chaetopteros and Artemia cultures, including initial setup, ongoing operational expenses and labor.

- Evaluate the economic benefits, such as improved fish growth rates and survival.

#### 7) Training and Education:

- Provide training for fish farmers on the proper handling and utilization of chaetopteros and Artemia.
- Ensure that farmers are educated on the nutritional requirements of their fish and the benefits of live feeds.

#### 8) Sustainability and Environmental Impact:

- Assess the sustainability of chaetopteros and Artemia culture in the local environment.
- Consider potential environmental impacts and implement practices to minimize any negative effects.

#### 9) Market Potential:

- Explore the market demand for fish fed with chaetopteros and Artemia.
- Determine if there is a premium market for fish produced with live feeding.



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10). Monitoring and record keeping :

- Establish a system for monitoring the health and productivity of chaetopteros and antenna cultures.
- keep detailed records to track performance and identify areas for improvement.

11). Regulatory Compliance :

- Ensure compliance with local regulations related to the use of live feed in fish farming.
- obtain any necessary permits or approvals.



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# Training and Support

Evaluating the availability of training programs and support for fish farmers in maintaining chaetopteros and Artemia culture involves assessing various aspects. Here's breakdown

## 1) Training programs:

### • Identification of programs:

Research existing training programs focused on chaetopteros & Artemia cultures.

### • Curriculum:

Assess the content of these programs ensuring they cover crucial aspects like cultivation techniques, water quality management and disease prevention.

### • Accessibility:

Evaluate the accessibility of training programs, consider factors such as location, cost and language.



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## 2) Support Mechanisms:

### • Technical Assistance:

Determine the availability of technical support for fish farmers, including experts who can provide guidance on chaetopteros & Artemia Culture.

### • Online Resources :

Explore the existence of online resources, webinars, or forums where farmers can access information and support remotely.

### • Networking Opportunities :

Assess whether there are networks or associations connecting fish farmers engaged in chaetopteros and Artemia culture to facilitate knowledge exchange.

## 3) Government Initiatives:

### • Government Sponsored Programs :

Investigate if there are any government-sponsored initiatives aimed at supporting aquaculture, specifically focusing on chaetopteros and Artemia.

### • Subsidies and Incentives :



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grants or incentives that fish farmers can avail themselves of for implementing and maintaining these culture.



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# Risk Assessment

Cultivating Chaetopteros (marine worms) and Artemia (brine shrimp) cultures, commonly used as live feeds in aquaculture, presents various challenges and risks.

## 1) Water Quality:

### • Risks:

Poor water quality can lead to the accumulation of toxins and pathogens, negatively impacting the health of both chaetopteros and artemia.

### • Challenges:

Maintaining optimal water parameters including temperature, pH & salinity, is crucial for their growth and survival.

## 2) Contamination:

### • Risks:

Contamination with unwanted microorganisms, such as bacteria, fungi or competing microalgae, can affect the nutritional quality of the culture.

### challenge:

Implementing strict hygiene practices and regular monitoring to prevent contamination is essential.

### 3) Nutritional Quality:

#### • Risks:

Limited inadequate nutrition can compromise the nutritional value of chaetopteros and Artemia as feed for larval organisms.

#### • challenge:

Formulating and providing a balanced diet that meets the nutritional requirements of the target species is crucial for successful aquaculture.

### 4) Genetic Diversity:

#### • Risks:

Limited genetic diversity within chaetopteros and Artemia populations can lead to susceptibility to disease and reduce adaptability.

#### • challenge:

Regularly introducing new genetic material and monitoring genetic diversity helps maintain robust & healthy cultures,



### 5) Temperature fluctuations:

#### • Risks:

Sudden temperature changes can stress and negatively impact the reproduction rates of rotifers and Artemia.

#### • challenge:

Implementing temperature control measure and gradually adjusting conditions to prevent sudden fluctuations is necessary.

### 6) Handling and Harvesting:

#### • Risks:

Improper handling during harvesting can lead to physical damage and stress, affecting the viability of the live feeds.

#### • challenge:

Regular health monitoring, Developing gentle harvesting techniques & efficient protocols to minimize stress during collection is important.

### 7) Disease Management:

#### • Risks:

Disease outbreak within Chaetopteros and Artemia cultures ~~entirely capex~~ decrease

populations if not properly addressed.

