



*A warm and hearty welcome*



**from**

***Department of Zoology***





# Departmental Highlights

Dr. Baisakhi Saha, Dr. Payel Bhattacharjee and Souren Dutta are full time Assistant Professors, along with three SACTs, Mr. Palas Kanti Manna, Mrs. Eureka Mondal, and Mrs. Piyali Pakhira with one permanent non teaching staff, Sri Mrinal Kanti Bera are managing the department.





# Brief History of The Department

- Higher Secondary and General Degree Course : 1984-85
- Honours Course: 1996-97
- CBCS system: 2017-till now
- NEP system: 2023-till now





# Departmental Highlights

- **Objective , Vision & Mission of the department**
  - Enhancing the basic skills of subject
  - Everyone might to go for higher studies
  - Enhance the scope of securing a job after graduation
  - Enhance applied skill to make student self establish



# Departmental Highlights





# Faculty Profile

Name of teacher/non-teaching staff	Designation	Qualification	Date of joining	Area of expertise	Publications	Presentations
Dr. Baisakhi Saha	HOD and Assistant Professor (stage II)	M.Sc., Ph.D.	05-02-2015	Cell Biology and Environmental Biology	22 [International-17 National -5]	41 [20- International, 21- National]
Souren Dutta	Assistant Professor (stage I)	M.Sc.	13-01-2017	Entomology and Ecology	10 [International – 1, National -9]	21 [National:-12 International: 9]
Sudha Anjella Dhan	Assistant Professor (Stage-I)	M.Sc.	1-9-2019 (resigned on:30-6-2023)	Entomology &Animal Behaviour	01 [National- 1]	17 [Interational-9 National-8 ]
Dr. Payel Bhattacharjee	Assistant Professor (stage I)	M.Sc., Ph.D.	23-12-2023	Drug-protein interaction, Protein Biomarker, Neurodegenerative diseases	16 [International-15; National- 1]	32 [International -21; National – 11 including 4 international travel grants]



# Faculty Profile

Name of teacher/non-teaching staff	Designation	Qualification	Date of joining	Area of expertise	Publications	Presentations
Palas Kanti Manna	SACT(Stage-II) (Category-II)	M. Sc., B. Ed.,	21-08-2010	Ecology	-	16 [International-8, National-8]
Eureka Mondal	SACT (Stage-I) (Category-II)	M. Sc., B. Ed., M. Phil.	21-08-2010	Agricultural entomology, Insect Pest management using bio-rational agents and microbial agents.	12 [International-01 + National-11]	31 [International: 16 + National: 15]
Piyali Pakhira	SACT (Stage-II) (Category-II)	M. Sc., B. Ed.	14-12-2013	Parasitology and Microbiology	-	15 [International-10, national -5]



# Non-Teaching Staff Profile

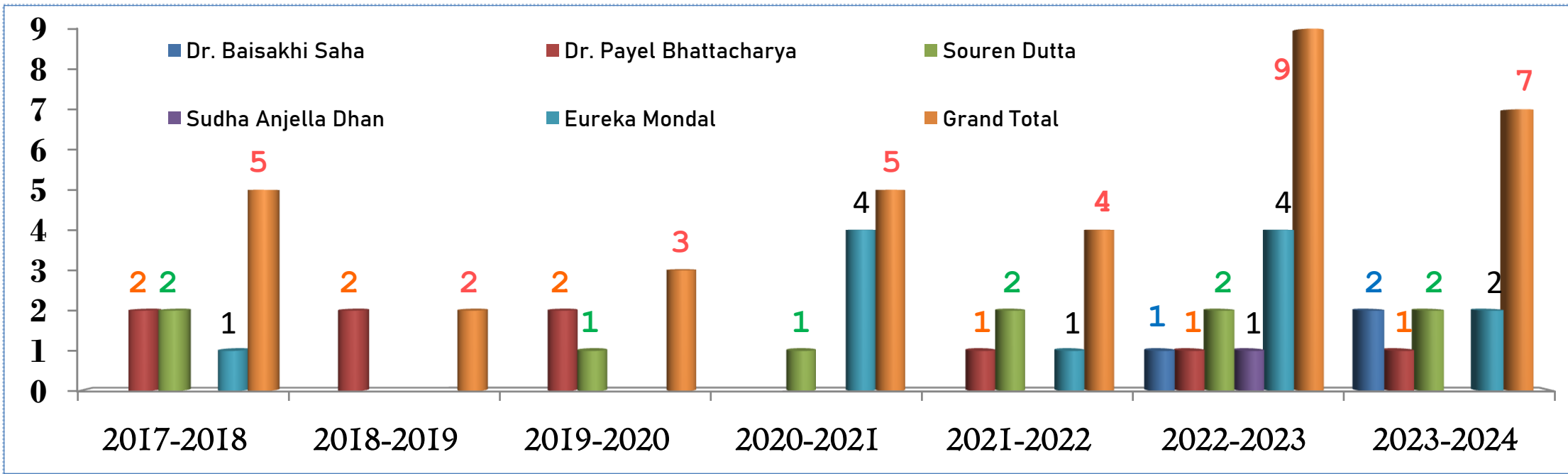
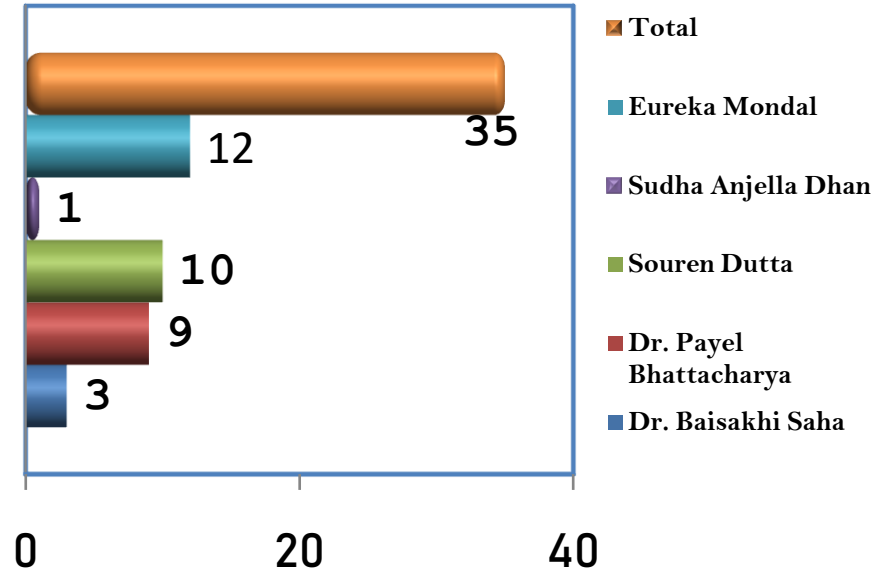
Name of teacher/non-teaching staff	Designation	Qualification	Date of joining	Area of expertise	Publications	Presentations
<b>Mrinal Kanti Bera</b>	<b>Skilled Lab Worker</b>	<b>B.A. (General)</b>	<b>06-07-1998</b>	-	-	-





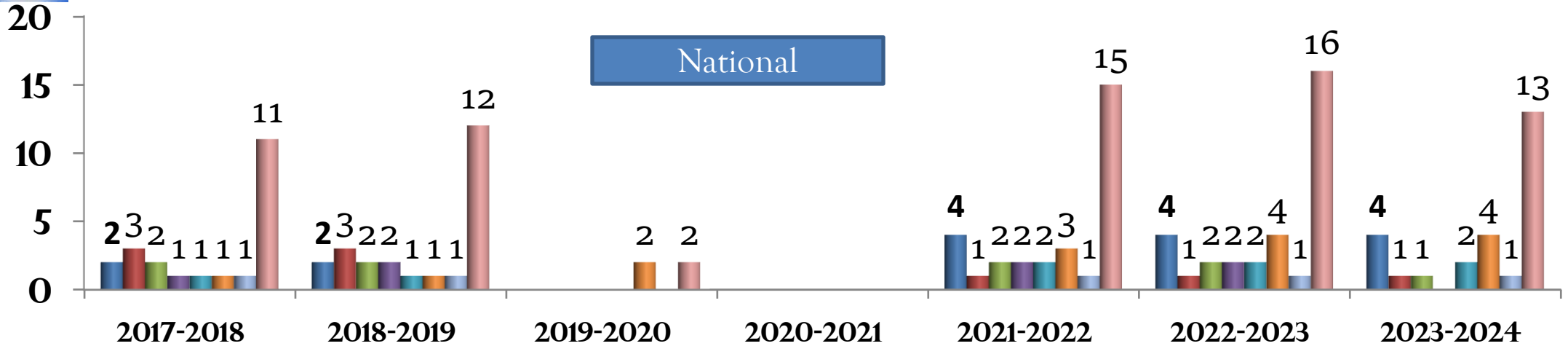
# Research Publication (UGC-CARE listed Journals)

Session year	Name of faculty					Grand Total
	Dr. Baisakhi Saha	Dr. Payel Bhattacharya	Souren Dutta	Sudha Anjella Dhan	Eureka Mondal	
2017-2018		2	2		1	5
2018-2019		2				2
2019-2020		2	1			3
2020-2021			1		4	5
2021-2022		1	2		1	4
2022-2023	1	1	2	1	4	9
2023-2024	2	1	2		2	7
<b>Total</b>	<b>3</b>	<b>9</b>	<b>10</b>	<b>1</b>	<b>12</b>	<b>35</b>

