DELNET MOU (IM 11:2007)

This Agreement is made on the	4th day	day of	February	_ 200 💇
between DELNET-Developing Library 1	Network, Nelson M	andela Road,	Vasant Kunj, New D	elhi-110070
(hereinafter referred to as DELNET) and				
8, RAPI AHMED	KLDWAI	ROAD,	KOLKATA-	700013
	(with full addre	ss)		

(Hereinafter referred to as the 'Institutional Member')

Whereas DELNET has agreed to grant non-exclusive license to the Institutional Members to use DELNET's databases, provide technical guidance in database creation and networking and deliver to the Institutional Member certain computer programmes from time to time and to grant a non-exclusive license to use such programmes and their associated documents on the terms and conditions' hereinafter contained:

Whereas the Institutional Member has its library located at B, RAFI AHMED KIDWH ROAD and has agreed to become a member of DELNET to use DELNET databases and services at this location only and promote and share of its library resources with other institutional members of DELNET:

Now it is hereby agreed as follows:

The Institutional Member shall:

- 1. Use the DELNET databases for furthering its own research programmes and providing information to its users and the Institutional Members and users of DELNET.
- 2. Use the software arranged by or through DELNET for networking purpose on the machine owned by the Institutional Member.
- 3. Create records of the standards set out by DELNET from time to time. DELNET is promoting at present the creation of records using MARC, AACR II, the Library of Congress Subject Headings List and specialised thesauri.
- 4. Contribute the records of all items to the Central Union Catalogues, which are not represented by records already present on the database. The copyright of records created by the Institutional Member in its own machine will rest in the Institutional Member, but the copyright of the Central Union Catalogues shall rest in DELNET.
- 5. Pay an initial registration fee of Rs.5,000/- to DELNET.
- 6. Pay annual membership fee to DELNET for the use of union catalogues and reference services at rates set by DELNET annually in advance on or before first April. (The annual membership fee payable at present by Institutional Member is Rs.7,500/-).
- 7. Pay Inter Library Loan fee of Rs.4000/- to DELNET for using Inter Library Loan services.
- 8. Pay all fees charges within thirty days from the date of DELNET invoice. The Institutional Member shall pay interest on all amounts not paid on the due date at the rate of 10% from the date of invoice to the date of payment.

Dr. Sangeeta Kaul DELNET, New Delhi

Principal Maulana Azad College Principal Maulana Azad College Kolkata

Govt. of West Bengal

The Institutional Member shall not:

- 1. Use the DELNET database for any commercial purpose. The Institutional Member shall not rent, sell or license the use of or deliver or release or otherwise part with the possession of the systems/materials/software or the DELNET databases or any part thereof to any third person.
- 2. Allow the use of the software/materials/database by any other person other than of the Institutional Members of DELNET.

It is further agreed that:

- 1. DELNET will not accept records in the Central Union Catalogues that do not have the essential fields as prescribed by DELNET or those that contain typographical and factual mistakes. The Institutional Member has agreed to create records of DELNET standard.
- 2. The Institutional Member will have qualified manpower, a suitable computer and independent telephone line at their premises for the use of DELNET databases and services.
- 3. All charges towards telecommunication, stationary, etc. arising out of the use of DELNET databases and services by the Institutional Members will be borne by the Institutional Member.
- 4. The Institutional Member **shall not** be entitled to assign, sub-license or otherwise transfer the license whether in whole or in part to any other user.
- 5. If the Institutional Member located outside Delhi wants to invite DELNET staff to its institution for consultation or training, the Institutional Member shall pay TA/DA to the staff as per DELNET norms.
- 6. If the Institutional Member does not create standard records, cooperate with other Institutional or Associate Institutional Members of DELNET in exchanging information, DELNET shall terminate the contract with a month's notice to the Institutional Member.

Termination

This contract may also be terminate by immediate notice in writing if DELNET or the Institutional Member has been responsible for a breach of its obligations and terms of this agreement. In such a case, the Institutional Member shall stop the use of the DELNET system facilities and databases with immediate effect and return any software/hardware provided by or through DELNET back to DELNET. All disputes between the parties shall be settled by negotiation.

Signed at MAULANA AZAD COLLEGE

B. Rafi Ahmed Kidwei Rood Kolk ale - 700013.

By (with signature)

(Name of Institutional Member of DELNET)

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Signed at New Delhi by Dr. H. K. Kaul, Director, DELNET-Developing Library Network, Nelson Mandela Road, Vasant Kuni, New Delhi - 110070

H.K. KAUL DIRECTOR DELNET-Developing Library Network Nelson Mandela Road, Vasant Kunj New Delhi - 110 070 4 GOVERNMENT OF WEST BENGAL KOLKATA PAY & ACCOUNTS OFFICE- I

A/C Payee only

Dated

28-MAR-2008 OR ORDER

PAY DELNET.

Twelve Thousand Five Hundred Only

EH-2202-03-103-HEAD OF ACCOUNT SP-004-V-50

CABEDIOO6 / 76729 / 27-MAR-2008 / 152612

RESERVE BANK OF INDIA **KOLKATA**

Rs. *****12500.00

> ADDL PAY & ACCOUNTS OFFICER KOLKATA PAY & ACCOUNTS OFFICE -

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GOVERNMENT OF WEST BENGAL OFFICE OF THE PRINCIPAL

Maulana Azad College



Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata.ac.in



Report on the activities under MoU between Maulana Azad College Kolkata and DELNET for use of DELNET databases and service within the college premises

> DATE of SIGNING THE MOU: 04.02.2008 (Extended annually, extension documents corresponding to the period of report have been included in this report)

> OBJECTIVE/PURPOSE:

Provide access to the digital resources and other e-library facilities as offered time to time by DELNET to the faculty members and students for their research studies and other academic needs.

- > TARGET AUDIENCE/ PARTICIPANTS: Students and faculty members of Maulana Azad College
- ➤ **VENUE:** Maulana Azad College

EXPECTED OUTCOME:

Students and faculty members of the college will be benefited by the huge collection of e-books, journals, magazines as well as other documents to foster their academic pursuit.

Dr. Sangeeta Kaul Director DELNET, New Delhi Principal
Maulana Azad College
Principal
Maulana Azad College
Kolkata
Govt. of West Bengal



GOVERNMENT OF WEST BENGAL OFFICE OF THE PRINCIPAL

Maulana Azad College



Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata.ac.in



Copy of DELNET Membership renewal letter and certificate in 2023





DELNET

Developing Library Network

J.N.U. Campus, Netson Mandela Road Vasant Kurij, New Deihi 110070, India Tel: 91-17-26742222, 26741266 91-9810329992 (Mobile) E-mali: sangs@delnet.ren.nic.in, sangskaul2003@yahoo.co.in Web: www.delnet.in Augus 13, 2022

DELNET/IM-1321/w6MACK/MEM/2022

Dear Mr. Jamal,

iub: DELNET Membership Renewal

We acknowledge with thanks the receipt of ₹13,570 (₹ Thirteen Thousand Five Hundred Seventy only) received through NEFT dated 10.8.202 made towards the DELNET Annual Institutional Membership Fee for the received 29,8.202 to 828,8.203. The receipt no. 70888 dated 23.8.202 is enclosed for the office received.

You are requested to access DELNET databases through the World Wide Web using the following procedur

Web Address: http://www.delnet.in

Click onto "New Discovery Portal". Since the IP address provided by you is not static (broadband), you are requested to use following login & password to access the new discovery portal of DELNET.

Login

: wbmack : mack74

Kindly note your later Library Loss (ILL for Books) Password is "whenackible" to be used while registring a request. You are also welcome to send us the bidingraphical reforences at samp@identrean.icin. sampikast2003/grabaos.cn.is for the resources noded by you. We will try our best to locate these resources. Also, accomplete state manual on here to access DELNET online databases to invalidate at the Discoursey Partial. We would further this to inform you dast Usage Report can be generated through "USAGE STATESTICS" in which appears at the top side of the leading page of the discoursey portal. Kindly use the password as 1321***1972 to download the pid. containing usage record your situations.

I would like to mention that DELNET provides access to mere than three crore catalogue records or boxes, journals, stricles, etc. through Decovery Pertal and also mere than one circs and filly lab full-lest-chookes, synamia, & centricles through flowwides Coliner Pertal. DELNET also provides Delplus software free of charge for library automation purpose. DELNET Guest House facility at New Delhi can also be availed by member-libraries on payment best in

I would also like to inform you that DELNET shall be glid to organise a one hour webinar on DELNET Networked Resources and Services at a manually convenient date and time for the students, faculty, researchers and scholars of "Maulana Azad College, Kolkata, West Bengal". It will help in the effective utilisation of DELNET

I am enclosing a poster on DELNET and a Certificate of Membership. Please kindly let us know if you wish

With kind regards,

Jury sincerely.

Saageeta Kaul

Mr. Nayyer Jamal Librarian (SG) Maulana Azad College 8, Rafi Ahmed Kidwai Road Kolkata-700013 West Bengal

Encl: (1) Receipt no. 78888 dated 23.8.2022 of ₹13,570 (2) Tax Invoice (3) DELNET Poster



DELNET

Developing Library Network
New Delhi
www.delnet.in



Certificate of Membership

This certifies that

Maulana Azad College Kolkata

is an Institutional Member of

DELNET - Developing Library Network

and is entitled to all benefits and privileges pertaining thereto.

Membership Number IM - 1321 has been renewed and next renewal is due on August 28, 2023



Date of Issue: August 23, 2022

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Dr. Sangeeta Kaul Director DELNET, New Delhi

Dr. Sangeeta Kaul Director DELNET, New Delhi Principal
Maulana Azad College

Principal Maulana Azad College Kolkata Govt. of West Bengal

Office of the Principal MAULANA AZAD COLLEGE, KOLKATA 8, Rafi Ahmed Kidwai Road, Kolkata 700013

Memo No- 65/Rib

Dated: 02/05/2008

To
The Director,
DELNET
JNU CAMPUS, Nelson Mandela Road, Vasant Kunj,
NEW DELHI-110070

Sir, We hereby apply for membership of DELNET. We are sending herewith Cheque of Rs – 12500/-bearing No152612----- and dated 28.03.2008 for membership of DELNET. Other relevant documents as sent by you are attached herewith.

Please Acknowledge the Receipt of the Cheque and send it to our Office Address. I would request you to make necessary for the Connection of DELNET.

Sincerely Yours,

Pratagram

PRATAP CH. DE
Officer- In Charge
Maulana Azad College, Kolkata
Officer-in-Charge,
Maulana Azad College
Kolkata-700015







Developing Library Network

Nelson Mandela Road, Vasant Kunj, New Delhi – 110070

Form of Application for Membership under Rule 4 (c)

To

The Director.