### • challenge:

Regular health monitoring, quarantine protocols, and the use of appropriate medications are crucial components of disease management.

### 8) Supply chain issues:

#### • Risks:

Dependence on external sources for culture inputs like microalgae can pose a risk if there is disruption in the supply chain.

### challenges:

Developing contingency plans and establishing in-house production of essential components can mitigate supply chain vulnerabilities.

### 9) Environmental Sustainability.

#### • Risks:

Overexploitation of natural resources for culturing can have environmental consequences, impacting ecosystem.



### challenge:

Implementing Sustainable practices such as efficient resource utilization and recycling help minimize, the ecological footprint.

Successfully navigating these challenges involves a combination of scientific expertise, careful management practices, and continuous monitoring to ensure the consistent production of high quality chaetopteros and ~~artemia~~ for aquaculture purpose.

# Market Demand

Analysing the market demand for fish fed with chaetopteros and artemia involves a comprehensive understanding of various factors including consumer preferences for high-quality and nutritious products.

## 1) Nutritional Benefits

- Highlight the nutritional advantages of chaetopteros and artemia.

## 2) Health benefits for consumers

- Emphasize how fish fed with chaetopteros and artemia offer health benefits to consumers.

## 3) Sustainability & Environmental consideration

- Address the sustainability aspects of using chaetopteros and artemia as fish feed.

## 4) Certification and Quality Assurance

- Discuss any certifications or quality



assurance measures in place for the production of chaetopteros & artemia.

5) Market Trends and Consumer Preference:

- Identify and Understand the target demographics and targeted consumer groups which are interested in high quality and nutritious fish feed.

6) Communication And Marketing Strategies:

- Develop effective communication strategies.

7) Collaboration with Retailers and Distributors:

- Collaborate with retailers and distributors and establish partnership.

8) Research and Development:

- Ongoing research and development efforts are essential to improve the efficiency.

9) Price point and value Proposition:

- Determine an appropriate price point for the fish products based on the production cost, market competition, and perceived value.

# Government Policies & Incentive

Fish farmers may access various forms of financial and regulatory support to enhance their operations.

- 1) Government Grants and Subsidies;
- 2) Loans and credit facilities
- 3) Insurance Programs.
- 4) Technical Assistance and Training.
- 5) Research and Development funding.
- 6) Tax incentives.
- 7) Environmental Compliance Support.



# Conclusion

After analyzing the probability report on the maintenance of chaetopteros and Artemia cultures by fish farmers, several key findings are emerged, firstly, there is a high probability that fish farmers will successfully maintain cultures of chaetopteros and Artemia due to their adaptability to various environmental conditions and their nutritional value for fish larvae.

The findings of the probability report suggest that with proper training, support and access to resource, fish farmers have a high probability of successfully maintaining cultures of chaetopteros and Artemia, which can ultimately contribute to the sustainable of healthy fish stocks.

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# Acknowledgement

We would like to extend our sincere gratitude to all the fish farmers who participated in this study, providing invaluable insights and practical knowledge regarding the culture of chaetopteros and Artemia.

Their co-operation and willingness to share their experiences were essential in gathering the data necessary for this report.

Additionally, we acknowledge the support and guidance for the head of the department Dr. More Sir, Assistant professor Sutar madam, assistant professor Mr. Sinari sir and assistant professor Ms. Shetkar madam, we are truly thankful for the efforts & time you invested in making this educational opportunity possible.

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# FOUNDATION COURSE (B. Sc. I, Sem -II)