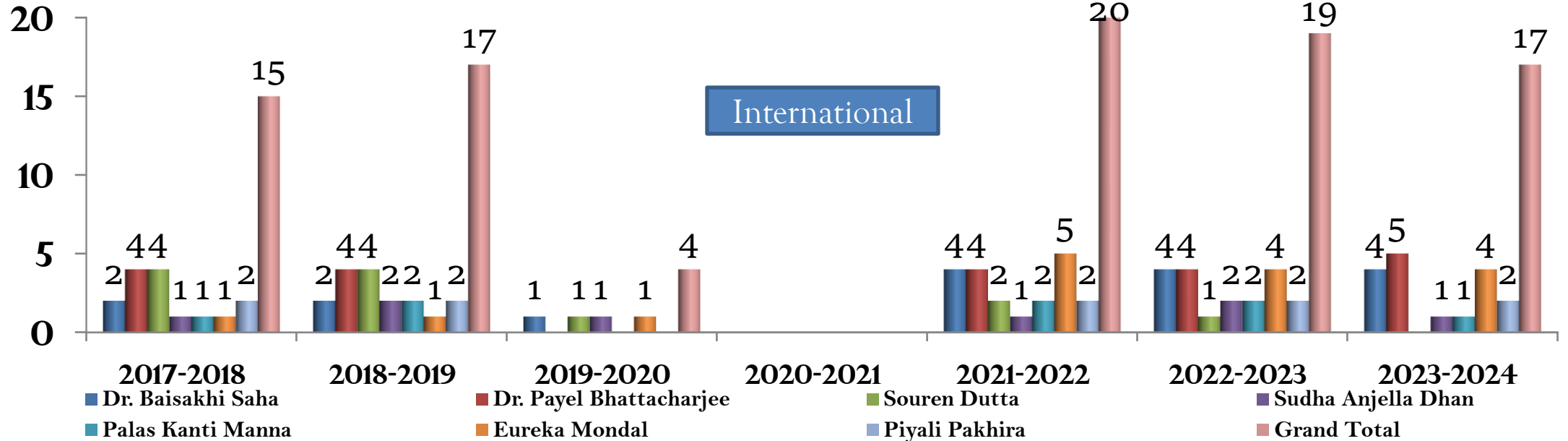




# Seminar Presentation & Workshop



■ Dr. Baisakhi Saha      ■ Dr. Payel Bhattacharjee      ■ Souren Dutta      ■ Sudha Anjella Dhan  
 ■ Palas Kanti Manna      ■ Eureka Mondal      ■ Piyali Pakhira      ■ Grand Total



■ Dr. Baisakhi Saha      ■ Dr. Payel Bhattacharjee      ■ Souren Dutta      ■ Sudha Anjella Dhan  
 ■ Palas Kanti Manna      ■ Eureka Mondal      ■ Piyali Pakhira      ■ Grand Total



# Research Grant Applications Submitted for Funding by the Faculties

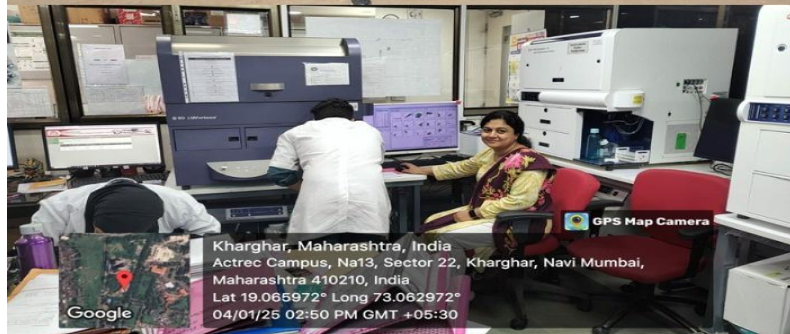
Sl No	Title of the project	Duration	PI/CO-PI	Funding Agency	Status
1	Screening for modifiable risk factors and identification of genetic polymorphisms related to liver diseases among youth in West Bengal: towards early management of liver diseases.	3 years	PI: Dr. Sanjay Kumar Saha, Institute of Postgraduate Medical Education and Research (IPGME&R) and SSKM Hospital, Kolkata CO-PI: <b>Dr. Payel Bhattacharjee</b> , Rabindra Mahavidyalaya Dr. Bidhan Chandra Chakraborty, IPGME&R, Kolkata Prof. Mausumi Basu, IPGME&R and SSKM Hospital, Kolkata	ICMR	Not funded
2	Determination of the synaptic protein levels in plasma-exosomes as potential diagnostic biomarkers of Major Depressive Disorder: A cross-sectional study from Eastern India	3 years	PI: Dr. Sanjay Kumar Saha, IPGME&R and SSKM Hospital, Kolkata CO-PI: <b>Dr. Payel Bhattacharjee</b> , Rabindra Mahavidyalaya Dr. Bidhan Chandra Chakraborty, IPGME&R, Kolkata, Dr. Paramita Ray, Institute of Psychiatry, IPGME&R, Kolkata	DST-Cognitive Science Research Initiative Programme	Under evaluation
3	Blood-based assay development to delineate the role of fibroblast growth factors and their receptors as neurodevelopmental markers for autism spectrum disorder	3 year	<b>PI: Dr. Payel Bhattacharjee</b> , Rabindra Mahavidyalaya Collaborator: Dr. Paramita Ray, Associate Professor in Psychiatry, Institute of Psychiatry, IPGME&R, Kolkata	Prime Minister's Early Career Research Grant under ANRF	Under evaluation



# Research Training Programme



Navi Mumbai, Maharashtra, India  
Sector 22, Utsav Chowk - Csf Rd, Owe Camp, Kharghar, Navi  
Mumbai, Maharashtra 410210, India  
Lat 19.064574° Long 73.065448°  
27/12/24 12:36 PM GMT +05:30



Kharghar, Maharashtra, India  
Actrec Campus, Na13, Sector 22, Kharghar, Navi Mumbai,  
Maharashtra 410210, India  
Lat 19.065972° Long 73.062972°  
04/01/25 02:50 PM GMT +05:30



Kharghar, Maharashtra, India  
Actrec Campus, Na13, Sector 22, Kharghar, Navi Mumbai,  
Maharashtra 410210, India  
Lat 19.065966° Long 73.062973°  
04/01/25 10:51 AM GMT +05:30



**DR. PAYEL BHATTACHARJEE,**  
*Assistant Professor in Zoology* took two weeks  
training in *Flow Cytometry for Cancer Diagnosis* from  
ADVANCED CENTRE FOR TREATMENT,  
EDUCATION AND RESEARCH IN CANCER,  
TATA MEMORIAL HOSPITAL, MUMBAI.

**Dr. Payel Bhattacharjee attended a hands-on workshop on  
'Whole exome sequencing in cancer diagnosis' from  
National Institute of Cancer Prevention and Research,  
Noida from 23-27 September 2024**



# Research Training Programme



**National Training program on Molecular Techniques in Microbial diversity analysis, trends and advances organized by ICAR-National Bureau of Agriculturally Important Microorganisms, MAU, Uttar Pradesh**



**A seven day National Workshop cum hands Hands-on Training program on Transmission Electron Microscopy organized by USIC, Golapbag Campus, Bardhaman**



## Award Received by the faculty members

- **Dr. Payel Bhattacharjee**

- Selected as group leader to present a project on 'Emerging health threats' at Sciathon 2021 global competition conducted by Lindau Nobel Laureate Council, on September 2021
- Awarded CSIR-Senior Research Associate (Scientists' pool scheme) fellowship from 2019 to 2022.
- Invited as an alumni of Lindau Nobel Laureate meeting, 2017 in an alumni meeting conducted by German Research Foundation (DFG) at New Delhi, India.

- **Eureka Mondal**

- 1<sup>st</sup> position in 6<sup>th</sup> Regional Science and Technological Congress, (Region-2) organized by College of Engineering & Textile Technology Berhampore and Government of West Bengal in 2023-2024.
- 2<sup>nd</sup> in position in 5<sup>th</sup> Regional Science and Technological Congress 2022-2023, (Northern Region) organized by University of Gour Banga, Malda and Government of West Bengal.

- **Souren Dutta**

- 1st Position in 3<sup>rd</sup> Regional Science and Technological Congress, (Northern Region) organized by Jalpaiguri Government Engineering College, Jalpaiguri, and Government of West Bengal on 2018-2019



# Average Class Load Per Week

<b>Teachers</b>	<b>Classes per Week</b>
<b>Assistant Professor</b>	<b>48</b>
<b>SACT</b>	<b>36</b>

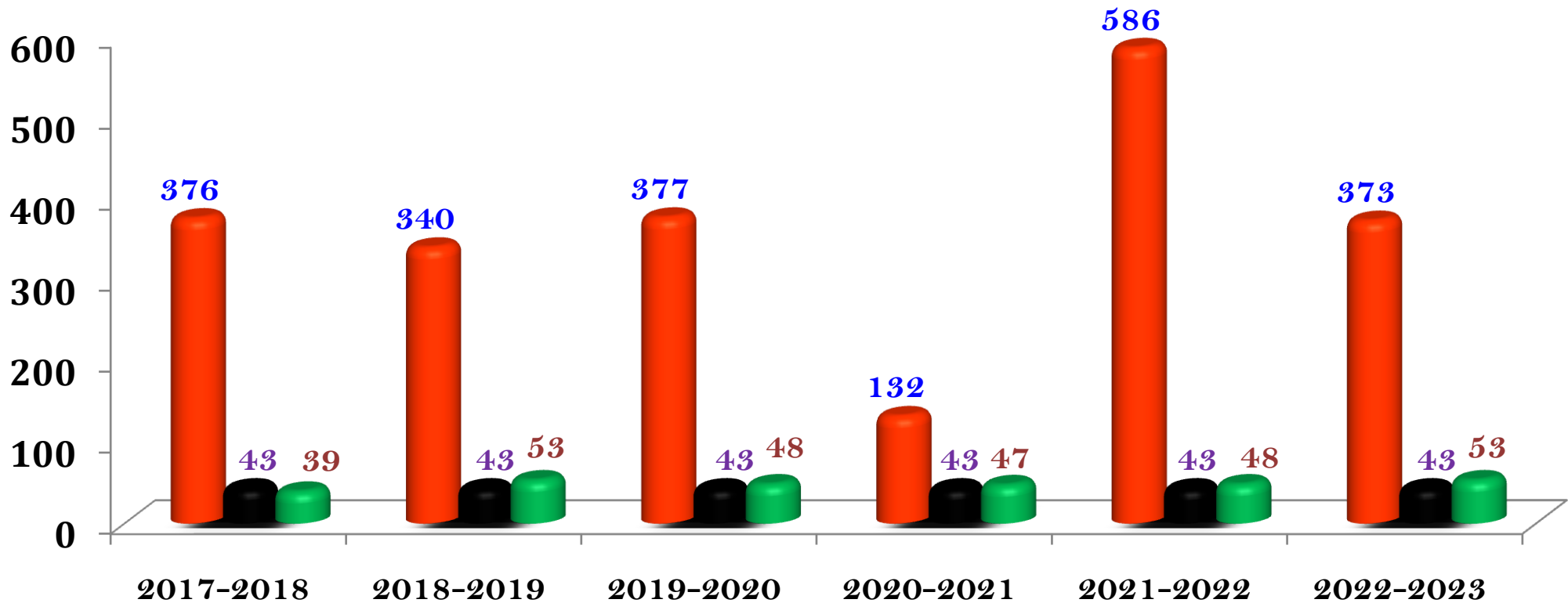
<b>Teaching Learning Infrastructure</b>	
<b>Theory Class Rooms</b>	<b>2</b>
<b>Laboratory</b>	<b>2</b>