DELNET

JNU Campus, Nelson Mandela Road, Vasant Kunj, New Delhi-110070

New Delhi - 110070

Sir.

We hereby apply for membership of DELNET under Rule 4(C)¹. Given below are the requisite particulars about our Institution.

We agree to abide by the Memorandum of Association and Rules of DELNET. We also undertake to pay such Annual Subscription², Admission Fee and Inter Library Loan (ILL) Fee as may be required under the Rules in force and which may be framed from time to time.

Yours faithfully,

Designation: OFFICE

Date: 4, 2. 2008

of Board of Directors/Governing Body

Head Name:

PARTICULARS OF THE APPLICANT

COLLEGE AZAD MAULANA 1. Name of the Organisation (in block letters) 8, RAFI AHMED KIDWAI ROAD Full Address with Postal Code KOLKATA - 700 013 PRINCIPAL. MAIGNI Name and Designation of the Executive Head of the Organisation (in block letters) with Nationality (a) Office 8, RAFIAHMED KIDWI ROAD Address of the Executive Head KOLKATA-70013 Phone (033) 2240 - 3737 Fax 2246-3737 Email mac 1926 (2) gonail. Com (b) Residence 3/B. F. D. Road Malikpara, Seram pore Hooghly WB. PIN: 712203. Phone (033) 3292 - 3082 _ Email pratap. C. de @ hormail. Com. 9-12-1926 Date of Establishment P. G. A U. G. UNDERC.U Nature of the Organisation DEGREE IN (Brief Particulars of Activities) 7. Name of Chairman, Managing Director and Members EDUCATION DEPT, GOVT OF W.B

	Particulars of the Library Head
	Name : BISWAJIT BANERJEE
	Designation : LIBRARIAN (5.6)
	Phone :(033) 2217-8185
	Fax: - Email bisbanmae a Yahor. Co. in
).	Library Collection
	(a) No. of books including bound periodicals 92, 936
	(b) No. of periodicals received
	(c) Other reading material Newspape 1 Bulletin
	(d) Total annual budget 3, 50, and =
10.	Library Staff
	(a) No. of professional staff with 2+3
	(i) Degree in Library Science
	(ii) Diploma/Degree in Computer Applications
1.	No. of Library users 2, 0001-
	Computer Hardware Available in the Library 7 P.c, 2-Pointer, 1-Scanner, LAM:
13.	Name of the Library Software Being Used
14.	Additional Products/Services of DELNET in which we would be interested:
	(a) DELPLUS Library Management Software
	(b) Proceeding of the National Convention on Library and Information Networking (NACLIN) Yes/No
	Information Networking (NACLIN) (c) Publications Yes/No Yes/No
	(d) Trainning Programmes for staff Yes/No
	(e) Knowledge Centre Activities Yes/No
	(f) Consortia for Subscription to periodicals Yes/No
	(g) Consultancy from DELNET for Modernisation of our Library Yes/No

1. Rule 4(c) Institutional Members: An Institution, Department, Association, Society, University or College that has a library with a collection of more than 10,000 volumes is eligible to become an Institutional Member of the Society on payment of Admission fee, Annual Subscription and any other charge as prescribed by the Governing Board. Now all Institutions/Libraries are admitted as Institutional Members irrespective of the number of books in their libraries.

2. Details of current rates of Admission Fee, Annual Subscription and ILL Fee are given in the enclosed sheet/brochure.

Dr. Sangeeta Kaul Director DELNET, New Delhi Principal Maulana Azad College

Principal Maulana Azad College Kolkata Govt. of West Bengal



पश्चिम बंगाल WEST BENGAL

79AB 406972

Memorandum of Understanding between Barasat Government College, Barasat, Kolkata-700124, Govt. of West Bengal and Maulana Azad College, Taltala, Kolkata-700013, Govt. of West Bengal

ne Memorandum of Understanding (hereinafter called the MoU) is entered into on this the

.. Day of June Two Thousand Twenty three

By and Between

BARASAT GOVERNMENT COLLEGE, BARASAT, The "First Party" represented herein by its Principal as Representative and Competent Authority (Hereinafter referred as "First Party", the institution which expression, unless excluded by or repugnant to the subject or context shall include its successors - in office, administrators and assigns)

MAULANA AZAD COLLEGE, KOLKATA The "Second party" and represented herein by the Principal as Representative and Competent Authority (Hereinaster represented as "Second Party", the institution which expression, unless excluded by or repugnant to the subject or context shall include its successors - in office, administrators and assigns)

(First Party and Second Party are hereinafter jointly referred to as 'Parties' and individually as 'Party') WHEREAS

- A) FIRST PARTY is a Government Higher Educational Institution named:
 - i) BARASAT GOVERNMENT COLLEGE, 10, K.N.C. Road, Barasat, North 24 Parganas, Pip-700124.
- B) First Party and Second Party believe that collaboration and cooperation between themselves will promote more effective use of each of their resources, and provide each of them with enhanced opportunities.

ক্ৰমিক নং 4100	2007
ভারিব	6 MAY 2022 T. K. Ghosh
(@ '5;	Advocate
मुन्तुः श्री	Barasat Judges' Court North 24 Parganas
ভেডার সি. সি.র. সিমের সিমের	n.
উত্তর ২৪ পরগণ	
ক্রের তারিপ	
মোট মূলা	• # • • • •
CHARLES COILS SHOWING RESIDENCE	

7910 466972

- C) The parties intent to cooperate and focus their efforts in cooperation within the area of Higher Education, Research and Development, provide opportunity for global experience, and to facilitate advancement of knowledge on the basis of reciprocity, best effort, mutual benefit, and frequent interactions.
- D) Both Parties being legal entities in themselves desire to sign this MoU for advancing their mutual interests.
- E) MAULANA AZAD COLLEGE, 8, Rafi Ahmed Kidwai Road, Taltala, Kolkata-700013, the SECOND PARTY is a Government Higher Educational Institute of West Bengal is under the aegis of the Department of Higher Education, Government of West Bengal and is engaged in imparting higher education by running under graduate Honours programmes in various science, arts and commerce streams at present with rights, possibility and extension thereafter.
- F) The Second Party presently functions from its own campus at 8, Rafi Ahmed Kidwai Road, Taltala, Kolkata-700013, West Bengal and will continue to do so until further order from the Department of Higher Education, Government of West Bengal. It has no other branch, wing, subsidiaries or extensions existing at present.

NOW THEREFORE, IN CONSIDERATION OF THE MUTUAL PROMISE SET FORTH IN THIS MoU, THE PARTIES HERE TO AGREE AS FOLLOWS:

Clause-I CO-OPERATION

- 1.1 Both the Parties are united by common interest and objectives, and they shall establish channels of communication and co-operation as far as practicable and to the best of efforts, that will promote and advance
 - i. Joint research projects and publications, including work by undergraduate and post graduate students at the partner institutions;
- ii. Faculty and student exchanges (internship) based on reciprocity;
- iii. Reciprocal placement of students and co-ops, when possible;
- iv. Team taught courses, including online courses and also work in the main spirit of NEP-2020;
- v. Visits by faculty, professional staff and students;
- vi. Exchange of information on teaching, learning material and other literature relevant to their educational and research programmes;
- vii. Joint organization of short-term continuing education programmes on topics of mutual interest and to invite each other's faculty to participate therein;
- viii. Joint organization of seminars, conferences, or workshops on topics of mutual interest and to invite each other's faculty to participate therein; and
- ix. Any other joint venture for academic enrichment of both the colleges on prior agreement of the Principals of both the Colleges; within the Institution and its related wings.
- 1.2 Both the Parties shall keep each other informed of potential opportunities and shall share all information that may be relevant to secure additional opportunities for one another.
- 1.3 First Party and Second Party must respect each other's intellectual property and the disputes if any, relating to any aspect of academic cooperation, Principals of both the College will jointly resolve the dispute in a spirit of independence, mutual respect, and shared responsibility.
- 1.5 Both the Parties mutually agreed not to include any financial transaction during the execution of this MoU.
- 1.6 Neither Party shall be held responsible for non-fulfillment of their respective obligation under this MoU due to circumstances beyond their control but not limited to pandemic, war, flood etc. If such condition continues beyond six months, the parties shall then mutually decide about the future course of action.

1.7 Nothing in this MoU shall be construed to make either party a partner, an agent or legal representative of the other for any purpose. Now onwards both the party may mention the name and LOGO of the other in their documents as "COLLABORATOR" for purpose as may be required subject to communication by the user to the other party in writing beforehand.

1.8 This MOU unless terminated by mutual written agreement will continue for 5 years after the effective date specified in the opening paragraph and can be renewed through mutual interest. Either Party shall have the right to unilaterally terminate this MoU upon 90 days prior written notice to the other party.

Agreed:

For

Barasat Government College, 10, K.N.C Road, Barasat, North 24 Parganas, Pin-700124

Maulana Azad College, 8, Rafi Ahmed Kidwai Road, Taltala, Kolkata-700013

Authorized Signatory

IQAC Coordinator

Barasat Government College, 10, K.N.C Road, Barasat, North 24 Parganas, Pin-700124 Ph: 9830235239

E-mail:iqac@bgc.ac.in

Website: www.bgc.aclir. Abhijit De Associate Professor in Physics Coordinator, IQAC

Barasat Govt. College Government of West Benga Authorized Signatory

Co-ordinator IQAC

IQAC Coordinator Maulana Azad College Maulana Azad College 8t Rafi Whene Bengal Kidwai Road, TaltalaRKolkathwa000hat, Kol.-13 Ph: 033-29730203

E-mail: maulanaazadcollegekolkata@gmail.com Website: www.maulanaazadcollegekolkata.ac.in

Authorized Signatory

Principal

Barasat Government College, 10, K.N.C Road, Barasat, North 24 Parganas, Pin-700124

Ph: 9733788309

E-mail:principal@bgc.ac.in Website: www.bgc.ac.in

Dr. Samar Chattopadhyay

Witness - 1

orized Signatory

Principal Maulana Azad College

Maulana Azad College, 8, Rafikatia Kidwai Road, Taltala, Kolkata-700013

Ph: 033-29730203

E-mail: maulanaazadcollegekolkata@gmail.com Website: www.maulanaazadcollegekolkata.ac.in

Witness - 2

Associate

Maulana Azad College

Kolkata

HEAD

DEPTT. OF HISTORY, W.B.E.S BARASAT GOVT. COLLEGE

Associate Profess Dept. of History Barasat Govt. Colleg Barasat, N-24 Parga

> Associate Professor Maulana Azad Collegé Kolkata



OFFICE OF THE PRINCIPAL Maulana Azad College 8, RAFI AHMED KIDWAI ROAD, TALTALA, KOLKATA 700013



Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com

Website: https://maulanaazadcollegekolkata.ac.in

Activities under MoU between Maulana Azad College, Kolkata 700013 and

Barasat Govt College, Barasat, Kolkata 700124

Start date of MoU: 13.06.2023 End date of MoU: Continuing

Duration: 5 years

SI.	Name of activity	Starting	Completion	Hosted by	No. of
No.		date	date	liosted by	participants
1.	Collaborative Research programme Prof. Timir Baran Jha, Retd. Professor and Guest Teacher, Dept. of Botany, Maulana Azad College and Dr. Mihir Halder, Assistant Professor, Dept. of Botany, Barasat Govt. College	16.02.21	Continuing till date	Maulana Azad College	2
2.	Faculty Exchange Programme Sri Ganapati Bhattacharya, Associate Professor and Head, Dept. of Political Science, Barasat Govt. College, took classes of Sem II and Sem IV Hons. students of the Dept. of Sociology, Maulana Azad College on Nehru: Views on Socialism and Democracy and Administrative Processes (Decision making) respectively.	15.06.23	15.06.23	Maulana Azad College	32 students of Maulana Azad College attended the class (9 from Sem IV and 23 from Sem II)
3.	Faculty Exchange Programme Dr. Onkar Nath Pathak, Associate Professor and Head, Dept. of Sanskrit, Maulana Azad College, took classes of Sem-II and Sem IV Hons students of the Dept. of Sanskrit, Barasat Govt. College on Sanskrit Grammar and Translation-Pratyayas and Karaka respectively	27.06.2023	27.06.23	Barasat Govt. College	40 students of Barasat Govt. College attended the class (19 from Sem II and 21 from Sem IV)

Principal Barasat Government College Principal Barasat Government College

Principal Maulana Azad College Kolkata Govt. of West Bengal

Principal

Maulana Azad College

Principal Barasat Govt. College Principal

Maulana Azad College



GOVERNMENT OF WEST BENGAL OFFICE OF THE PRINCIPAL Maulana Azad College





Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata.ac.in

Report on the activities under MOU for Academic Collaboration between Maulana Azad College Kolkata and Barasat Govt. College.

➤ Date of Signing the MOU: 13.06.2023

> Objective:

Initiate an academic Collaboration between departments of Maulana Azad College and Barasat Govt. College which would benefit the students and faculty members of both the institutions in their pursuit of academic excellence.

- **Target Participants**: Students and faculty members of both Institutions.
- ➤ **Venue**: Maulana Azad College and Barasat Govt. College.

> Expected Outcome:

Students and faculty members of both Institutions will be benefited in terms of their academic pursuit in several areas by organizing joint Seminar/Workshop/Conference, Student exchange programme, Faculty exchange programme etc.

- > Report of activity carried out under MoU
- 1. Name of the activity: Collaborative Research between Dept. of Botany, Maulana Azad College and Dept. of Botany, Barasat Govt. College

Faculty members engaged in collaborative research

- 1. Professor Timir Baran Jha, Professor and Guest teacher, Dept. of Botany, Maulana Azad College
- 2. Dr. Mihir Halder, Assistant Professor, Dept. of Botany, Barasat Govt. College

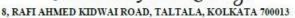






GOVERNMENT OF WEST BENGAL OFFICE OF THE PRINCIPAL

Maulana Azad College





Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com
Website: https://maulanaazadcollegekolkata.ac.in

Brief Report of the Activity:



A Report on the Collaborative Research Work Outcomes between Department of Botany, Maulana Azad College and Department of Botany, Barasat Government College

This report summarizes the outcomes of the collaborative research work between two faculties of the Department of Botany, Maulana Azad College and Department of Botany, Barasat Government College in the field of plant molecular cytogenetics. Under the scheme of collaborative research work, We, i.e., Dr. Mihir Halder, Assistant Professor of Botany of Barasat Government College and Prof. Timir Baran Jha, Retired Professor of Botany and Guest Faculty, Department of Botany, Maulana Azad College working together since 2021 onwards. We are interested in plant molecular cytogenetics to decipher several chromosomal features which are not detected through the classical method of chromosome preparation and staining techniques. Enzymatic maceration and air drying (EMA)-based Giemsa holds significant promise for understanding different karyomorhological features of plant chromosome by reveal number, positions, and pattern of landmark secondary constrictions. In addition, chromosome staining with 4'-6-diamidino-2-phenylindole (DAPI) and chromomycin A3 (CMA) flurophore very effective in decoding unique fluorescent banding pattern of chromosome in genome. Decoding of the genomic diversity at chromosomal level is expected to be beneficial for plant breeders and genome researchers in both conventional and innovative breeding programs.

Plant Materials:

We performed chromosomal studies of (i) 22 populations of traditional aromatic rice cultivars of India, (ii) two wild and one horticulture populations of Gloriosa, (iii) Allium cepa. (iv) Allium sativum, (v) Nigella sativa, (vi) Trigonella foenum-graecum L., and (vi) Aloe vera.

Methodology:

For plant molecular cytogenetics study of various Indian species and their germplasm, following species- or population-specific methodologies have been performed.

- (i) Standardization of EMA protocol for chromosome preparation
- (ii) Standardization and Giemsa staining
- (iii) Standardization of fluorescent staining of chromosomes with 4'-6-diamidino-2phenylindole (DAPI) and chromomycin A3 (CMA)

Principal
Barasat Government College
Principal
Barasat Government College

Principal
Maulana Azad College
Principal

Principal Maulana Azad College Kolkata Govt. of West Bengal



OFFICE OF THE PRINCIPAL

Maulana Azad College

8, RAFI AHMED KIDWAI ROAD, TALTALA, KOLKATA 700013

Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com

Website: https://maulanaazadcollegekolkata.ac.in



- (iv) Digital documentation of cytoplasm-free metaphases under a Carl Zeiss AxioLab A1 microscope fitted with a CCD (charge-coupled device) camera and computer.
- (v) Measurement and analysis of various karyomorphometric data (the lengths of the long and short arms, the positions of the centromeres, the average chromosome length, and the total chromatin length, number and position of fluorescent signals) using Axiovision L. E4 software.
- (vi) Statistical analysis of chromosomal data using SPSS software (version 16.0)

Key Findings:

This collaboration yielded a number of significant findings, including:

- (i) Detection of some unique and foundational karyomorphological features of 22 populations of traditional rice cultivars of Indian using EMA-based Giemsa, DAPI, and CMA staining. It includes the diversity in staining pattern, total chromatin length, morphology of individual and landmark sat-bearing chromosomes in each cultivar, intraspecific sat-bearing chromosome number in several cultivars, the karyotype formula, and the effect of DAPI on sat-bearing chromosomes.
- (ii) Detailed karyomorphological analysis including somatic chromosome number, number and locations of secondary constrictions of two wild populations of Gloriosa superba and one horticulture population of Gloriosa using EMA-based chromosome preparation followed by Giemsa, DAPI, and CMA staining.
- (iii) Comparative fluorescent banding pattern studies of Allium cepa, Allium sativum, Nigella sativa, Trigonella foenum-graecum, and Aloe vera highlight the enormous divergence of centromeric sequences within and between the karyotypes.

Outcomes and Impact:

The collaborative research activity has resulted in several positive outcomes:

- (i) Publications: The findings have been disseminated through publications (1 published, 1 accepted, 1 communicated) in international peer-reviewed scientific journals, contributing to the advancement of knowledge in plant molecular cytogenetics.
- Jha, T.B., Halder, M. (2023) Evaluation of karyotype diversity in Indian traditional aromatic rice cultivars through EMA-based non-fluorescent Giemsa and fluorescent DAPI staining. Genet Resour Crop Evol 71:1379–1400. https://doi.org/10.1007/s10722-023-01696-4

Principal
Barasat Government College
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Barasat Government College

Principal
Maulana Azad College
Principal

Principal Maulana Azad College Kolkata



GOVERNMENT OF WEST BENGAL OFFICE OF THE PRINCIPAL

Maulana Azad College 8, RAFI AHMED KIDWAI ROAD, TALTALA, KOLKATA 700013

Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata.ac.in

- Jha, T.B., Chakroborty P., Halder, M. (2024) Karyotype analysis on Gloriosa superba using enzymatic maceration and air-drying-based Giemsa, DAPI, and CMA staining techniques. Cytologia (accepted on 19/05/2024)
- 3. Timir Baran Jha, Mihir Halder, Biplab Kumar Bhowmick (2024) Giemsa-based chromosome staining and Comparative Fluorescence Banding pattern in six valuable Indian plant species (communicated).
 - Student Benefits: The valuable research experience and finding have been shared among under graduate and post-graduate students during their theory and practical classes to encourage them in the field of plant molecular cytogenetics.

Future Directions:

The success of this collaboration encourages us to continue this collaborative research works. Currently we are working on decoding chromosomal landmarks in more than 20 new traditional rice populations of West Bengal. Moreover, we are planning to expand the research to a wider range of plant species.

Principal Barasat Government College Principal Barasat Government College

Principal Maulana Azad College

Principal Maulana Azad College Kolkata



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Copy of letter from Principal, Barasat Govt. College to Principal, Maulana Azad college regarding collaborative research



GOVERNMENT OF WEST BENGAL

BARASAT GOVERNMENT COLLEGE

POST GRADUATE DEPARTMENT OF BOTANY

10, K.N.C. Road, Barasat, Kolkata - 700124, West Bengal, India Phone: (033) 2552 3365, Fax: (033) 2562 5053, Website: www.bgc.ac.in, E-Mail: principal@bgc.ac.in

No

Date: 16/06/2023

To

The Principal.

Maulana Azad College.

8, Rafi Ahmed Kidwai Road,

Kolkata- 700013

Subject: Requesting for using Plant Molecular Cytogenetics Lab of Maulana Azad College

Sir,

Apropos MoU activity between two colleges, I am sending herewith Dr. Mihir Halder, Assistant Professor of Botany of our college, to your esteem college to execute his research oriented endeavor in your Plant Molecular Cytogenetics Laboratory under Dr. T.B. Jha, Retired Professor of Botany and Guest Faculty, Department of Botany, Maulana Azad College Kolkata in advancing the research programme that will contribute significantly to my college as well as the scientific community.

Sir, in this context I am requesting your good self to allow him to enjoy your Laboratory as mentioned above that can benefit the field of plant science research.

Research facilities available in the Molecular Cytogenetics laboratory at Maulana Azad College are an excellent opportunity for him in this field.

Considering the above I will be thankful if you kindly extend your permission in this regard.

With regards,

Principal Beresat Govt. College Govt. of West Bengal

Principal.