## Student Project List Academic Year 2023-24

Sr. No	Name of the student	Allotted project	Remark
1	Shirodkar Srya Abhay	उच्च शिक्षण आणि भारत	Complete
2	Gawas Bhikaji Khemraj		Complete
3	Gawas Rutik Arun		Complete
4	Gawas Bhakti Bhagawan		Complete
5	Kamble Pallavi Prakash		Complete
6	Jangale Tushar Shamu		Complete
7	Gawade Vithoba Umesh		Complete
8	Sawant Divya Laxman	पिण्याचे स्वच्छ पानी व स्वच्छता सुविधा	Complete
9	Panvelkar Amit Arun		Complete
10	Mestri Sudarshan Dattaram		Complete
11	Desai Saisha Sadanand		Complete
12	Gawade Swapnil Santosh		Incomplete.
13	Gawade Neha Yalappa	सार्वजनिक शिक्षणाधिकार	Complete
14	Naik Yogita Anand		Complete
15	Mayekar Shivram Suryakant		Complete
16	Naik Dipti Dilip		Incomplete.
17	Naik Nutan Sanjay		Complete
18	Bandekar Yogesh N.	लैंगिक विषमता आणि भारत	Complete
16	Malik Vedant Sanjay		Complete
20	Desai Dilip Sanjay		Complete
21	Desai Vidhyadhar Gurudas		Complete
22	Bagadi Prathamesh P.		Complete
23	Desai Samiksha C.	शहरातील आरोग्य सुविधा	Complete
24	Ghogale Sakshi Baburao		Complete
25	Uphalkar Sharan P.		incomplete.
26	Halankar Narayan Suresh		Incomplete.
27	Naik Akshay Anil		Incomplete.
28	Mundhe Vishal Kishan	जैतपूरचा अणुऊर्जा प्रकल्प	Complete
29	Patil Akashay Anadrao		Complete
30	Gawade Laukik Santosh		Incomplete.
31	Shetkar Rohan Hari		Complete
32	Jadhav Shailesh C.		Complete
33	Karol Sakib Suleman	शहरीकरण आणि त्यांच्या समस्या	Complete
34	Naik Prachi Prakash		Incomplete.
35	Naik Pranali Prakash		Incomplete.
36	Shetye Pramila Anand		Incomplete.
37	Jadhav Asmita Ganpat		Complete
38	Gawas Mayur Mohan	शहरीकरण आणि त्यांच्या समस्या	Incomplete.
39	Chobe Rahul Rajendra		Complete
40	Shetkar darsahni hari		Incomplete.
41	Gawas Gaurish Mahadev		Complete
42	Gawade Reshma Laxman		Complete
43	Desai Viraj Sitaram		Complete





44	Sinari Chinmay Sandip		Complete
45	Dalvi Prasad Sharan		Incomplete.
46	Kavthankar Damodar Arjun	टेहरी धरण	Complete
47	Shetkar Madhukar Ravindra		Incomplete.
48	Warang Priya Prakash		Complete
49	Prasadi Vaishanvi Rajesh		Complete
50	Patil Onkar Sadashiv		Incomplete.
51	Patil Sucheta Vasant		Complete.

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# प्रकल्प

## यकाभूत गणितसूत्र

Name - Yogita Anand Naik.

Class - F.Y. Bsc.





# Certificate

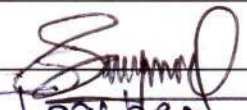
## Foundation Course

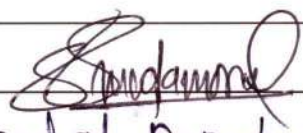
Class - F.Y. Bsc

Year 2023-24

This is certify that, the entered  
in these project work of Ms. Yogita  
Anand Naik, who worked for the Sem II.  
of the year 2023-24 in college.

Date. 10/04/2024

  
Teacher

  
Head of Department



# અનુક્રમણિકા

અ.ક્ર	વ્યત્કારી નામ	પૃષ્ઠ ક્રમાંક
1)	પ્રસ્તાવના	1
2)	ભૌતિક વિષમતા વા આશિષ્ય	2-3
3)	ભૌતિક વિષમતેમાગીભ કારણો	4
4)	ભૌતિક વિષમતેમાગીભ મુખ્ય વ્યત્ક	5-6
5)	મહિમાસાથી આશિષ્ય ઉપાયઃ યોજના	7
6)	સંદર્ભ	8
7)	નિષ્કર્ષ	9
8)	અશોનિદૌષક	10
9)	પ્રમાણપત્ર	11



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# प्रस्तावना

पुरुषप्रधान संस्कृतीमध्ये स्त्रीयांना पुरुषांच्या तुलनेत कमी महत्त्व दिले जाते. आरोग्याची निगा व वैद्यकीय सुविधांच्या बाबतीत स्त्री पुरुष असा भेदभाव केला जातो. स्त्रीया व मुलींच्या आरोग्याकडे तुलनात्मकदृष्ट्या दुर्लक्ष केले जाते. आर्थिक स्थिती व पुरुषप्रधान संस्कृती ही त्याची दोन कारणे असतात. उदा. घरातील स्त्रीया किंवा मुलीला दवाखान्यात जाण्यासाठी घरातील कर्त्या पुरुषाची किंवा पतीची परवानगी घ्यावी लागते. स्त्रीयांना कमी मेसले जाते. स्त्री-पुरुष असा भेदभाव केला जातो.