# Departmental Highlights

Demand Ratio (2017-2023) (CBCS System)

Session	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
No. of eligible applications receive	376	340	377	132	586	373
Sanctioned / Approved student strength	43	43	43	43	43	43
No. of Student admitted	39	53	48	47	48	53



■ No. of eligible applications receive

■ Sanctioned / Approved student strength

■ No. of Student admitted

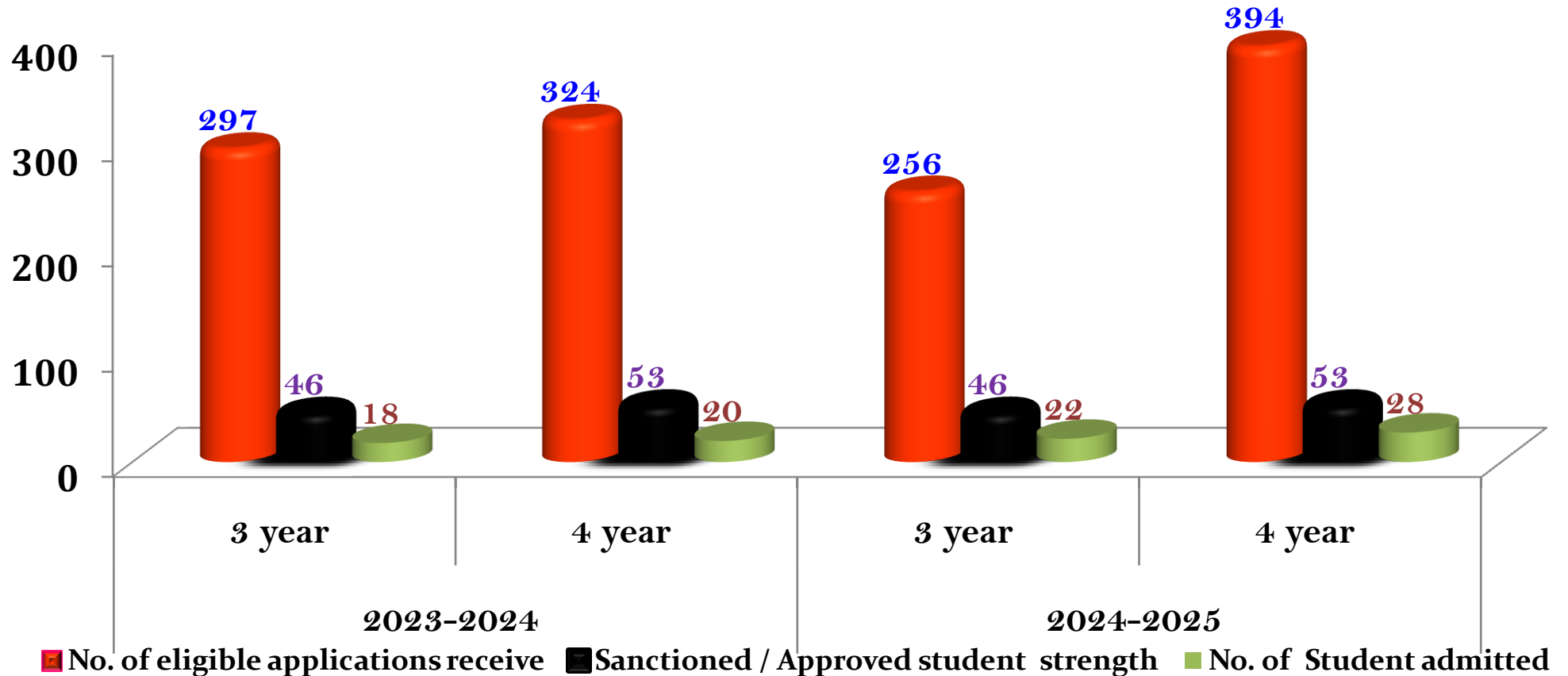




# Departmental Highlights

Demand Ratio (2017-2023) (NEP System)

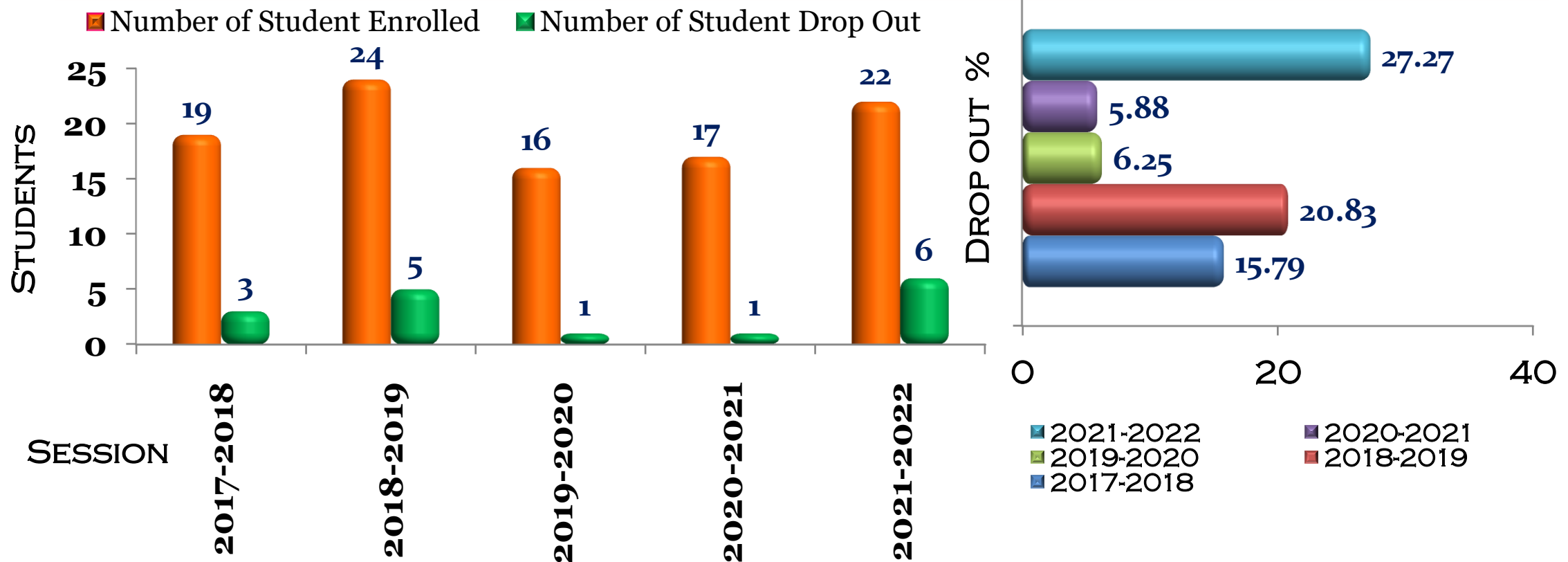
Session	2023-2024		2024-2025	
	3 year	4 year	3 year	4 year
No. of eligible applications receive	297	324	256	394
Sanctioned / Approved student strength	46	53	46	53
No. of Student admitted	18	20	22	28





# Drop-out History in Honours Subjects under CBCS

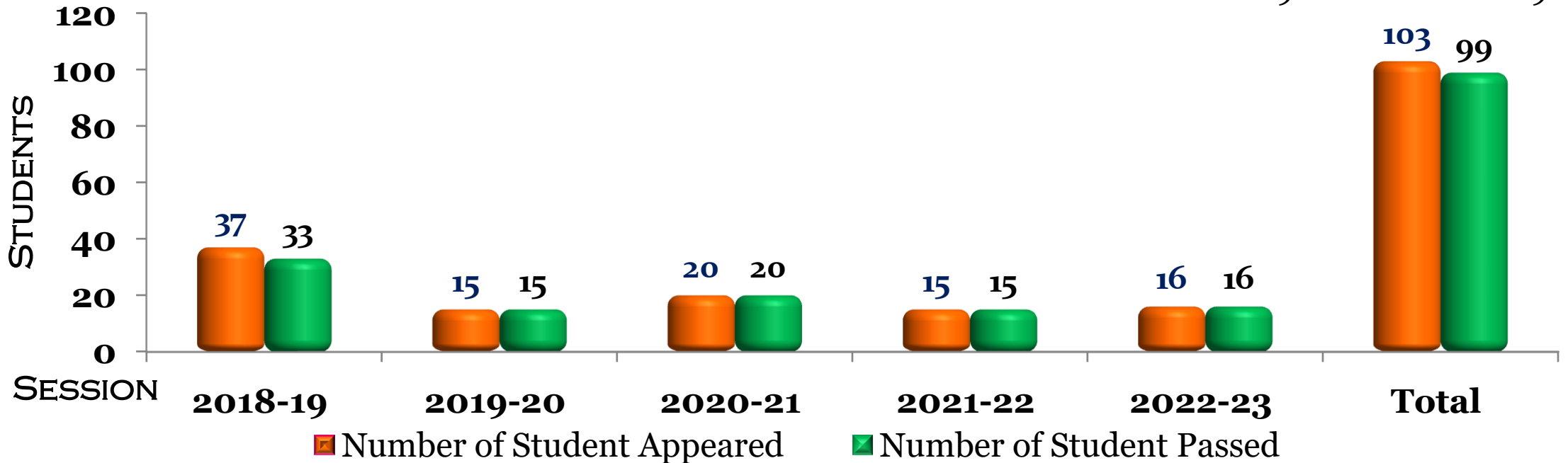
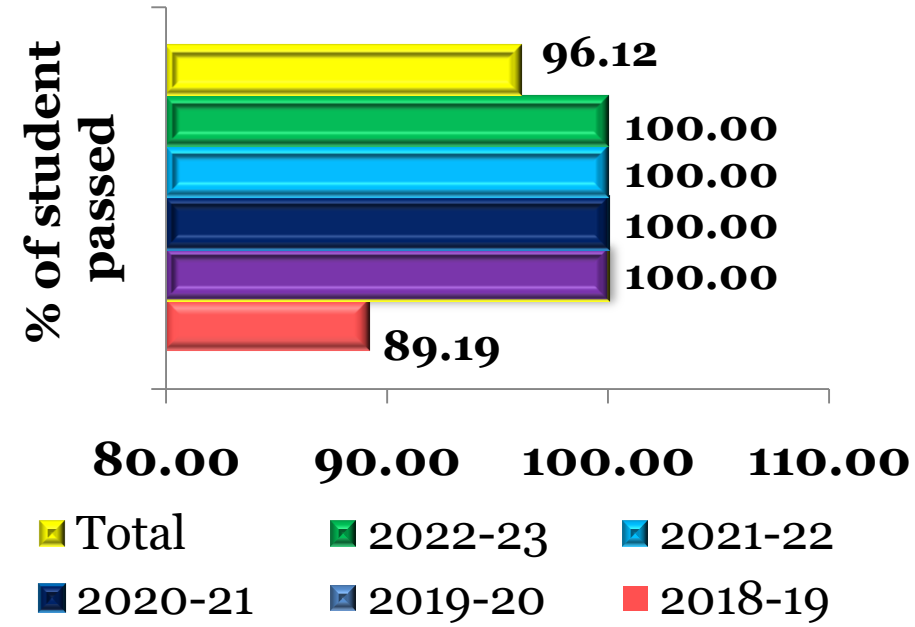
Session	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
Number of Student Enrolled	19	24	16	17	22
Number of Student Drop Out	03	5	01	01	06
Drop out %	15.79	20.83	6.25	5.88	27.27