Barasat Govt. College

Principal Barasat Government College Principal Barasat Government College

Principal Maulana Azad College

> Principal Maulana Azad College Kolkata Govt. of West Bengal



OFFICE OF THE PRINCIPAL Maulana Azad College 8, RAFI AHMED KIDWAI ROAD, TALTALA, KOLKATA 700013





Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata.ac.in

Permission from Principal, Maulana Azad College regarding the collaborative research work





GOVERNMENT OF WEST BENGAL

BARASAT GOVERNMENT COLLEGE

POST GRADUATE DEPARTMENT OF BOTANY

10, K.N.C. Road, Barasat, Kolkata - 700124, West Bengal, India

Phone: (033) 2552 3365, Fax: (033) 2562 5053, Weblite: www.bgc.oc.in, E-Mali: <u>principal/Pbgc.oc.in</u>

No. NII

The Principal, Maulana Azad College, 8, Rafi Ahmed Kidwai Road,

Through The Principal, Barasat Govt. College, 10, K.N.C. Road, Barasat

Kolkata-700013

Kolkata 700124

ORWARDED for favourable schatterju

Date: 16/02/2021

Subject: Prayer for permission to execute Collaborative research work with the Department of Botany, Maulana Arad College, in the field of Plant Molecular Cytogenetics

I, Mihir Halder, Assistant Professor of Botany, Barasat Government College, have deep interest in advancing my research programme that contribute to my college as well as the scientific community.

This is to bring to your kind information that I have obtained verbal permission from the Head, Department of Botany, Maulana Azad College and Dr. Timir B. Jha, W.B.S.E.S. (Retired Professor of Botany), Division of Plant Molecular Cytogenetics, Department of Botany, Maulana Azad College in executing collaborative research work in the Department of Botany, Maulana Azad College without hampering my normal college duty.

Sir, in this context I am requesting your good self to allow me to continue such collaborative research work so that both the institutes can be benefited in the field of plant science. Research facilities available in the Molecular Cytogenetics laboratory at Maulana Azad College are an excellent opportunity for me in this field. My academic association with Maulana Azad College will certainly help me to share my advance knowledge among the students of both Undergraduate and Post Graduate studies of Barasat Govt. College.

Considering the above I will be thankful if you kindly extend your permission in this regard.

With regards.

Yours faithfully

Miker Halder Dr. Mihir Halder

Assistant Professor of Botany Barasat Government College

Seed & Associate Professor e.G. Department of Botaris Bersser Govt College

Principal Barasat Government College Principal Barasat Government College

Principal Maulana Azad College

> Principal Maulana Azad College Kolkata Govt. of West Bengal



Maulana Azad College

8, RAFI AHMED KIDWAI ROAD, TALTALA, KOLKATA 700013



Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata.ac.in

Publications from the collaborative research project

1. Karyotype analysis on Gloriosa superba using enzymatic maceration and air-drying based Giemsa, DAPI and CMA staining techniques accepted in Cytologia (Just accepted manuscript)

<em@editorialmanager.com>

Date: 19 May 2024 at 10:18:35 PM GMT-4
To: Timir Baran Jha < tbjha2000@yahoo.co.in >
Subject: [CYTOLOGIA] Your Submission
CYTOLOGIA-D-24-00021R2
Reply-To: Mendel-Cytologia < isc-mendelcytologia@edu.k.u-tokyo.ac.jp >

Ref.: Ms. No. CYTOLOGIA-D-24-00021R2 Karyotype analysis on Gloriosa superba using enzymatic maceration and air-drying-based Giemsa, DAPI, and CMA staining techniques CYTOLOGIA

Dear Dr. Jha,

I am pleased to tell you that your work has now been accepted for publication in CYTOLOGIA.

It was accepted on 2024-05-19 22:17:57

Comments from the Editor and Reviewers can be found below.

Comments from the Editors:

Congratulation. Your articles was accepted by Cytologia. Please accept that article type is changed from Karyotype analysis to Regular article because of long article.

2. Jha, T.B., Halder, M. Evaluation of karyotype diversity in Indian traditional aromatic rice cultivars through EMA-based non-fluorescent Giemsa and fluorescent DAPI staining. Genet Resour Crop Evol 71, 1379–1400 (2024). https://doi.org/10.1007/s10722-023-01696-4

Principal
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Maulana Azad College
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Maulana Azad College
Kolkata
Govt. of West Bengal



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Home > Genetic Resources and Crop Evolution > Article

Evaluation of karyotype diversity in Indian traditional aromatic rice cultivars through EMA-based non-fluorescent Giemsa and fluorescent DAPI staining

Research article | Published: 09 August 2023
Volume 71, pages 1379–1400, (2024) Cite this article

Timir Baran Jha 🔽 & Mihir Halder

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Abstract

Rice serves as a primary dietary source of nutrients and calories for over half of the global human population. With India being the world's second-largest producer and largest rice exporter, it boasts a vast collection of rice germplasm. Among these, traditional aromatic rice cultivars (TARCs) occupy a prominent position. Despite the challenges posed by the small size of chromosomes and procedural limitations, karyotype analysis of rice has not received adequate attention. However, such evaluation of karyotype diversity may enrich the global gene pool, which is a prerequisite for the success of new breeding programs. The enzymatic maceration and air drying (EMA) method, a fundamental technique in molecular cytogenetics, has rejuvenated plant chromosome research by providing a cytoplasm-free background. The objective of the present study was to document, decode, and conserve the untapped karyotypic diversity in TARCs of India. Karyotype diversity was evaluated in 22 populations of TARCs using the EMA-based chromosome preparation method, followed by staining with non-fluorescent Giemsa and DNA base-specific fluorescent dye DAPI (4'-6-diamidino-2-phenylindole) for the first time. Some unique and foundational highlighting features of this study include the diversity in staining pattern, total chromatin length, morphology of individual and landmark sat-bearing chromosomes in each cultivar, intraspecific sat-bearing chromosome number in several cultivars, the karyotype formula, and the effect of DAPI on sat-bearing chromosomes. The genomic diversity decoded and conserved in Indian rice for its adaptive potential is expected to be highly advantageous for global rice breeders and genome researchers in both conventional and new breeding initiatives.

2. Faculty Exchange Programme

Principal
Barasat Government College

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Barasat Government College

Principal
Maulana Azad College
Principal
Maulana Azad College
Kolkata

Govt. of West Bengal



OFFICE OF THE PRINCIPAL Maulana Azad College 8, RAFI AHMED KIDWAI ROAD, TALTALA, KOLKATA 700013





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GOVERNMENT OF WEST BENGAL OFFICE OF THE PRINCIPAL Maulana Azad College



Number of

8, RAFI AHMED KIDWAI ROAD, KOLKATA 700013, INDIA
Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com

The following collaborative activities have been completed in accordance with the Memorandum of Understanding signed by Barasat Government College and Maulana Azad College on 13th June 2023.

Activity Type	Date/ Duration	Faculty details	Activity details : Syllabus/Paper code/ Topic Covered	Participants
1. Faculty Exchange	15.06.2023	Ganapati Bhattacharya Head & Associate Professor	Administrative Processes : a. Decision Making	og
		Deptt. of Political Science Barasat Government College Barasat : Kol-700124	Nehru: Views on Socialism and Democracy	Sem-II
2. Faculty	27.06.2023	Dr. Onkar Nath Pathak Associate Professor Deptt. of Sanskrit	Sanskrit Grammar and Translation- Karaka	Sem-IV
Exchange		Maulana Azad College kolkata	Sanskrit Grammar and Translation- Pratyayas	Sem-II

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Principal Maulana Azad College Kolkata Govt. of West Bengal



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Attendance sheets of the class of Dr. Ganapati Bhattacharya at Maulana Azad College

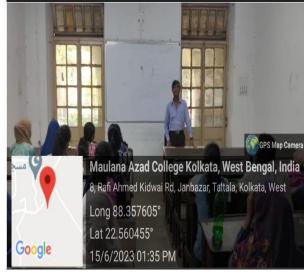
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ge, Barasat and Moulana Azad College, Kol	e. Kolkata
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Representative photographs of the class of Dr. Ganapati Bhattacharya at Maulana Azad College

Date: 15.06.23

Signature of the faculty member











OFFICE OF THE PRINCIPAL Maulana Azad College 8, RAFI AHMED KIDWAI ROAD, TALTALA, KOLKATA 700013





Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata.ac.in

Attendance sheets of the class of Dr. Onkar Nath Pathak at Barasat Govt. College

	nd Designation of the faculty engage 27.07.2023 SENNING Communications		Pathak Time: 12:30
opic	Sans hail		Semesten VI
		idents Attendance Sheet	
St. No.	Name	E mail ID /Mob. No.	Signature
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03	PRIVA NAS	9883754577	Toka Das
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015.	SAYANI MATH	6297808501	Same
06	MRIMUNA KHATUN	7832776984	M-Khatun
01	KOYEL MONDAL.	8201230240	K-Mondal
08	KEYA BISWAS	8391952755	K. Biswas
09	PRIYA MONDAL	70 47 5937 47	P. Mondel.
10-	ARCHANA MANDAL	TPPF CP84FP	A. Mandal.
21.	SHURHAM DAS	6295089322	God).
12.	BARSBA ORAON	85899082.61	Boseon
13.	SAYAN SEN	8585010989	Japade
14.	SONALI DAS	8910389475	L. Dorl
5.	MITARIBATTA BRATTA	0330583416	10.0
	RAKTINA KARMAKAR	6289722401	R. karmakari
	RETECKYA CHAKRABORI	9748748527	R-Chakbahant
	DIP MONDAL	7477613301	12km
9.	MANAS GHOSH	8967731815	m. chosh
	RIYAN BISWAS	6271920967	QB irwan
	SHREYA BISWAS	1489.30.4286	S. Birely.
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	id Designation of the faculty engaged	1: Dr. Onkarnath T	Pathak
	27.07.23		Time: 11: 30
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	Jam, KHLL		
	Stud	dents Attendance Sheet	
SL No.	Name	E-mail ID /Mob. No.	Signature
1.	HRITIK MATABBAR	7675052661	Hritik Malabbar
2.	BIPLAB KUMAR PAUL-	8100183026	Biplab surmais paul
3-	SOHINI SEN	8710088705	Latini Son
4.	ASHTAMT SANTRA	9831498954	Ashtani Santon
5.	PRIYANKA MONDAL	7029670072	Pruyanta Monday
1	Manisha Ghosh	9083939061	Manisha Ghash
7	STILL GHOSH	9330849815	Siuli behosh
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11-	STMRAN DAS	7939839010	Ginner Les
13-	BARSHA NATH	8293447326	Borsha Nath
13.	SANCHITA KOY	8583071640	Samelida Rof
Ks.	SHREEZA CHEVDHUR	6291981082	Shropen Chard
15.	RATAT DAS	9064002552	Ragat Das
16.	DANTT SAHA	85830945 56	Rout sohe
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Representative photographs of the class of Dr. Onkar Nath Pathak at Barasat Govt. College











পশ্চিমবঙ্গ पश्चिम बंगाल WEST BENGAL

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THIS MEMORANDUM OF UNDERSTANDING is made on this 16th day of July, 2018, BETWEEN MAULANA AZAD COLLEGE KOLKATA, Government of West Bengal, having its campus at Premises Numbers 8 Rafi Ahmed Kidwai Road, Kolkata 700013, West Bengal, represented by its Principal Dr Subhasis Dutta, hereinafter referred to as the FIRST PARTY (which term or expression shall unless excluded by or repugnant to the context be deemed to mean and include its successor in office, representatives, administrators, and assigns) OF THE ONE PART

AND

RIGHT BRAINS TECHNOLOGY, a private concern, having its Office at Ground Floor, Sanghoti Abasan, Garia Main Road, P.S. Narendrapur, Kolkata-700084, represented by its Proprietor Sri Rajib Mukherjee, son of Sri Ananda Gopal Mukherjee, hereinafter referred to as the SECOND PARTY (which term or expression shall unless excluded by or

RIGHT BRAINS TECHNOLOGY

Munheyer Proprietor

Principal

Maulana Azad College, Kolkata

Govt. of West Bengal

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repugnant to the context be deemed to mean and include its successor in office, representatives, administrators, and assigns) OF THE OTHER PART.