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## भौंगिक विषमता व आरोग्य :

पुरुषप्रधान संस्कृतीत स्त्रियांना पुरुषांच्या तुलनेत कमी महत्त्व दिले जाते. आरोग्याची निगा व वैद्यकीय सुविधांच्याही बाबतीत स्त्री पुरुष असा भेदभाव केला जातो. स्त्रिया व मुर्बीच्या आरोग्याकडे दुर्लक्ष केले जाते. आर्थिक स्थिती व पुरुषप्रधान संस्कृती ही त्याची दोन कारणे असतात. उदा., घरातील स्त्रिया किंवा मुर्बीला दवाखान्यात जाण्यासाठी घरातील कर्त्या पुरुषाची किंवा पतीची परवानगी घ्यावी लागते. आणि अनेकदा ही परवानगी दिली जात नाही. अगदीच तातडीची गरज असले तरी परवानगी मिळते. अनेकदा पैशाअभावी स्त्रिया दवाखान्यात जात नाहीत. परंतु पुरुष किंवा मुर्बींना ही सेवा अव्यक्तमाने पुरवली जाते.

काही जमातींमध्ये तर महिलांनी घराबाहेर जाण्यावर नियंत्रण असते. अशा ठिकाणी महिला व दवाखाना हे अंतर जास्त असले तरी महिलांना केळ्या वेळी आरोग्य सुविधा मिळत नाही.

मानवी विकास अहवाल २०१० नुसार बाळंतपण आईच्या मृत्यूचे प्रमाण भारतात दर १,००,००० जन्मांपरिमागे ५५० इतके आहे. तर हेच प्रमाण पाकिस्तानमध्ये ३२० इतके आहे. आजही भारतात या सुविधांचा अभाव दिसून येतो. किंवा सर्वसामान्यांना त्या मिळत नाही. तर काहीना परवडत नाहीत. भौंगिक समानतेचे मोजमाप केल्यानंतर त्यामध्ये भारताचा नंबर १३८ देशांमध्ये १२२ वा लागतो. तर पाकिस्तानचा नंबर ११६ वा व बांगलादेशाचा क्रमांक ११२ वा लागतो.

अन्य देशांच्या तुलनेत भारताचा जेंडर गैप इंडेक्स जेंडर गैप इंडेक्स बिंग असामान्येचा मापण्याचा बहुआयामी उपाय आहे. भारत विश्व मंथार ०.६६ त्वके अंक मिळवून १३६ देशांच्या सुपीमध्ये १०१ व्या क्रमांकावर आहे. पुरुष आणि महिलांच्यामध्ये स्वास्थ, शिक्षा, आर्थिक व राजनीतिक असमानता दर्शवते.

बिंग असमानता व अथे कारण भारताचा बिंगानुपात महिलांच्या जीवकाळात त्यांची शिक्षा प्राप्त आणि आर्थिक स्थितीवर प्रभाव पडतो. भारतात बिंग





असमानता पुरुष आणि महिलांसाठी समान करून घेऊन एक बहुमुखी मुद्दा आहे. भौतिक समानतेचे तर्क पुरुषांसाठी नुकसानदायक आहे. विविध समूहांच्या मध्ये भारताची विश्व भिंती असमानता दाखवते आहे. उदाहरणासाठी विश्व आर्थिक मंचावर दरवर्षी प्रत्येक मंचावर देशासाठी एक ग्लोबल गैर गैप इंडेक्स प्रकाशित केला जातो. शुचकांक महिलांच्या सशक्तिकरणावर केंद्रित नाही आहे. पण हा चार क्षेत्रांमध्ये पुरुष आणि महिलांमध्ये आर्थिक भागीदारी, शिक्षा आणि स्वास्थ, आस्तित्व राजनीतिक सशक्तिकरणाच्या अंतर्भाषा दर्शवते. या तह्येच्या अनुमानानुसार भिंती चरानात्मक गर्भपात, राज्यात महिलांचे प्रमुख व वर्षांची संख्या, पुरुष समानता दर, राज्यात महिला आणि पुरुषांच्या संख्येच्या दर्शवते जाते. त्या ठिकाणी या तह्येची आकडेवारी प्रकटित करणे कठीण आहे, त्या ठिकाणी ग्लोबल इंडेक्स ची गठाना एक चौगाभा अनुमान आहे.