# Pass percentage of Students during last five years (excluding backlog students)

Session	2018-19	2019-20	2020-21	2021-22	2022-23	Total
Number of Student Appeared	37	15	20	15	16	103
Number of Student Passed	33	15	20	15	16	99
% of Student Pass	89.19%	100.00%	100.00%	100.00%	100.00%	96.12%





# Departmental Highlights

## Comparative Study of 5-years Final Results of Honours Subjects under CBCS

Name of the Course	Session year	Number of student obtain Grade					Grand Total
		O	A+	A	B+	B	
B.Sc. (Hons) in Zoology	2017-2020		1	10	4		15
	2018-2021		8	12			20
	2019-2022	10	5				15
	2020-2023		13	3			16
	2021-2024		1	7	7	1	16
<b>Grand Total</b>		<b>10</b>	<b>28</b>	<b>32</b>	<b>11</b>	<b>1</b>	<b>82</b>



Session

Grade O

Grade A+

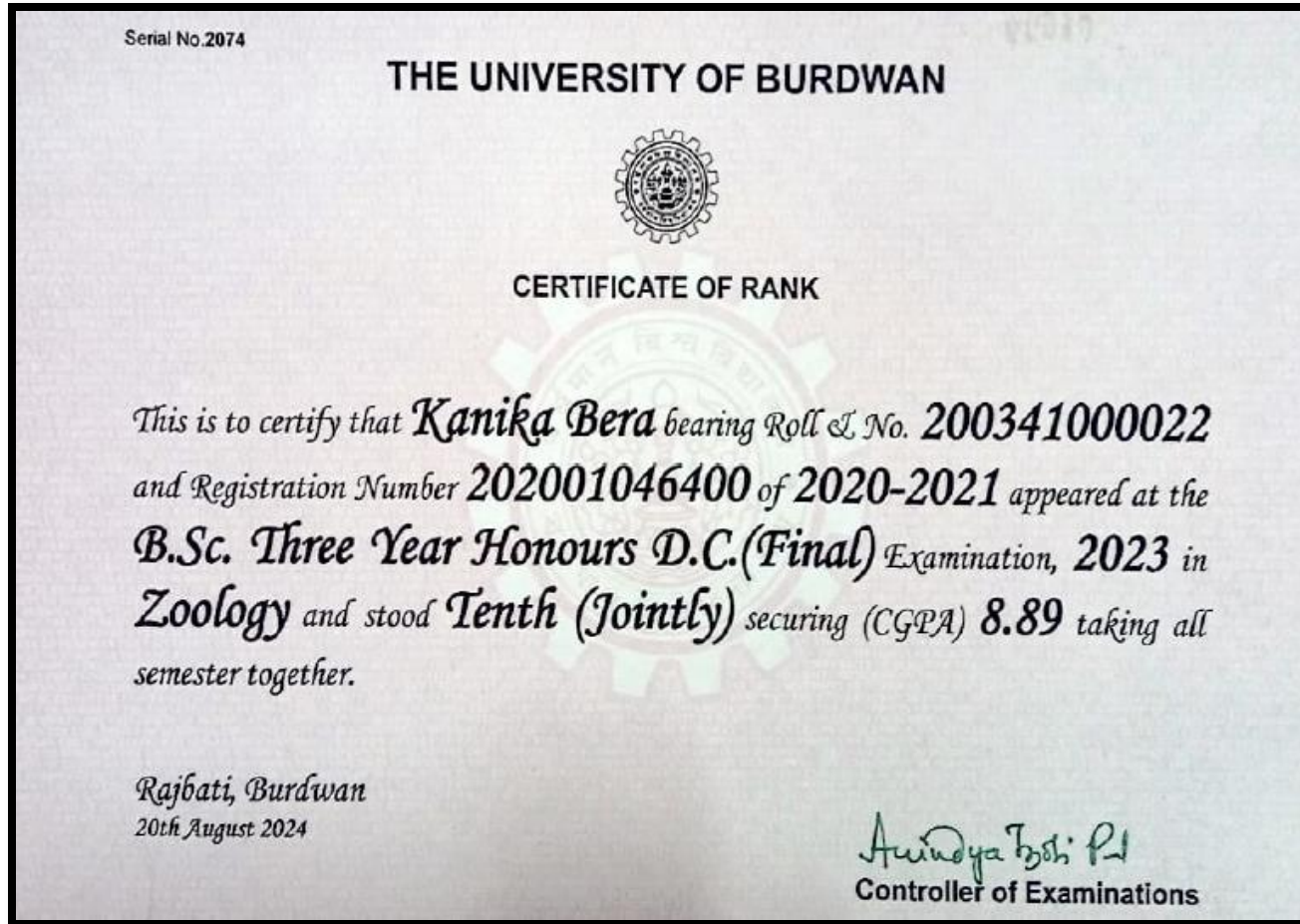
Grade A

Grade B+

Grade B



# Departmental Highlights



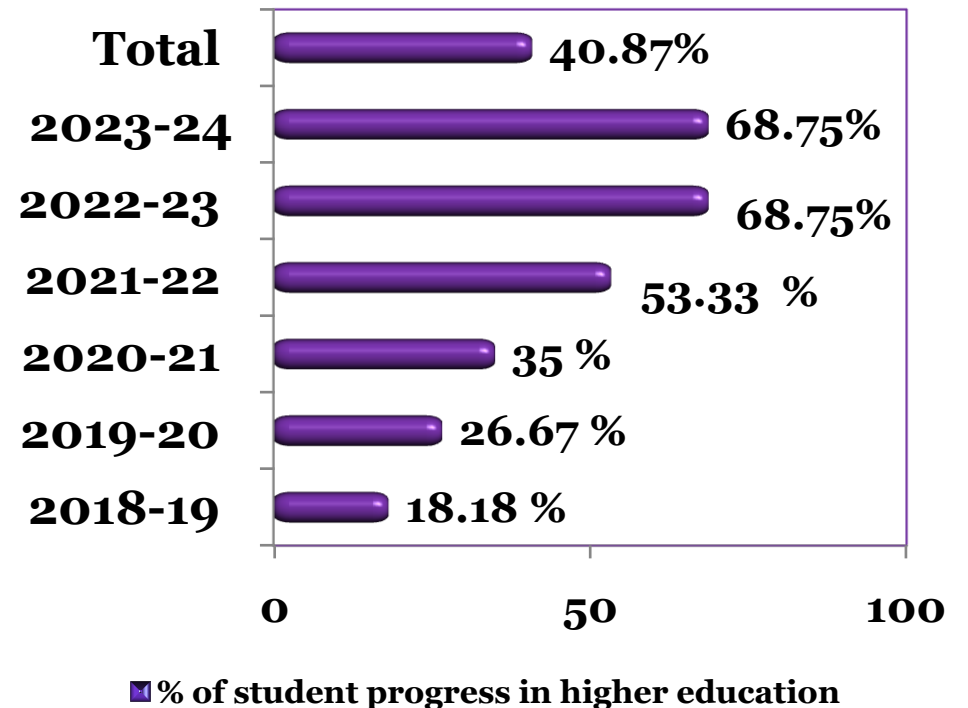
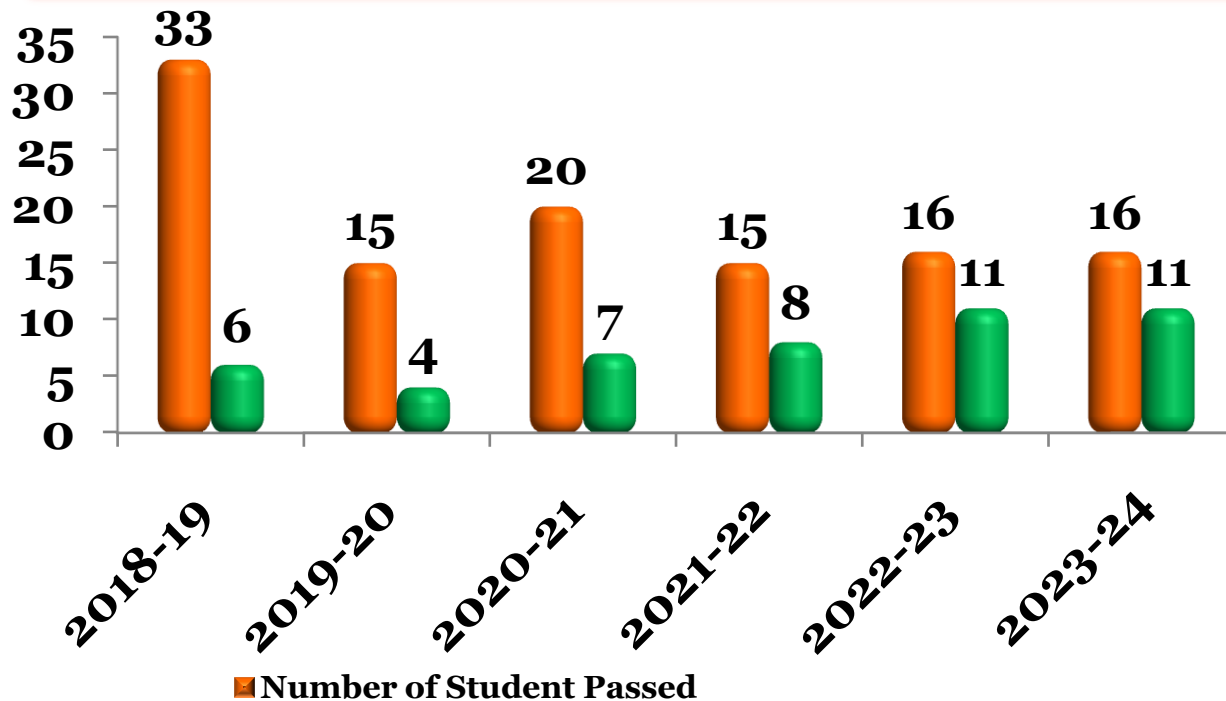
Jointly 10th in 2022-23