WHEREAS the Maulana Azad College, Kolkata with a view to improving Advancement of Learning and Need-based Education, and desirous to provide career-oriented academic advantages through an online repository of resources for competitive examinations called 'Entry in Service Examinations' portal and Faculty Development Programme in collaboration with Right Brains Technology, a registered software company and the Second Party has agreed to the said proposal.

NOW THIS AGREEMENT WITNESSETH and it is agreed by and between both the parties hereto as follows:

- 1. That for the above-mentioned purpose both the Parties have agreed to start the 'Entry in Service Examinations.'
- 2. The Placement Cell of the First Party will oversee the contents of the said portal and look after the day-to-day activities.
- 3. That the Second Party/ Right Brains Technology will render and provide the online resources for competitive examinations, technical advice and assistance to the students who enrol themselves for the said benefit.
- 4. That the fee for accessing the said portal will be Rs.150/- (Rupees One hundred and Fifty only) per year which is to be deposited in the College Account and the student who thus registers will have access to the same for that particular year of her course of study in the college.
- 5. Both the Parties will take necessary permission/ approval from the concerned Authorities regarding the above matters.

RIGHT BRAINS TECHNOLOGY

Principal
Maulana Azad College, Kolkata
Govt, of West Bengal

- 6. Both the Parties have agreed that if additional assistance is required, Principal of Maulana Azad College for Girls and Mr Rajib Mukherjee of Right Brains Technology will settle the matter mutually after discussions.
- 7. That in respect of the above-mentioned collaboration only the Principal of the college will take all responsibilities regarding selection of candidates/ participants and other matters of the said purpose.
- 8. If any disputes arise in respect of this Agreement, then Principal of the College and Mr Rajib Mukherjee will discuss and settle the matter amicably.
- 9. That this Memorandum of Understanding is valid up to 15.07.2025.
- 10. The College can provide Students only but the college will not take any financial responsibility.

IN WITNESS WHERE OF, both the parties have set and subscribed their respective hands and seals on the day, month and year first above written

SIGNATURE 1st PARTY

Maulana Azad College, Kolkats Govt. of West Bengal

IGNATURE 2nd PARTY

Witnesses:

Associate Professor
 Maulana Azad College

Kolkata

2.

Assistant Professor Maulana Azad College Kolkata RIGHT BRAINS TECHNOLOGY



GOVERNMENT OF WEST BENGAL OFFICE OF THE PRINCIPAL Maulana Azad College 8, RAFI AHMED KIDWAI ROAD, TALTALA, KOLKATA 700013



Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com

Website: https://maulanaazadcollegekolkata.ac.in

Activities under MoU between Maulana Azad College, Kolkata 700013 and

Right Brains Technology, Kolkata 700084

Start date of MoU: 16.07.2018

End Date of MoU: Continuing

Duration: 7 years

Sl.	Name of activity	Starting	Completion	Hosted by	No. of
No.		date	date		participants
1	Online Competitive	12.12.2018	30.05.2019	Maulana Azad	899
1	Examination (Scheme			College	
	Name: Entry-in-Service)				
_	Online Competitive	03.12.2019	02.06.2020	Maulana Azad	1042
2	Examination (Scheme			College	
	Name: Entry-in-Service)				
	Online Competitive	05.12.2020	09.06.2021	Maulana Azad	1258
3	Examination (Scheme			College	
	Name: Entry-in-Service)				
	Online Competitive	03.12.2021	27.05.2022	Maulana Azad	1310
4	Examination (Scheme			College	
	Name: Entry-in-Service)				
	Online Competitive	01.12.2022	29.05.2023	Maulana Azad	1589
5	Examination (Scheme			College	
	Name: Entry-in-Service)				
	Professional Development	25.08.2022	29.08.2022	Maulana Azad	17
	Programme on "Life-skill			College	
6	and Work-Life Balance for				
	Academicians in the 21st				
	Century"				
	Professional Development	17.04.2023	21.04.23	Maulana Azad	32
7	Programme on "Cloud based			College	
	data management and cyber				
	security"				



Principal
Maulana Azad College

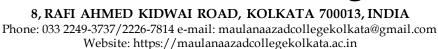
Principal Maulana Azad College Kolkata Govt. of West Bengal



GOVERNMENT OF WEST BENGAL OFFICE OF THE PRINCIPAL

Maulana Azad College







Report on the activities under MoU between Maulana Azad College Kolkata and Right Brains Academy, Kolkata

> DATE of SIGNING THE MOU: 16.07.2018

> OBJECTIVE/PURPOSE:

Right Brains Academy will carry out both online and offline workshops for students and faculty members to impart training in job-oriented skills including training for entry into services, professional development programme for faculty members and computer skill workshops for non-teaching staff members.

- > TARGET AUDIENCE/PARTICIPANTS: Students, faculty members and non-teaching staff members of Maulana Azad College
- > **VENUE:** Maulana Azad College (Physical and online)
- > EXPECTED OUTCOME:

Students, faculty members and non-teaching staff members will be benefited by these professional skill-oriented workshops. Students especially will get the requisite training for cracking the exams related to various government and non-government jobs.

Summary of yearwise list of activities conducted

Sl. No.	Name of the Activity	Starting date	Completion date	No. of participants
1	Online Competitive Examination (Scheme Name: Entry-in-Service)	12.12.2018	30.05.2019	899
2	Online Competitive Examination (Scheme Name: Entry-in-Service)	03.12.2019	02.06.2020	1042
3	Online Competitive Examination (Scheme Name: Entry-in-Service)	05.12.2020	09.06.2021	1258
4	Online Competitive Examination (Scheme Name: Entry-in-Service)	03.12.2021	27.05.2022	1310
5	Online Competitive Examination (Scheme Name: Entry-in-Service)	01.12.2022	29.05.2023	1589
6	Professional Development Programme on "Life-skill and Work-Life Balance for Academicians in the 21st Century"	25.08.2022	29.08.2022	17
7	Professional Development Programme on "Cloud based data management and cyber security"	17.04.2023	21.04.23	32

RIGHT BRAINS TECHNOLOG

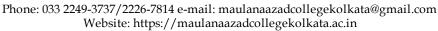
Principal Maulana Azad College Principal Maulana Azad College Kolkata Govt. of West Bengal



GOVERNMENT OF WEST BENGAL OFFICE OF THE PRINCIPAL

Maulana Azad College





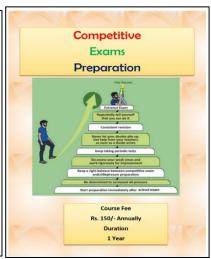


Cumulative report on online competitive examination (Entry into service)

Brochure of the scheme

















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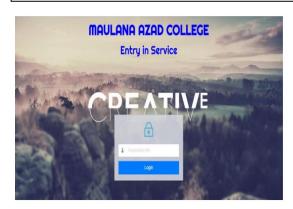
Maulana Azad College



Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata.ac.in



Screenshots of the examination portal provided by Right Brains





Practice Exam of English



Test Exam Instruction



Enrolled Students for Session 2018-19

SL. NO.	Student Name	Enrollment Number
1	SHREYA SEN	146-1211-0632-17
2	KULSUM TABASSUM	146-1211-0528-17
3	KAINAT KHATOON	146-1211-0349-18
4	MD JAWED ALI	146-1121-0642-16
5	DEEPAN ROY	146-1111-0108-18
6	NEHA SINGH	146-1211-0092-17
7	SYED MD ZOHAIB	146-1111-0345-18
8	PRIYANKA JAISWAL	221-1221-0026-14
9	SYED MASUD ALI	146-1111-0164-17





S.L. NO. Date 28 09 2020

S. N. CHATTERJEE, NOTARY

GOVT. OF WEST BENGAL

REGISTRATION NO. 4/1983
Office: SEALDAH CIVIL COURT COMPLEX
3rd Floor

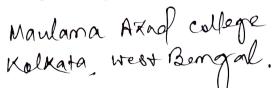
Residential Address :

34/2A/5, MOTTERY ROAD, KOLKATA - 700 015

NOTARIAL CERTIFICATE

PURSUANT TO SECTION 8 OF THE NOTARIES ACT 1952

TO ALL MEN THESE PRESENTS SHALL COME, I SAILENDRA NATH CHATTERJEE practising a NOTARY PUBLIC in the District of 24 PARGANAS of state of West Bengal within the Union of India, do hereby declare that the Paper riting collectively marked 'A' annexed hereto, herein-after well the Paper Writings 'A', are presented before me by the excutants (s).



hereinafter refered to as the "executant(s)" on this, the

22th day of Sep

Two thousand Twendy

The "executant(s)" having admitted the excution of the "Paper Writings A" in respective hand(s) in the presence of the witnesses, who as such-subscribe(s) signature(s) thereon, and satisfied, as to identity of the executants(s), and the said execution I have attested the execution of the "Paper Writing A" and testify that execution is in the respective hand(s) of the executant(s).

AN ACT WHEREOF being required of Notary Public, I have granted THESE PRESENTS as my NOTARIAL CERTIFICATE to serve and, avail as need and occasion shall may require.