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## लैंगिक विषमतेमागील कारणे :

**साक्षरता :-**

महिलांची साक्षरता हळू हळू वाढत आहे. पण पुरुषांच्या तुलनेत साक्षरता दर कमी आहे. २०११ च्या जनगणनेसुर महिलांच्या साक्षरतेचा दर ८५.५६ % दर पुरुषांच्या साक्षरता दर ८२.१५ होता. मुलांच्या तुलनेत मुलांचे दाखले शाळांमध्ये कमी होतात. आणि त्यातील काही मुली शाळा सोडून देतात. १९९९ च्या राष्ट्रीय सर्वेक्षणाच्या अनुसार फक्त केरळ आणि मिझोरम ही सार्वभौम साक्षरता दर प्राप्त करू शकले आहेत. अधिक विद्वानांच्यानुसार केवळ महिलांमध्ये सामाजिक स्तर सुधारण्याचे कारण साक्षरता आहे. २००६ ते २०१० पर्यंत साक्षरता प्राप्त करणारी महिलांची टक्केवारी पुरुषांच्या टक्केवारीत केवळ अर्धी होती. राष्ट्रीय कुटुंब स्वास्थ रचणा अनुसार पंजाबमध्ये मुल व मुलींच्या शाळांमध्ये टक्केवारी वाढत आहे. १५ आणि १९ वर्षांपर्यंत हे प्रमाण १०% होईल.

**अशरीर्य आणि अस्तित्त्व असमानता :-**

अशरीर्याच्या बाबतीत स्त्रियांना पुरुषांच्या तुलनेत कमी सुविधा मिळतात. स्त्रियांना कमी सुविधा मिळतात. स्त्रियांना जन्मात्मा यायत्मा अगोदर भिंग परिक्षण करून गर्भपात केला जातो. यामुळे स्त्रियांची संख्या कमी होत आहे. स्त्री भ्रूणहत्या यामुळे पुरुषांच्या तुलनेत स्त्रियांचे प्रमाण अधिक आहे.

**राजनीतिक असमानता :-**

राजनीतिक क्षेत्रांमध्ये स्त्रियांना कमी दर्जा दिला जातो. त्यांना कमी आखले जाते. तरी पण काही वर्षांत भारताच्या राजनीतिक महिलांना महत्वाचे स्थान प्राप्त केले आहे. स्त्रियांनी आता राजनीतिमध्ये महत्त्वपूर्ण स्थान प्राप्त केले आहे.



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## लैंगिक विषमतेमागील मुख्य घटक :

**आर्थिक असमानता - श्रम भागीदारी आणि मजदुरी :-**

२०१३ मध्ये महिलांच्या श्रमशक्तीची भागीदारी ४०% होती. मानव संसाधन प्रबंधन समिती नेल्सी बॉकवुड च्या नुसार १५० देशांमध्ये महिला श्रमिकांची संख्या पुरुष श्रमिकांपेक्षा कमी होती. भारतीय श्रमरथा ९० टक्क्यापेक्षा अधिक कृषिमध्ये कार्यरत आहे. अधिक महिला पशुधन स्वरूपात, अंडा व दुध उत्पादनात कार्यरत आहेत. पण पुरुष कार्यक्षमतेच्या रूपात कार्यरत आहेत. कृषि कार्यत महिला ४४% आहेत. तर पुरुष ६३% आहेत. तर ३४% महिला शेतकरी आहेत. वर्ष २००९ मध्ये ४०% कृषि कार्य महिलांनी केलेले आहे. भारतात पुरुष आणि महिलांच्या वेतनता असमानता आहे. वर्ष २००९ च्या नुमे अन्वयानुसार पुरुषांच्या प्रतिदिन १०३ रु महिलांना ५९ रु दिने जातात. मजदुरीचे अनुसार १.४२ % आहे.