# Session-wise Progression to Higher Education

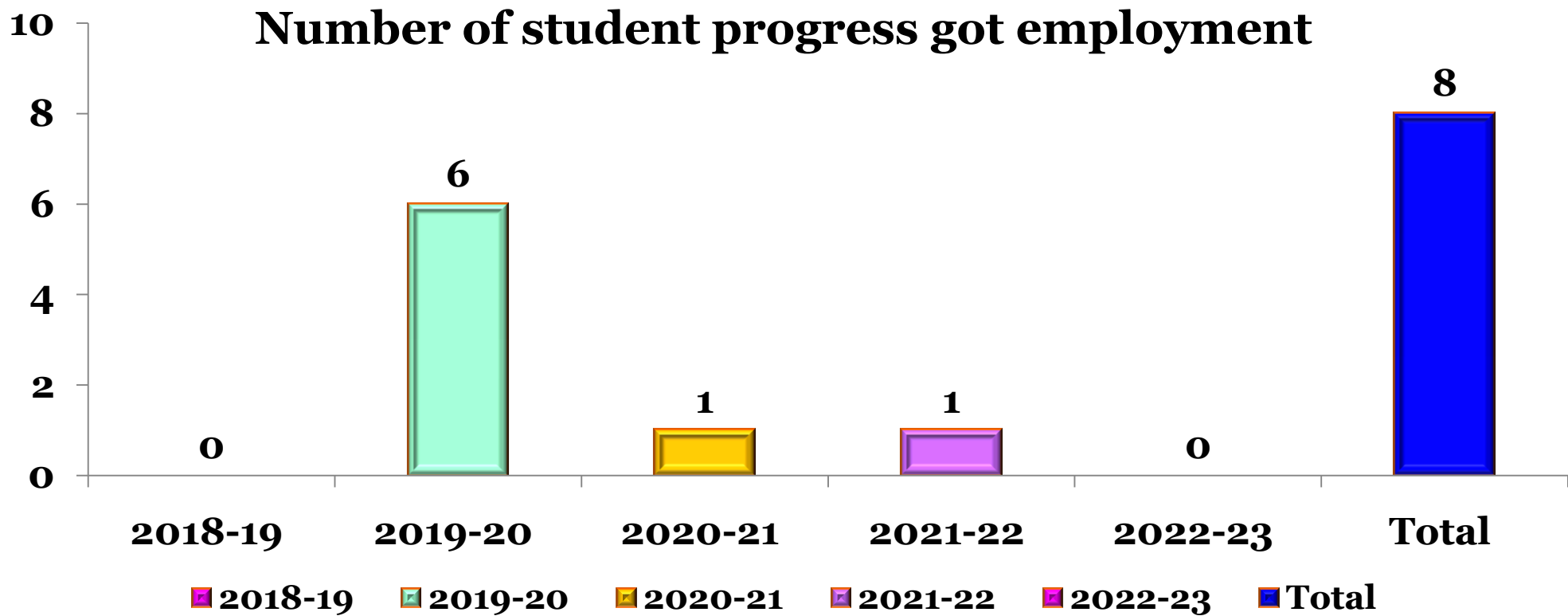
Session	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	Total
Number of Student Passed	33	15	20	15	16	16	115
Number of Student progress towards higher education	6	4	7	8	11	11	47
% of student progress in higher education	18.18	26.67	35.00	53.33	68.75	68.75	40.87





# Session wise Progression to Employment

Session	2018-19	2019-20	2020-21	2021-22	2022-23	Total
Number of student progress got employment	0	6	1	1	0	8





# Success Rate of Final Year Students

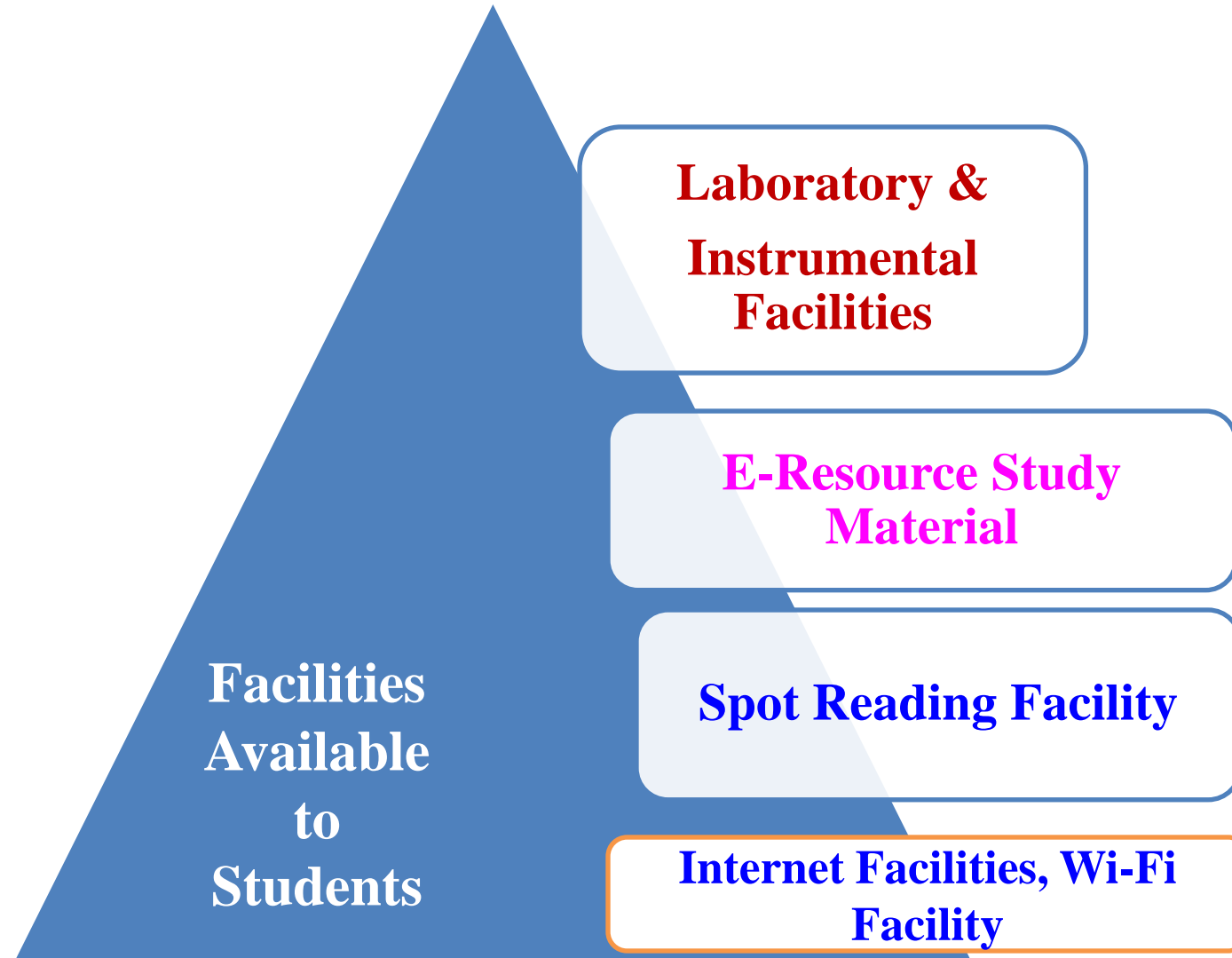


Year	Hons./General	Appeared	Passed	1 <sup>st</sup> Class	Success Rate
2023-2024	Honours	16	16	16	100%
2023-2024	General	4	4	4	100%



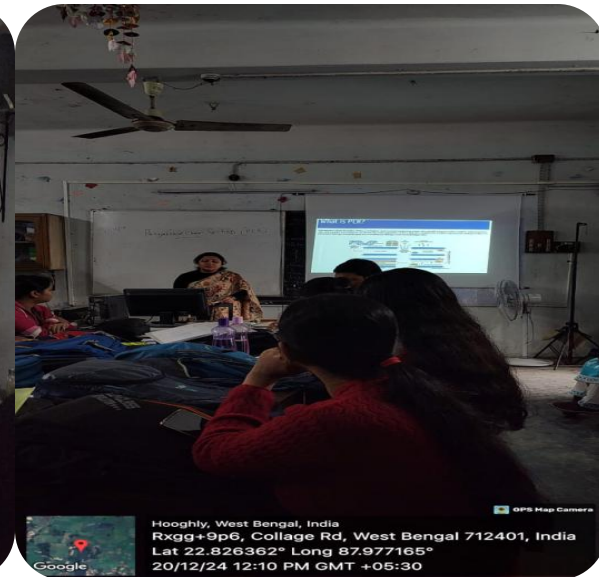
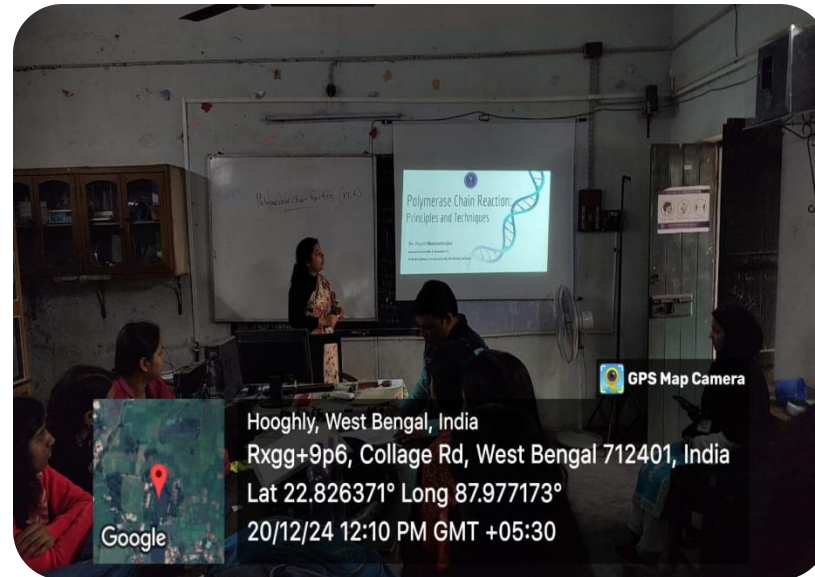