IN FAITH AND TESTIMONY WHERE OF I the said Notary, have hereunto set and subscribed my hand and affixed my Notarial seal of Office at Sealdah in the District of 24-Parganas on this the day

% Mof..... To thousand Then the

Notarial Stamp on Original Sailendra Nath Chatterjee

Advo MOTARdry Public Collect West Bongal gd. No.- 4/83 Civ. Complex at Scaldat Civ. 2 700 014 28 SEP 2020

S. N. CHATTERJEE

S. N. CANTAINER)I

Advocate & Newary Public

Govt. of West Bengal

Regel No. - 4/53

Civil Court Complex at Sealda' Reducta = 700 014



Memorandum of Understanding (MOU) between Maulana Azad college, Kolkata, WEST BENGAL, and Association SNAP for jointly organizing the Certificate language courses in Arabic, Persian and Urdu. This is a non-profit initiative for the promotion of history, culture and communal harmony through learning abovementioned languages.

34AB 816420

This MOU is prepared in India and signed at the respective places and at the respective dates as mentioned herein between:

Maulana Azad College, one of the most reputed Government Colleges in West Bengal, was set up in 1924, (earlier known as the Islamic College), with an objective to promote Islamic learning and general education among the Muslim population in British India and with the sustained efforts of contemporary education minister of Bengal. olex at Sealdal

Principal

forward to lead a public discussion on the findings of the report and called for the wide public action. Association SNAP has been partnering with MA & ME, and Dept of Labour for the past several years. Among the academic collaborators, SNAP has worked with the

Salin Andung



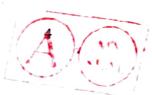
Presidency University, Jadavpur University, St. Xavier College, Institute of Development Studies Kolkata (IDSK), Aliah University, AMU, etc.

Association SNAP is a registered society under the West Bengal Societies Registration Act XXVI of 1961. SNAP Academy conducts coaching for civil service aspirants, career counseling sessions, and skill-based trainings for several years now.

Background of the Initiative:

Association SNAP realized the importance of learning Arabic, Persian Urdu while implementing several projects understanding the lives of minorities in Kolkata as part of their initiative called 'Know Your Neighbor' (KYN). The work involves visits to several heritage sites and archives. As most of the archival materials and inscriptions are written in the above mentioned languages, participants mostly research scholars, professors, writers urged SNAP to initiate language courses in the above mentioned languages. SNAP approached Maulana Azad College for the following objectives: designing the course curriculum and faculty support undertaking classes. Both the Institute's have agreed to enter into an Understanding to start the Certificate courses in the above mentioned

Aim: The overall objective of the language course is to equip the participants to read and understand inscriptions in those languages. Their learning will be contributed to research work for promoting scientific inquiry into past, peace, and communal harmony in West Bengal. The specific objectives as follows: a) participants earn basic proficiency in reading, writing, and and conversation, b) Sparticipants understand





underscore the importance of these languages in the development of other Indian languages like Bengali, Hindi, etc c) it is expected that the employability of the participants increased in research works and translation work.

Deliverables of the MOU

- Designing the course curriculum: Both the parties will jointly develop the course curriculum for the six month basic courses language courses. Both parties have the right to review the course curriculum. MAC as an academic institute will contribute to the academic aspect of the course.
- 2. Participants for the course will be drawn through a public announcement on MAC's website and social media platform.
- 3. SNAP will organize the online facilities for the delivery of the classes from its own premises at 183B Park Street, Kolkata 700016.

 The class will be held once a week (Saturday or Sunday).
- 4. SNAP will bear the cost of logistics including studio cost, internet, and digital equipment, and digital channel (Zoom) required for online classes. The cost also includes refreshments for faculty, technical assistance, and travel cost for faculty, course coordinators, etc.
- 5. To meet the above expense, SNAP will charge Rs.1000 from each participant, and some scholarships will be awarded to needy and interested candidates.
- 6. MAC will issue certificates jointly with Association SNAP (SNAP Academy) after the successful completion of the course by the participants. MAC will take the lead role in the evaluation of the participants' academic performance.

 S. N. CHATTE (S)

Principal
Maulana Azad College
Principal
Maulana Azad College
Kolkata
Gott, of West Bengal

28 SEP 1



- **7.** MAC and SNAP will jointly organize a certificate giving ceremony at the college premise.
- **8.** There will be no financial implication for MAC in any manner for the execution of the language course.
- **9.** Any amendments to this contract shall be subject to the approval of both parties and shall be produced in writing, and thereafter it will always be read as part or continuation of this Contract.

BOTH THE PARTIES HERETO HAVE UNDERSTOOD AND ACCEPTED THE CONTENTS OF THIS CONTRACT AND HAVE SIGNED HEREWITH IN WITNESS & RECOGNITION OF THE SAME ON THE RESPECTIVE DAY AND PLACE AS MENTIONED AGAINST THEIR NAMES:

Principal Maulana Azad College

ATTESTED BY ME

VITTERJEE

Secretary
Association SNAP

Sakir Ahan

Jane and

28 SEP 2020

Principal
Maulana Azad College
Principal
Maulana Azad College
Kolkata
Govt. of West Bengal



2 8 SEP 200



PAPER RITINGS "A" & THE RELATIVE NOTARIAL CERTIFICATE





S. N. Chatterjee

NOTARY PUBLIC GOVT. OF WEST BENGAL REGISTRATION NO. 4/83 CIVIL COURT AT SEALDAH, 3rd FLOOR KOLKATA-14

Residential address :-34/2A/5, POTTERY ROAD, KOLKATA - 700 015 PHONE: 2329-0394



KNOWLEDGE IS POWER



GOVERNMENT OF WEST BENGAL OFFICE OF THE PRINCIPAL Maulana Azad College 8, RAFI AHMED KIDWAI ROAD, TALTALA, KOLKATA 700013



Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata.ac.in

Activities under MoU between Maulana Azad College, Kolkata 700013 and

Association SNAP, Kolkata 700073

Start date of MoU: 28.09.2020 End date of MoU: Continuing

Duration: 5 years

Sl. No.	Name of activity	Starting date	Completion date	Hosted by	No. of participants
1.	Joint organization of certificate course Certificate course (1st batch) in online mode was conducted by Maulana Azad College and SNAP Academy in Basic Persian Language Course, Persian Advanced, Basic Arabic Language Course, Advanced Arabic language course, Basic Urdu language course, Basic Urdu language course. Dr. Iftekhar Ahmed, Head, Dept. of Persian, Maulana Azad College was the course coordinator.	01.09.2021	28.02.2022	Maulana Azad College, Kolkata.	23
2.	Joint organization of certificate course Certificate course (2 nd batch) in online mode.	2.01.2023	31.08.2023	Maulana Azad College, Kolkata.	26

Salve the During

Secretary

Association SNAP

Principal
Maulana Azad College
Principal
Maulana Azad College
Kolkata
Govt. of West Bengal

Principal

Maulana Azad College



Maulana Azad College



8, RAFI AHMED KIDWAI ROAD, KOLKATA 700013, INDIA

Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata.ac.in

Report on the activities under MOU for Academic Collaboration between

Maulana Azad College Kolkata and SNAP Academy, Kolkata

- > DATE of SIGNING THE MOU: 28.09.2020
- > OBJECTIVE/ PURPOSE:

Introduce certificate courses for language training in Urdu, Persian and Arabic.

> RESOURCE PERSON/S ENGAGED IN COLLABORATIVE ACTIVITY:

Faculty Members from Maulana Azad College and SNAP Academy

- Dr. Iftekhar Ahmed, Course Co-ordinator and Head, Dept. of Persian, Maulana Azad College
- Sabir Ahamed, Hony. Secretary, Association SNAP

External Faculty members

- Dr. Aziz Bano, Head, Department of Persian and & Chairperson, BOS, Maulana Azad National Urdu University
- Mr. Nilanjan Hajra, Journalist, Author & Translator,
- Prof. Mohammad Kazim, Department of Urdu, Delhi University
- > TARGET AUDIENCE/ PARTICIPANTS: Open to all students eager to learn these languages for personal or professional interests.
- > BRIEF REPORT ABOUT COURSES OFFERED UNDER COLLABORATIVE ACTIVITY:

SNAP Academy is an initiative of Association SNAP, a registered non-profit organization, promoting well-being of the minorities and peace and harmony since 2007. The academy conducts language course in Arabic, Persian and Urdu. The curriculum is designed as a 6 month basic level course for academicians, researchers, journalists and professionals who wish to read and communicate in these languages.

- ➤ **INFRASTRUCTURE:** Physical infrastructure, learning resources, digital management and all course related expenditure is borne by SNAP and Maulana Azad College will award course completion certificates.
- **EXPECTED OUTCOME:** This is an effort to specifically promote the rich heritage of Arabic, Persian and Urdu language among non-native speakers in addition to imparting professional skill development in related jobs







GOVERNMENT OF WEST BENGAL

OFFICE OF THE PRINCIPAL

Maulana Azad College



8, RAFI AHMED KIDWAI ROAD, KOLKATA 700013, INDIA

Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata.ac.in

Letter of Intent from Association SNAP to Principal, Maulana Azad College



HEAD OFFICE 66, Phears Lane, Kolkata 700 073, West Bengal Phone +91 8420183535 Website: www.snapbengal.org Email . snapkolkata@gmail.com

Date: 06.07.2016

To.

The Principal,

Maulana Azad College,

8 Rafi Ahmed Kidwai Road,

Kolkata 700013

Sir,

Subject: Collaboration for providing Institutional Certificate for Language Course by SNAP Academy

We are writing this letter to request your approval in partnering with SNAP Academy for 'Languages Course' by providing our learners with a certification from your reputed institution.

SNAP Academy, is an initiative of Association SNAP, a registered non-profit organization, promoting well-being of the minorities and peace and harmony since 2007. In the past we have partnered with the primer institutions in West Bengal including Presidency University, IDSK, St. Xavier College and Jadavpur University etc, academic activities.

Continuing with our legacy, we have launched the first online 'Languages Course' this year in three languages - Arabic, Persian and Urdu, starting from July. The course curriculum for three of these languages is designed as a 6-month Basic Level Course for academicians, researchers, journalists and professionals who wish to read and communicate in them. This is an effort to specifically promote the rich heritage of Arabic, Persian and Urdu languages among non-native

speakers. Having registered learners from around the globe, SNAP Academy feels proud to inform you that this online Language Courses start from July-end.

With an inclination to add value to our course, we request that your premier institute partner with us to provide Certificates of Completion to the learners in preferably the Urdu and Persian courses. The physical infrastructure, learning resources, digital management and all related course expenditure will be borne by us, with no monetary contribution from your institution. However, as we have invited the renowned Dr Iftekhar Ahmed as a Faculty, who is currently the Head of Department of Persian at Maulana Azad College, we would like to honour it with this collaboration.

We have had a discussion with Dr Iftekhar Ahmed regarding this and his cooperation to this endeavor will be well communicated to you in person once we initiate with details on how to take the certification procedure further.