**सैन्य - सेवा :-** महिलांना सैन्य दळात कार्य करण्याची अनुमती दिली जात नाही. त्यांना सैन्यात आतापर्यंत स्थायी कमिशन दिले नाही. कारण त्यांना कुठल्याही प्रकारचे प्रशिक्षण आणि कोठातही अधिकार दिला नाही. मऊ अध्ययनानुसार ज्या ठिकाणी महिला अधिकाऱ्यांना शत्रुसोबत शारीरिक संपर्काची अधिक संभावना असते. त्या ठिकाणी त्यांना लडाकु शस्त्रांपासून लोहर ठेवले जाते.

**शाळा :-** युनिसेफच्या मानांकनानुसार शिक्षणाची गुणवत्ता, उपास्थितीदर, शैक्षिक लैंगिक समानता, सुचकांक समाविष्ट केले आहे. ग्रामीण क्षेत्रात मुली अजूनही कमी शिक्षित आहेत. १९९४ च्या संयुक्त राष्ट्रांच्या वाणिज्य विभागाच्या अनुसार भारतातील महिलांच्या शिक्षणातील प्रमुख अडथळे अपर्याप्त शाळा सुविधा, महिला शिक्षकांची कमी.

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### पुरुषप्रधान समाज :-

पुरुषप्रधान समाज एक व्यवस्था आहे. ज्यामध्ये पुरुषांना प्राथमिक अधिकारिक व्यक्ती बनवले जाते. ज्यामध्ये राजनैतिक नेतृत्व, नैतिक अधिकार, संपत्तीवर अधिकार, महिमांवर व मुभांवर नियंत्रण समाविष्ट आहे. काही अपवाद वगळता अधिकतर भारतात पितृ प्रधानताचे नियम लागू आहेत. ज्याद्वारे कुटुंबातील स्त्रिया, संपत्ती आणि नावाचा मानक होती. पुरुषप्रधान समाजाचे उदाहरण भारतात प्रचलित परंपरा आहे. ज्याद्वारे उत्तराधिकार वडिलांकडून मुलांना मिळतो. स्त्रीचा विवाह करून आपल्या नवऱ्याच्या घरी जातात. विवाहामध्ये स्त्रियांकडून हुंडा किंवा पैसा घेतले जातात.

### मुभाभा प्राथमिकता :-

लैंगिक असमानतेचे मुख्य कारण मुभाभा प्राथमिकता देणे आहे. मुभाभा उत्तराधिकारी आणि संपत्तीतील महत्त्वाचा वाटा देला जातो. धार्मिक परंपरेनुसार वडिलांच्या मृत्युनुसार अधिक कार्यासाठी उपयोगी मानले जाते. हुंड्यामुळे देखील स्त्रियांना अधिक प्राधान्य दिले जात नाही. यामुळेच लैंगिक असमानता अधिक प्रमाणात वाढत आहे. मुभाभाच प्राथमिकता दिल्यामुळे लैंगिक असमानता अधिक प्रमाणात वाढत आहे. मुभाभा सर्वप्रकारचे अधिकार दिल्यामुळे लैंगिक असमानता वाढत आहे.



*Crunch*



## महिला आरोग्यासाठी सरकारी उपाय योजना :

### १) जननी सुरक्षा योजना :-

ही केंद्रसंस्कारणी योजना सर्व राज्यात शबविध्यात आत्मी आहे. ज्या ठिकाणी गर्भवती महिलांसाठीच्या सीसी-युविद्या उपलब्ध नाहीत अशा ठिकाणी सीसी युविद्या उपलब्ध करवून देण्यासाठी ही योजना शबविध्यात आत्मी. यांमध्ये प्रसूतीपूर्व व प्रसूतीनंतर महिलांना शैश्व मदत देण्यात येते. यामध्ये सर्व दारिद्र्य रेषेखालील गर्भवती महिलांना दोन अपत्यांपर्यंत समावेश होतो. विशेषतः ग्रामीण भागात आदिवासी पाड्यात ज्या ठिकाणी वाहतुकीची साधने पोहचत नाहीत व संपर्काची माध्यमे ही नसतात अशा ठिकाणी तशीच महिलांना वैद्यकीय सुविद्या मिळत नाहीत.