# Facilities Available To Students





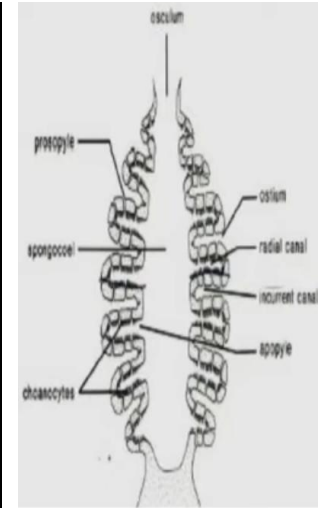
# ICT based (Audio-Visual) Class Teaching





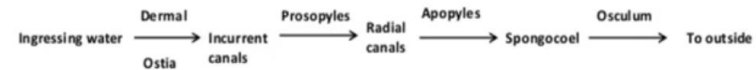
# e-Teaching Learning

You Tube



## Sycon type

- More complex canal system and found only in syconoid sponges
  - Derived from the asconoid type by horizontal folding of its wall
  - Have two types of canal-incurrent and radial, paralleling and alternating with each other
  - Incurrent canals are non-flagellated and radial canals are flagellated
  - have two openings-dermal ostia and prosopyles in its body wall
  - The spongocoel is the narrow and non-flagellated cavity
  - It is lined by pinacocytes
- e.g. *Scypha*, *Grantia*



## Google Classroom

## Google Meet



# E-contents

Search in Drive

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- Routine
- SEM II General
- sem III general
- Sem III GENERAL BOTANY
- SEM III General Micro Biol...
- SEM IV Zoology General
- SEM v General
- SEM VI General
- Sem-I
- Sem-II
- Sem-III
- Sem-IV
- Sem-V
- Sem-VI
- snd

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## Chapter 4

### The Ecosystem

- 4.1. Concept & Importance of Ecosystem
- 4.2. Classification or Types of Ecosystem
- 4.3. Structure of the Ecosystem
- 4.4. Typical Examples of Ecosystem

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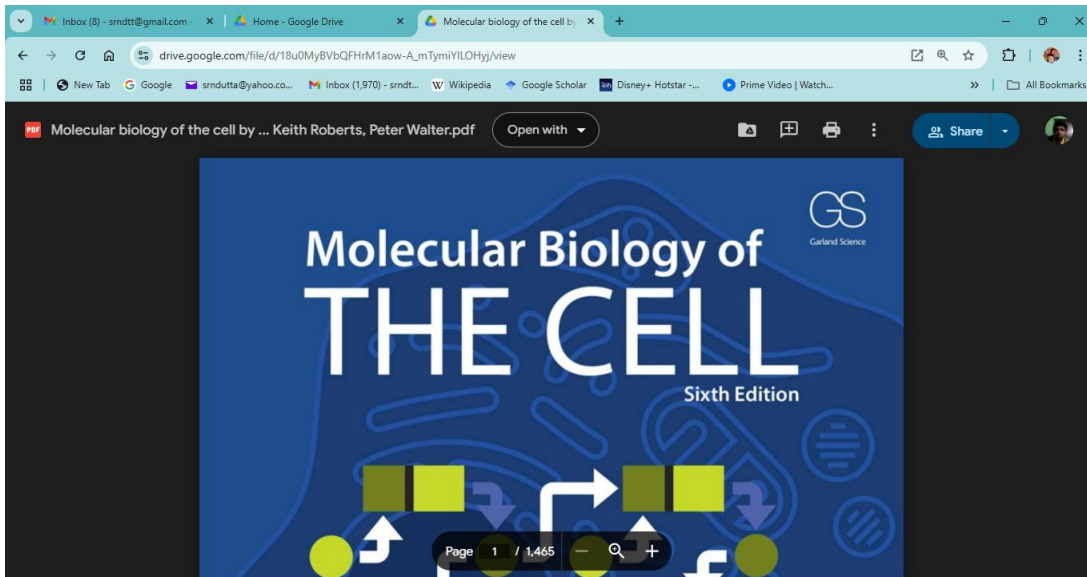
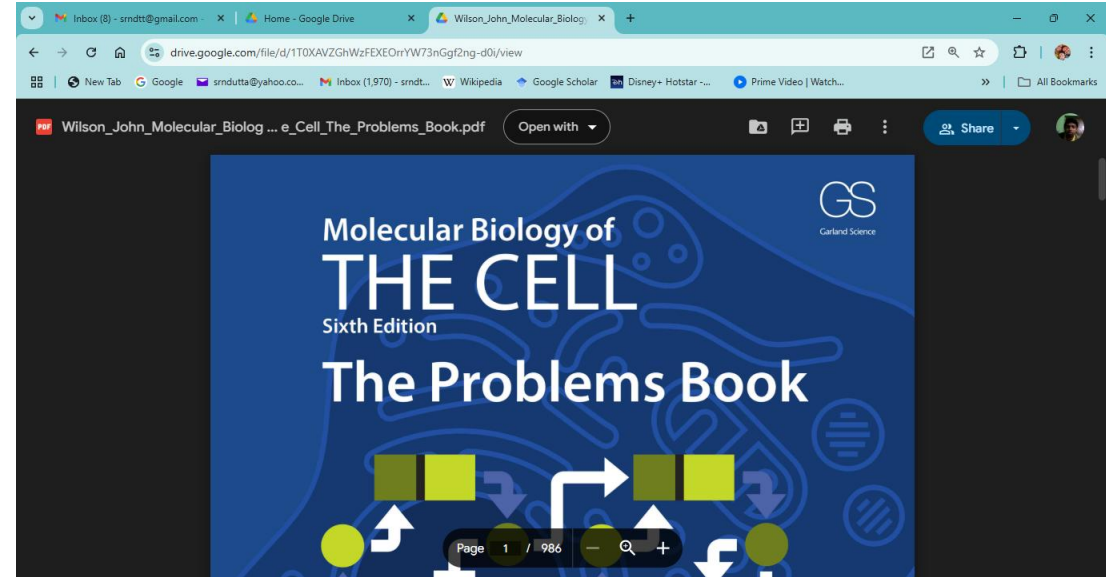
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E-learning resources



# E-Resources

Name of Books	Author	Link
BIOLOGY OF ANIMALS	BANKU BEHARI GANGULY, M.Sc., Ph.D. ARUP KUMAR S1NHA, M.Sc., Ph.D. SIMANANDA ADHIKART, M.Sc., Ph.D.	<a href="https://drive.google.com/file/d/1-CFHs3dBTwBIHDCxm4FKRHJ9KISpN03/view?usp=sharing">https://drive.google.com/file/d/1-CFHs3dBTwBIHDCxm4FKRHJ9KISpN03/view?usp=sharing</a>
Biology of Invertebrates	Pechenik	<a href="https://drive.google.com/file/d/1NnFcLDlIQg8DSj1VsFPVSRiv1-L1noL/view?usp=sharing">https://drive.google.com/file/d/1NnFcLDlIQg8DSj1VsFPVSRiv1-L1noL/view?usp=sharing</a>
Instant Notes Immunology	P.M. Lydyard, A Whelan, M.W. Fanger	<a href="https://drive.google.com/file/d/1wWn6eBUWmXi5dVb_v36nHM47HOxg5Z15/view?usp=sharing">https://drive.google.com/file/d/1wWn6eBUWmXi5dVb_v36nHM47HOxg5Z15/view?usp=sharing</a>
MODERN TEXT BOOK OF ZOOLOGY VERTEBRATES	R.L.KOTPAL FORMERLY, PROFESSOR AND HEAD DEPARTMENT OF ZOOLOGY MEERUT COLLEGE MEERUT	<a href="https://drive.google.com/file/d/1JGIBnhVeNG6TOPxQd5jgI8Hf9ZKwA2w2/view?usp=sharing">https://drive.google.com/file/d/1JGIBnhVeNG6TOPxQd5jgI8Hf9ZKwA2w2/view?usp=sharing</a>
Genetics: A Molecular Approach	Peter J. Russell	<a href="https://drive.google.com/file/d/1kLDp2iOoNFXVDQcezWkVo8CfIdHztA/view?usp=sharing">https://drive.google.com/file/d/1kLDp2iOoNFXVDQcezWkVo8CfIdHztA/view?usp=sharing</a>
Genetics	Snustad(2012)	<a href="https://drive.google.com/file/d/1Pis04gr8Q-UUdTmhjDYFT4Ozct0e0/view?usp=sharing">https://drive.google.com/file/d/1Pis04gr8Q-UUdTmhjDYFT4Ozct0e0/view?usp=sharing</a>
Genetics	Benjamin A. Pierce	<a href="https://drive.google.com/file/d/1WgnJHgtP9CPme0OZm8gYGtoMuxwSyN/view?usp=sharing">https://drive.google.com/file/d/1WgnJHgtP9CPme0OZm8gYGtoMuxwSyN/view?usp=sharing</a>



E- resources from E-seminar Library  
<https://rabindramahavidyalaya.ac.in/department.php?did=MTE=&item=6>



# Laboratory Facilities



Animal Dissection



Study of museum specimen



Study of different bones & Skeleton



Study of microscopic specimen

Hooghly, West Bengal, India  
RXGG+9P6, Collage Rd, West Bengal 712401, India  
Lat 22.826357°  
Long 87.977335°  
18/12/23 01:51 PM GMT +05:30

GPS Map Camera

Google



# Zoological Museum



**Chordate Museum**



**Non-Chordate Museum**



# Instrumental Facilities



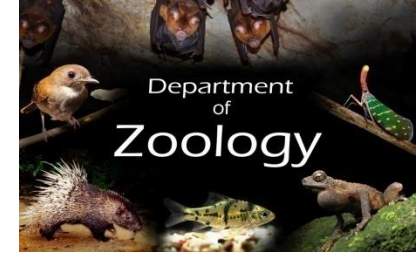
**Presently the Department of Zoology has two laboratories. These Instruments are mainly used in practical classes by the students.**