We are sure as a distinguished educator yourself, you would welcome the initiative and approve of this request readily.

Thanking You.

Yours faithfully,

SobirAhamed

Sabir Ahamed

Secretary, Association SNAP

Secretary Association Snap

Salin Andring

Principal Maulana Azad College



GOVERNMENT OF WEST BENGAL

OFFICE OF THE PRINCIPAL Maulana Azad College



8, RAFI AHMED KIDWAI ROAD, KOLKATA 700013, INDIA

Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata.ac.in

2022-2023: A total of 26 students were enrolled in the second batch in Arabic, Urdu and Persian. Classes were held between the period of 2nd January, 2023 to 31st August, 2023

Details of students enrolled in 2nd batch

				Lan	guage	Co	urse	e Ne	ew l	Bato	ch i	202	23
	SI No	Name	Whatsapp No	Calling Number	Initial Par	Feb	Mar	Apr	May	June	July	Aug	
	1	Sk Abdul Sattar	Telegram8116794435	9609312356				100				-	
	2	Swarnadip Chatterjee	8961207794	8961207794	2000	TD							
Arabic	3	Bibhabhori Bhattacha	9330287707	9330287707		TD							
Arabic	4	Raju Sha (Md.Jamsh	9732593307	9732593307	2000	TD							
	5	MR. MD MISBAHUL	9734572235	9734572235	2000	TD							
	6	Shrabasti Sarkar	8017792499	8017792499	2000	TD							
	7	Azhar	9534085692	9534085692	2000	TD							
	8	Ayesha Daroga	7044031127		2000	TD							
		N. L. E. D	7740004005	7740004005	0000	TD							
	8	Mehuli Banerjee ABHIJIT RAY	7719301635 7439300413			U N							
	1000												
	10 11	Zobia Salam BHAGYASRFF SENO	9899535190 9804965299										
Urdu	12	Simool Sen	7059724270				gram 94	177041	221				
	13	Debolina Chakrabarti				-	graini 94	1//04/	331				
	14	Amrita Bandopadhya											
	14	Annia bandopadnya	04/00/224/	0410012241	1900	10							
	16	Paramita Purakayast	9088991366	9088991366	1500	TD							
	17	Samhita Sen	9874046546		2000	TD							
	18	SAUMYA BOSE	8337047737	8337047737	2000	TD							
	19	SARBAN BANDYOP	8336871916	8981429093	2000	TD							
0 .	20	Riman Rakshit	7001646106	7001646106	2000	TD							
Persian	21	Trina Nileena Banerje	9903232085	9903232085	2000	TD							
	22	Senjuti Chakraborti	9836155475	9836155475	2000	TD							
	23	Bhargav Rani	9326190553	9326190553	2000	TD							
	24	Basim u nissa	9796730906	9796730906	2000	TD							
	25	Sadam (Brother of	8825074359	8825074359	2000	TD							
	26	Kishore Kumar Ghos	9868153593	9868153593		TD							



Principal

Maulana Azad College

Principal

Maulana Azad College

Kolkata

Govt. of West Bengal



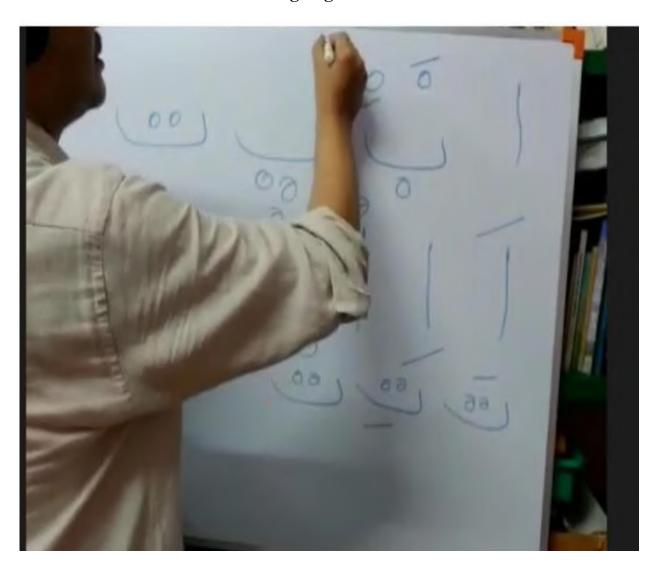
Maulana Azad College



8, RAFI AHMED KIDWAI ROAD, KOLKATA 700013, INDIA

Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata.ac.in

Screenshot of class going on in second batch









GOVERNMENT OF WEST BENGAL

OFFICE OF THE PRINCIPAL





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Sample Certificates issued to students of second batch after completing the course









পশ্চিম্বঙ্গ पश्चिम बंगाल WEST BENGAL

81AB 340839

MEMORANDUM OF UNDERSTANDING (MoU) FOR ACADEMIC CO-OPERATION BETWEEN

GOVERNMENT GIRLS' GENERAL DEGREE COLLEGE 7, MAYUR BHANJ ROAD, KOLKATA-700023 AND

MAULANA AZAD COLLEGE, KOLKATA 8, RAFI AHMED KIDWAI ROAD KOLKATA-700013

Whereas the college is engaged in teaching the subject of Chemistry by taking practical classes to the students of Government Girls' General Degree College by the teaching faculty of Maulana Azad College in the college premises.

And whereas the Government Girls' General Degree College and Maulana Azad College agreed to impart the teaching assignments to the students of both the Colleges as required in different subjects (Arabic, Bengali, Persian, Urdu, History, Political science, Sociology, Botany, Chemistry, Physics, Mathematic and Commerce) within their premises.

This Memorandum of Understanding (hereinafter referred to as the MoU) intends to set out the general modalities for initiating an Academic Collaboration which is intended to benefit the students and faculty members of both the institutions in their pursuit for achieving academic excellence.

Maulana Azad College Kolkata Govt. of West Bengal

Principal
Comment Girls' Coneral

Name: B. C. LAHIRI

Advocate
Address: Alipcia Judga's Court, Kol-27
Alipcia Conectorate, 24 Pgs. (8)
SUEHANKAR DAS
STAMP VENDOR
Alipora Polica Court, Koi - 27

And whereas the parties have agreed as follows:

1. This agreement will commence from 2022-2023 for a period of five years and will expire on 2027 -2028.

2. The purpose of this MoU is to develop academic and educational collaboration through Seminars, Inter-disciplinary workshops, conferences and teachers / students exchange program and strengthening professional relations between the two institutions., enjoying Library facilities.

3. Students of both the institutions will have equal access to quality enhancement program organized by both the institutions.

4. Teachings will be imparted during the college/ beyond college hours in dual mode which is to be determined in consultation with Principals of both the colleges.

5. The college will provide physical infrastructure like theory class rooms and laboratories for physical class if required.

6. The agreement may anytime be revised and modified by mutual consent within the period mentioned above.

7. During the period of MoU if any condition mentioned in MoU is violated then the MoU will be treated as cancelled only after decision by the review committee.

8. The MoU will be jointly reviewed by Government Girls' General Degree College and Maulana Azad College from time to time.

This MoU has been signed by the Principal, Maulana Azad College and Principal, Govt. Girls' General Degree College, Ekbalpur.

Signed by and on behalf of

Signed and delivered by the college

Coordinator of

Maulana

Signed and delivered by the college

Coordinator of

Govt. Girls' General Degree College

Principal

Maulana Azad Coll

Govt. of West Bengal

Principal Principal

Government Girls' General

Govt. Girls' General Trege College

In presence of (witnessed by)

Name: Sye 2 Md Ighal Stat.
Algrados



GOVERNMENT OF WEST BENGAL

OFFICE OF THE PRINCIPAL

Maulana Azad College 8, RAFI AHMED KIDWAI ROAD, TALTALA, KOLKATA 700013



Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata.ac.in

<u>Activities under MoU between Maulana Azad College, Kolkata 700013 and Government Girls' General Degree College, Ekbalpore, Kolkata 700023</u>

Start date of MoU: 14.06.23

End date of MoU: Continuing

Duration: 5 years

Sl. No.	Name of activity	Starting date	Completion date	Hosted by	No. of participants
1.	Faculty Exchange Programme Dr. Debaprasad Banerjee, Associate Professor and Head, Dept. of English, Government Girls' General Degree College, Ekbalpore, Kolkata took classes of M.A. Sem IV students of Maulana Azad College	19.06.23	19.06.23	Maulana Azad College, Kolkata	18
2.	Faculty Exchange Programme Dr. Ajanta Mukherji, Assistant Professor, Dept. of Chemistry, Maulana Azad College, took classes of B.Sc. Chemistry (Hons.) Sem II, IV and VI students of Government Girls' General Degree College, Ekbalpore, Kolkata	17.06.23 19.06.23 21.06.23 22.06.23 23.06.23	17.06.23 19.06.23 21.06.23 22.06.23 23.06.23	Government Girls' General Degree College, Ekbalpore	4 (Sem VI) 3 (Sem VI) 3 (Sem VI) 3 (Sem IV) 2 (Sem II)

Activities between Maulana Azad College and Government Girls' General Degree College, Ekbalpore prior to MoU under linkage

Sl. No.	Name of activity	Starting date	Completion date	Hosted by	No. of participants
1.	Dr. Ajanta Mukherji, Assistant Professor, Dept. of Chemistry, Maulana Azad College gave a lecture as an invited resource person in the One-day seminar titled "Way to a Greener World' organized by Government Girls' General Degree College. Ekbalpore, Kolkata.	20.09.2019	20.09.2019	Government Girls' General Degree College. Ekbalpore, Kolkata.	6 from Maulana Azad College
2.	Dr. Rajendra Saha, Associate	13.03.23	13.03.23		3 (Sem IV)
	Professor, Dept. of Chemistry,	20.03.23	20.03.23	Maulana Azad College,	Do
	Maulana Azad College and Dr.	21.03.23	21.03.23	Kolkata.	Do
	Subhodeep Samanta, Assistant	22.03.23	22.03.23		Do
	Professor, Dept. of Chemistry,	27.03.23	27.03.23		Do
	Maulana Azad College, took classes of	28.03.23	28.03.23		Do
	B.Sc. Chemistry Sem IV classes	04.04.23	04.04.23		Do
	-	10.04.23	10.04.23		Do
		11.04.23	11.04.23		Do
		17.04.23	17.04.23		Do

Principal
Government Girls' General
Degree College
Kolkata

Maulana Azad College
Principal
Maulana Azad College
Kolkata
Govt. of West Bengal

Principal



GOVERNMENT OF WEST BENGAL OFFICE OF THE PRINCIPAL Maulana Azad College 8, RAFI AHMED KIDWAI ROAD, TALTALA, KOLKATA 700013



Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata.ac.in

Report on activities under MOU: Academic linkage for Faculty exchange Programme between Maulana Azad College, Kolkata-13 and Government Girls' General Degree College Ekbalpore, Kolkata-23

Date of Signing of MoU: 14:06.2023

> OBJECTIVE/PURPOSE:

Initiate an academic Collaboration between the two colleges which would benefit the students and faculty members of both the institutions in their pursuit of academic excellence.