### २) राष्ट्रीय ग्रामीण आरोग्य अभियान :-

ग्रामीण भागातील महिला आणि मुलांपर्यंत गुणवत्तापूर्ण अद्ययावत व परिणामकारक आरोग्यसेवा पुरेशा प्रमाणात पोहचवण्यासाठी भारत सरकारने हे अभियान २००९ मध्ये सुरू केले. याअंतर्गत मूल्यांकित सामाजिक आरोग्य उपक्रम प्रत्येक गावात करवण्यात येते. दर हजार लोकांमध्ये एक अशाप्रकारे हे उपक्रम शबविधे जातात. आतापर्यंत देशात व लाख आशा कार्यरत आहेत. ग्रामीण भागातील महिलांना व बाळकांना औषधे देण्याचे कार्य हे करत आहेत.

ग्रामीण आरोग्य सुविद्या व आहार कमीटी गाव पातळीवर लोकांमध्ये आरोग्यविषयक जागृतीचे कार्य करीत आहेत. यासाठी दरवर्षी या कमीटीला ६०,००० रुपये दिले जातात.

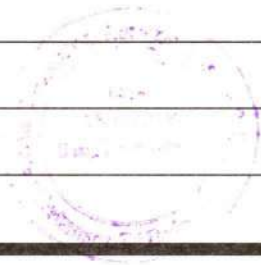


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# संदर्भ ....

- ① पाठ्याभ्युत अभ्यास या पुस्तकातून हा प्रकल्प करताना यातून माहिती मिळवली
- ② या प्रकल्पासाठी मी वाचनात्म्यातील काही संदर्भ पुस्तकांची मदत घेतली आहे.
- ③ त्याचप्रमाणे दैनंदिन वापरातील वृत्तपत्रांसाठी वापर मी प्रकल्प पूर्ण करण्याकरिता केला.
- ④ तसेच प्रकल्प सादर करण्याकरिता मला संबंधित विषय शिक्षकांनी मार्गदर्शन केले.
- ⑤ त्याचप्रमाणे अप्रत्यक्षपणे काही मित्र-मैत्रिणींचीही मार्गदर्शन केले.



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## निष्कर्ष

या प्रकल्पातून स्त्री-पुरुष भेदभाव थांबवून माहिती मिळावी. स्त्रीयांबद्दल आरोग्याच्या सुविधा थांबवून माहिती मिळावी. स्त्री-पुरुष असमानता कोठल्या कारणांमुळे होते हे समजले. स्त्री पुरुष यांमध्ये कोठल्या घटकांमध्ये असमानता नास्त प्रमाणात केली जाते, हे समजले. या प्रकल्पातून मला भरघोस माहिती मिळाली. या प्रकल्पातून स्त्रीयांच्या स्थितीबद्दल माहिती मिळाली.



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## ✽ પાનિદેશક

ભૌતિક વિષયતા વ અરોચ્ય હા પ્રકલ્પ મભા શ્રી. મીરે સરંની નિવડુન દિભા. ત્યાંની આમંભા થા પ્રકલ્પાવિષયી કાહી માહિતી દિભી. ત્યાસંબધિત કાહી દિલ્સ દિલ્યાત આઠી ત્યાનુસાર મી હા પ્રકલ્પ પૂઠી કેભા.

હા પ્રકલ્પ પૂઠી કરતાના મીરે સરંની શૂપ મદત કેભી. તરીય માશ્યા મિત્ર - મૈત્રિણીનીહી મભા મદતીયા હાત ભાવભા. તરીય હા પ્રકલ્પ પૂઠી કરઠયાકરિતા મભા પાયાશૂત અશ્યાસ થા પુસ્તકાલુન ભરઘોસ મદત વ માહિતી મિલાભી. ત્યાપ્રમાઠી મી થા પ્રકલ્પાકરિતા વર્તમાનપત્રે વ વસ્યનામચાતીભ સ્તર પુસ્તકાંપાહી શૂપ વાપર કેભા.

અશાપ્રકારે મભા મદત કરઠાયા સર્વાંયે મી આભાર માનતે. ત્યાપ્રમાઠી થા વિષયાવરીભ પ્રકલ્પાકરિતા મીરે સરંયે માર્ગદર્શન શૂપ મહત્ત્વાયે હીતે. ત્યામુલે મી ત્યાંયેહી આભાર માનતે.



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