**Instruments: Incubator, Gel Electrophoresis Kit, Uv-Illuminator, Magnetic Stir, Hot plate, Sphigmomanometer, Haemocytometer, Centrifuge etc.**





# Library Facility



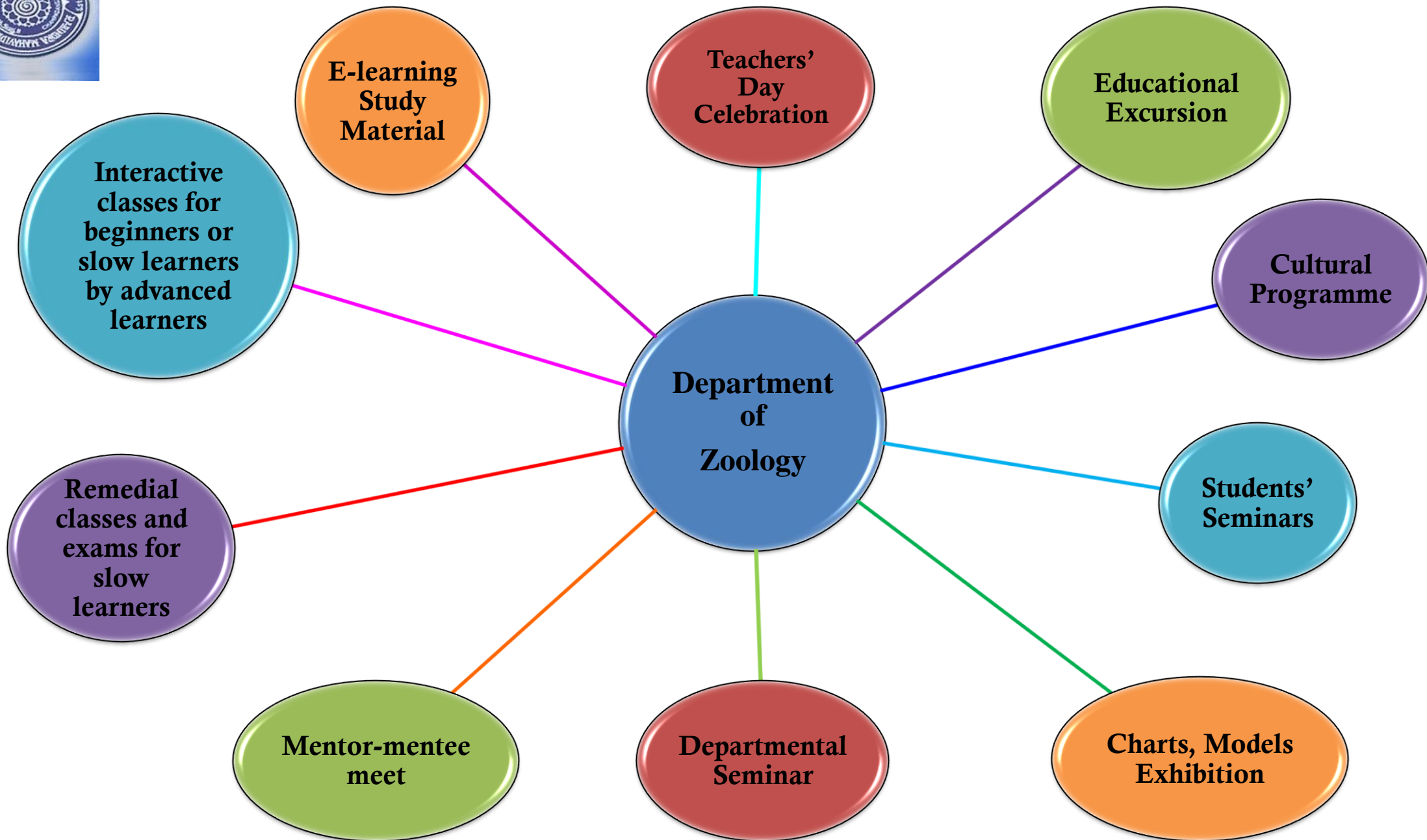
○ **Central Library-** There are ~1307 books in the Central Library both for the teachers and the students.

○ **Departmental Library-** There is a departmental Library for Zoology Hons. and General students which have collected from publishers besides that faculties of Zoology has also donated books for the benefit of the students. Beside that department has facility online seminar library system also Link

<https://rabindramahavidyalaya.ac.in/department.php?did=MTE=&item=6>



# Other Departmental Activities

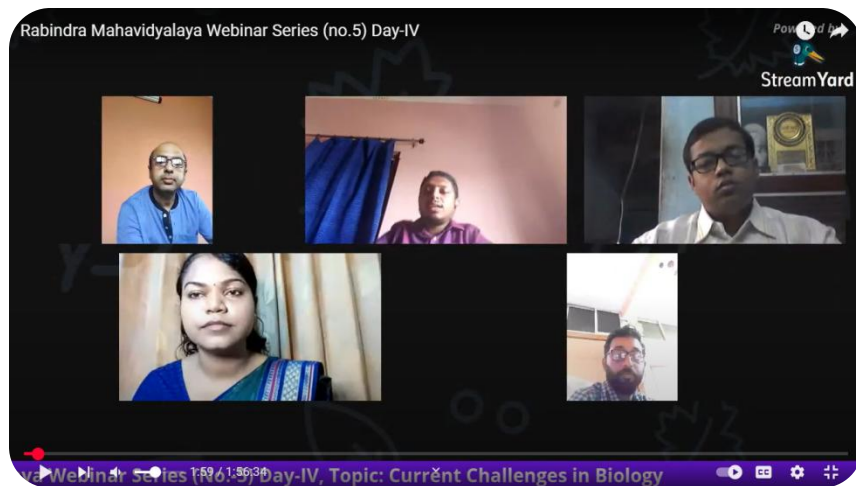




# Other Departmental Activities



## Departmental Seminar and Webinar





# Other Departmental Activities

## Departmental Quiz

### Departmental Quiz Competition Dept. of Zoology

Date: 5.3.2024

**Which one is jawless?**

Shark, Toad, Lamprey, Snake

**Incompletely divided ventricle is found in**

Lizard, Pigeon, Monkey, Crocodile

**Single celled animal is**

Euglena, Octopus, Starfish, Sponge

**Tunic is present in**

Sphyrna, Ascidia, Amphioxus, Starfish

**Nephridia is a type of**

Respiratory organ, Excretory organ, digestive organ, sense organ

**Which one is a fish**

Silver fish, catfish, starfish, jellyfish

**Haemolymph is observed in**

Arthropoda, Annelida, Mollusca, Nematoda

**Male sex hormone is**

Estrogen, testosterone, insulin

**Vermocomposting is done by**

Fungus, bacteria, earthworm, Virus

**Which one is master gland?**

Hypothalamus, hypophysis, adrenal, pineal

**Find out the simple sugar**

Fructose, glycogen, amino acid, Mucopolysaccharide

**Energy flow through ecosystem is**

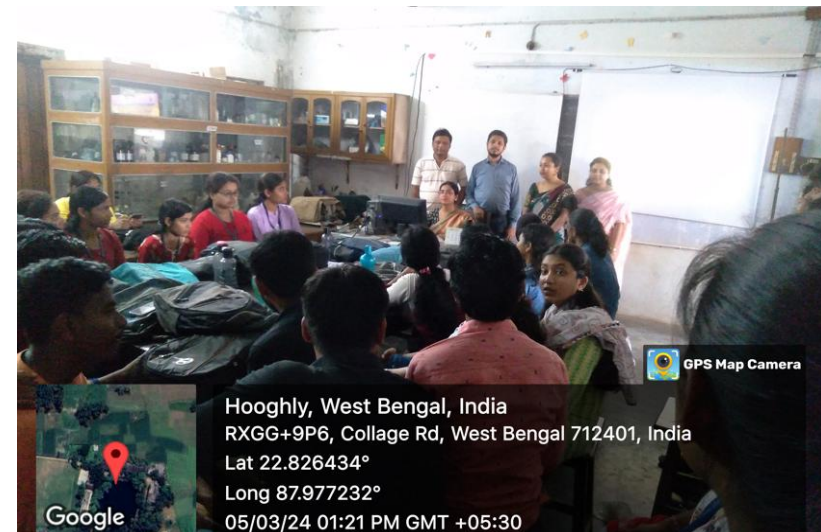
One way, two ways, multiple ways

**Multivalent antibody is**

IgM, IgE, IgA, IgG

**Haemophilia is a kind of disease**

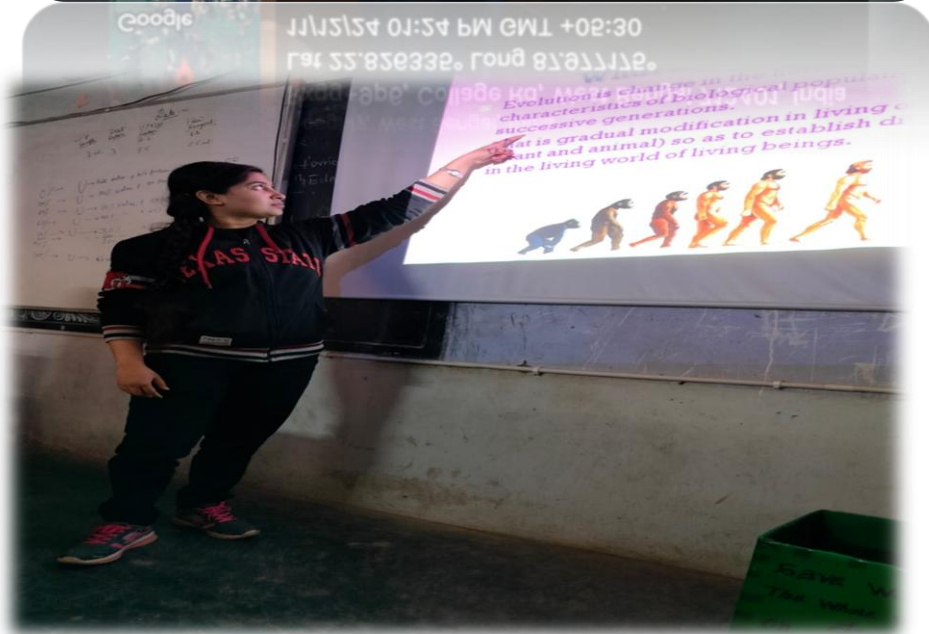
X-linked recessive, Y-linked, Autosomal, X linked dominant





# Other Departmental Activities

## Interactive Class





# Other Departmental Activities



Hooghly, West Bengal, India  
RXGG+9P6, Collage Rd, West Bengal 712401, India  
Lat 22.826317°  
Long 87.977184°  
13/05/24 02:44 PM GMT +05:30



Hooghly, West Bengal, India  
RXGG+9P6, Collage Rd, West Bengal 712401, India  
Lat 22.826336°  
Long 87.977147°  
04/03/24 03:22 PM GMT +05:30



03/29/2024 13:19



Hooghly, West Bengal, India  
Rxxgg+9p6, Collage Rd, West Bengal 712401, India  
Lat 22.826342° Long 87.977202°  
22/11/24 03:06 PM GMT +05:30

**Chart and Model Exhibition, Wall Magazines and Quiz (Sem V students taking class of Sem I students)**



# Other Departmental Activities



Kolkata, West Bengal, India  
244, Acharya Jagdish Chandra Bose Rd, Bhowanipore, Kolkata, West Bengal 700020, India  
Lat 22.5407°  
Long 88.342311°  
19/01/24 01:44 PM GMT +05:30



Kolkata, West Bengal, India  
49/1, Gariahat Road, Ballygunge Gardens, Ballygunge, Kolkata, West Bengal 700019, India  
Lat 22.527462°  
Long 88.363398°  
17/05/24 01:29 PM GMT +05:30



Kolkata, West Bengal, India  
244, Acharya Jagdish Chandra Bose Rd, Bhowanipore, Kolkata, West Bengal 700020, India  
Lat 22.539649°  
Long 88.34155°  
19/01/24 03:32 PM GMT +05:30

Students watching slide preparation for malarial parasite identification at Malaria Clinic, at Institute of Postgraduate Medical Education and Research (IPGME&R) and SSKM hospital

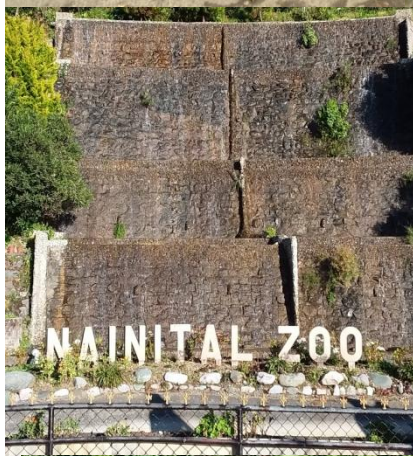
Dr. Subhra Prakash Hui, Assistant Professor and HOD of S.N. Pradhan Centre of Neurosciences showing Zebra Fish facility at the laboratory

Students learning Flow cytometry at MBRU, IPGME&R

## Departmental visit to Science Center, Archeological Museum and Clinical Laboratory



# Other Departmental Activities



**Departmental Educational Tours and Faunal Diversity**





# Other Departmental Activities



**Alumni Meet with Departmental Ex-Students**



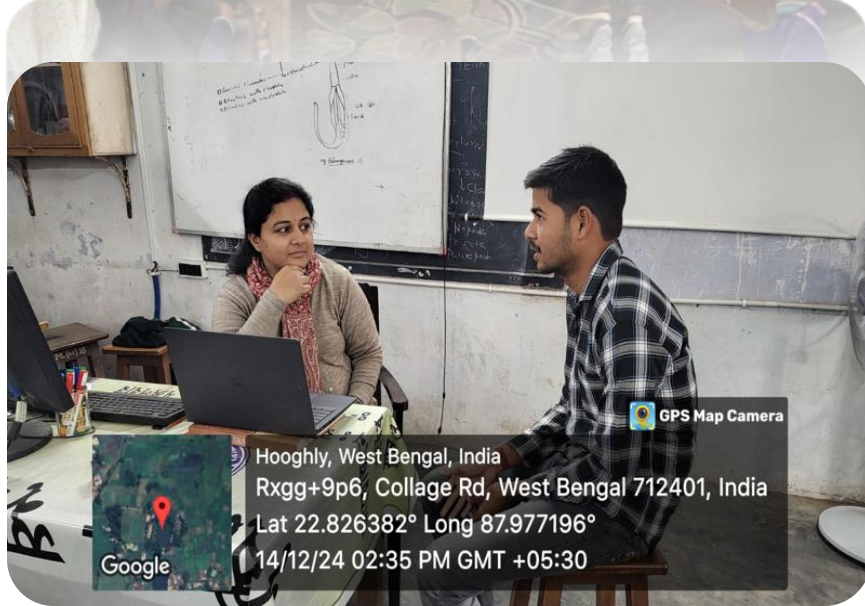
# Parent Teacher Meeting and Student Counseling



Hooghly, West Bengal, India  
Rxgg+9p6, Collage Rd, West Bengal 712401, India  
Lat 22.826437° Long 87.97689°  
16/12/24 12:02 PM GMT +05:30



16/12/2024 12:01



Hooghly, West Bengal, India  
Rxgg+9p6, Collage Rd, West Bengal 712401, India  
Lat 22.826382° Long 87.977196°  
14/12/24 02:35 PM GMT +05:30



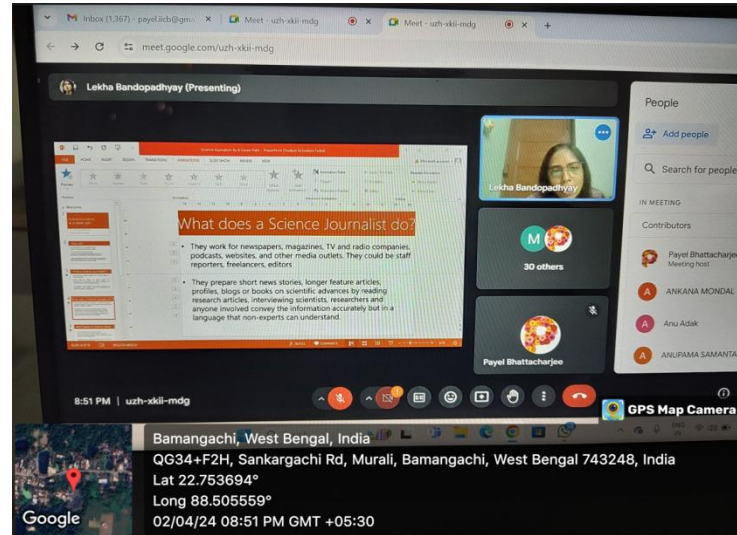
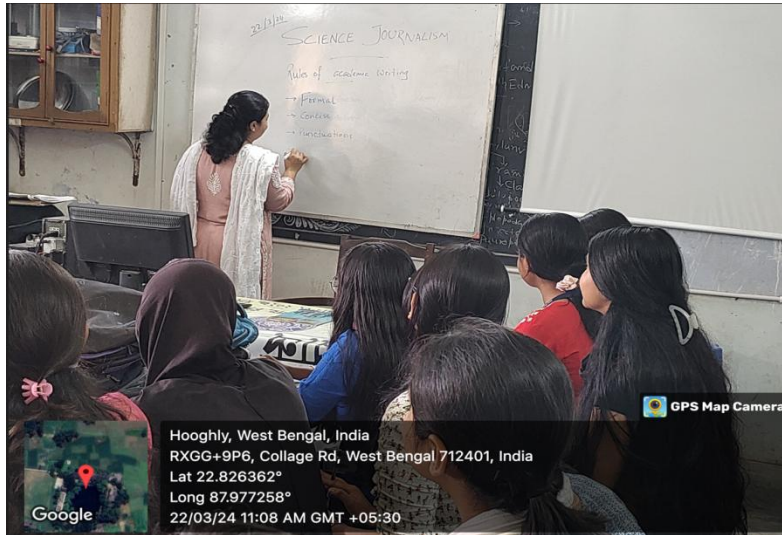
Hooghly, West Bengal, India  
Rxgg+9p6, Collage Rd, West Bengal 712401, India  
Lat 22.826378° Long 87.97718°  
14/12/24 12:48 PM GMT +05:30



Hooghly, West Bengal, India  
Rxgg+9p6, Collage Rd, West Bengal 712401, India  
Lat 22.826387° Long 87.977186°  
14/12/24 12:48 PM GMT +05:30



# Add-on Course in Science Journalism



Offline and online classes, examination and certificate distribution of add-on course in Science Journalism



# SWOC ANALYSIS

## Strength:

- The department boasts of qualified and competent teaching faculties.
- Good relationship between teachers and students.
- Satisfactory number of students enrolment both in Honours and General course.
- Students get support both from department & central library.

## Weakness:

- Limited scope to introduce various combinations & allied courses.
- No separated department & departmental library room.
- Almost all the students come from poor socio-economic background and first generation learner.
- Availability of Fund for purchasing lab and IT items
- Availability of Wi-Fi connection properly

## Opportunity:

- The Department may attract students by offering need based courses e.g. Vermicomposting, Farming, Aquaculture etc.
- More scope to uses modern technological aids in teaching learning programmes.
- To train and counsel students to become more employable
- More social extension activities could be done.

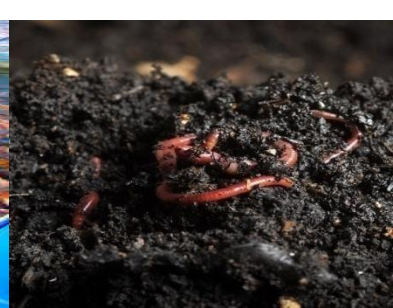
## Challenges:

- Drop out due to early marriages of girl students.
- Most of the boys engaged in cultivation and related works. Thus poor attendance observed.
- More challenges are there in nearby towns, so more quality students are attracted by town colleges.
- Increasing demand of technology based courses is responsible for declining interest in studying Zoology.



# Future Plans

- To organize National/International Seminars/Conferences by distinguished persons from Universities and Research Institutes.
- To organize Faunal study in Tarakeswar Block.
- Conduction of smart and ICT classes for the students for effective delivery of current scientific topics.
- To start hands-on training in Poultry Keeping, Vermicomposting, Aquaculture etc. for enhancing the self-sufficient skill the students.
- Introducing more add-on courses like nutrition and public health, clinical laboratory practices, first aid and Cardiopulmonary resuscitation (CPR) training etc. in addition to ongoing Science Journalism course.
- Applying for research grants for conducting research in collaboration with Universities, Research Institutes and Medical Colleges.



**Thank You**