- > TARGET AUDIENCE/ PARTICIPANTS: Students and faculty members of both Institutions
- > VENUE: Maulana Azad College and Government Girls' General Degree College, Ekbalpur.

> EXPECTED OUTCOME:

Students and faculty members of both Institutions will be benefited in terms of their academic pursuit in areas of faculty exchange programmes, Joint conference organization, Joint research activities etc.

Yearwise report of activities under MoU and also before MoU (as linkage between two Institutions0

1. Faculty Exchange Programme

Date	Department and College	Semester	Course Code	Topics	Teachers Involved	Affiliating College	Number of students
10.04.2023 and 19.06.2023	PG Dept. of English, Maulana Azad College	M.A. Sem II and Sem IV	English	Samuel Beckett's Endgame (Sem IV) Graham Greene's Brighton Rock (Sem II)	Dr. Debaprasad Banerjee, Associate Professor and Head	Dept. of English, Government Girls' General Degree College	20 (Sem II) (10.04.23) 18 (Sem IV) (19.06.23)
17.06.2023, 19.06.2023, 21.06.2023, 22.06.2023, 23.06.2023	Dept. of Chemistry, Government Girls' General Degree College, Ekbalpore	B.Sc. Sem II, Sem IV and Sem VI	CC-3P (Sem-II) CC-8P (Sem-4) DSE- A3P (Sem-VI)	Organic Chemistry	Dr. Ajanta Mukherji, Assistant Professor	Dept. of Chemistry, Maulana Azad College	4 (Sem VI) (17.06.23) 3 (Sem VI) (19.06.2023) 3 (Sem VI) (21.06.2023) 3 (Sem IV) (22.06.2023) 2 (Sem II) (23.06.2023)

Principal
Government Girls' General
Degree College
Kolkata

Principal
Maulana Azad College
Principal
Maulana Azad College
Kolkata
Govt. of West Bengal



Maulana Azad College 8, RAFI AHMED KIDWAI ROAD, TALTALA, KOLKATA 700013



Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata.ac.in

Invitation letter to Dr, Debaprasad Banerjee for taking classes



POST GRADUTATE DEPARTMENT OF ENGLISH MAULANA AZAD COLLEGE

8, Rafi Ahmed Kidwai Road, Kolkata 13, India www.maulanaazadcollegekolkata.ac.in Email: english@maulanaazadcollegekolkata.ac.in

Dated: 17/06/2023



POST GRADUTATE DEPARTMENT OF ENGLISH MAULANA AZAD COLLEGE

8, Rafi Ahmed Kidwai Road, Kolkata 13, India ww.maulanaazadcollegekolkata.ac.in Email: english@maulanaazadcollegekolkata.ac.in

Dated: 6/04/2023

To

Dr. Debaprasad Banerice

Government Girls' General Degree College, Ekbalpore,

Kolkata 23.

Sir.

We have the pleasure of inviting you for delivering a lecture on Samuel Beckett's Endgame to our M.A. 4th Semester students on 19th June 2023 at 12.30 p.m. Looking forward to seeing you in our department.

Best regards,

HOD

Dept. Of English

Head P. G. Department of English Maulana Azad College Kolkata 13

Principal

Maulana Azad College Principal Maulana Azad College Kolkata Govt. of West Bengal

Dr. Debaprasad Banerjee

Government Girls' General Degree College, Ekbalpore,

Kolkata 23.

Sir,

We have the pleasure of inviting you for delivering a lecture on Graham Greene's Brighton Rock to our M.A. 2nd Semester students on 10th April 2023 at 3.00 p.m. Looking forward to seeing you in our department.

Best regards,

Dept. Of English

Head

P. G. Department of English Maulana Azad College Koll da 13

Maulana Azad College

Principal Maulana Azad College Kolkata Govt. of West Bengal

Peruitted Qlg,

Principal emment Girls' General Degree Cullege Kolkata

Photographs of Dr. Debaprasad Banerjee taking class at Maulana Azad College





Principal Maulana Azad College Principal Maulana Azad College Kolkata Govt. of West Bengal



Maulana Azad College 8, RAFI AHMED KIDWAI ROAD, TALTALA, KOLKATA 700013





Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata.ac.in

Attendance of students in Dr. Banerjee's class

POST GRADUTATE DEPARTMENT OF ENGLISH MAULANA AZAD COLLEGE

Date: 10/04/2023

Attendance of M.A. 2nd Semester

Students Present:

- 1. Abhishek Banerjee
- 2. Anurima Mukherjee
- 3. Muskan Afroz
- 4. Baisakhi Mukherjee
- 5. Debyani Chakraborty
- 6. Dwaipayan Hira
- 7. Priyanka Saha
- 8. Poulami Debnath
- 9. Rupam Ghosh
- 10. Refaz Karim
- 11. Susmita Das
- 12. Anirban Deb
- 13. Ankita Chakraborty
- 14. Somdatta Dhar
- 15. Debalina Mandal
- 16. Aaron Wu
- 17. Gulshis Sabnam
- 18. Moumita Dan
- 19. Soyeta Singh

20. Tamanna Parvin

Debakrasow Bo

Signature of the teacher

Signature of Principal, Maulana Azad College

Principal Maulana Azad College Kolkata Govt. of West Bengal

POST GRADUTATE DEPARTMENT OF ENGLISH MAULANA AZAD COLLEGE

Date: 19/06/2023

Attendance of M.A. 4th Semester

Students Present:

- 1. Ananya Das
- 2. Arijit Das
- 3. Halima Khatun
- 4. Md. Imran Ahmed Mallick
- 5. Ishita Saha
- 6. Kuheli Chakraborty
- 7. Namrata Basak
- 8. Nishat Munir
- 9. Rajasree Baidya
- 10. Saba Parveen
- 11. Sana Naaz
- 12. Saptarshi Mondal
- 13. Shahnawas Karim
- 14. Shromona Ganguly
- 15. Smritikana Maity
- 16. Soumyajit Guha 17. Sujan Das
- 18. Shubhrajcet Kamila

Signatur of Principal, Maulana Azad College

Principal Maulana Azad College Kolkata Govt. of West Bengal

a Azad College



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Photographs of Dr. Ajanta Mukherji taking classes at Government Girls' General Degree College





Attendance of students in Dr. Mukherji's class

GOVERNMENT GIRL'S GENERAL DEGREE COLLEGE 7, MAYURBHANJ ROAD, KOLKATA – 700023 DEPARTMENT OF CHEMISTRY Date: 17.06.2023 Special Practical Class Attendance of Chemistry (Hons.) Students Students present: 1. Mahshara Safi 2. Umme Umara Warisha 3. Vaishali Agrawal 4. Ummulwara Sana Signature of Head artment of Chan. Quilbury 14/6/23 Signature of the teacher Department of Chemistry Algund 14/02/20

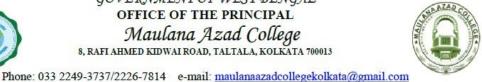
Signature of Principal,

GOVERNMENT GIRL'S GENERAL DEGREE COLLEGE 7, MAYURBHANJ ROAD, KOLKATA - 700023 DEPARTMENT OF CHEMISTRY Date: 19.06.2023 Special Practical Class Attendance of Chemistry (Hons.) Students Students present: 1. Vaishali Agrawal 2. Mahshara Safi 3. Umme Umara Warisha Signature of Head Signature of the teacher Department of Chemistry Signature of Principal,

Principal Maulana Azad College Principal Maulana Azad College Kolkata Govt. of West Bengal



Maulana Azad College 8, RAFI AHMED KIDWAI ROAD, TALTALA, KOLKATA 700013



Website: https://maulanaazadcollegekolkata.ac.in

Attendance of students in Dr. Mukherji's class

GOVERNMENT GIRL'S GENERAL DEGREE COLLEGE 7, MAYURBHANJ ROAD, KOLKATA – 700023 DEPARTMENT OF CHEMISTRY

Special Practical Class

Date: 21.06.2023

Signature of Head

Department of Chemistry

Attendance of Chemistry (Hons.) Students

Semester Students present: 1. Gulfeshan Fatima 4 3. Arshadi Parveen

Signature of the teacher

Signature of Principal,

Principal emment Girls' General Degree College Kolkata

GOVERNMENT GIRL'S GENERAL DEGREE COLLEGE 7, MAYURBHANJ ROAD, KOLKATA - 700023 DEPARTMENT OF CHEMISTRY

Special Practical Class

Date: 22.06.2023

Attendance of Chemistry (Hons.) Students

4 1. Gulfeshan Fatima 2. Afshan Parween

Students present:

3. Arshadi Parveen

Signature of the teacher

Signature of Principal, Principal emment Girls' General Degree College Kolkata

Signature of Head partment of Chom. Department of Chemistry

Semester

GOVERNMENT GIRL'S GENERAL DEGREE COLLEGE 7, MAYURBHANJ ROAD, KOLKATA - 700023 DEPARTMENT OF CHEMISTRY

Special Practical Class

Date: 23.06.2023

Attendance of Chemistry (Hons.) Students

Students present:

Semester

1. Vanshika Gupta

2

2. Jannatul Firdous

2

Signature of the teacher

Signature of Head

Olyman 23 | 62 | 23 Signature of Principal,

Government, General Degree College Kolkata

Department of Chemistry

Principal Maulana Azad College



GOVERNMENT OF WEST BENGAL OFFICE OF THE PRINCIPAL Maulana Azad College 8, RAFI AHMED KIDWAI ROAD, TALTALA, KOLKATA 700013



Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata.ac.in

Certification from Principal, Government Girls' General Degree College, Ekbalpore to Ajanta Mukherji



7, Mayurbhanj Road, Kolkata - 700023 Telephone No.: 033-2448-1160, 033-2448-1171 E-mail: gggdc.coll@gmail.com Website: www.govtgirlsekbalpur.com

Date: Ref. No. : ...

CERTIFICATE OF APPRECIATION

lt is my immense pleasure to certify that Dr. Ajanta Mukherji, Assistant Professor of the Department of Chemistry, Maulana Azad College, Kolkata has involved herself with various activities of our College, with special reference to the Department of Chemistry. She has delivered a Lecture on Environment addressing all students of our college in a Seminar ("Way to a Greener World") held on 20.09.2019, taken special practical sessions and acted as an External Evaluator of B.Sc. (Hons.) in Chemistry practical of Semester-II, Semester-IV and Semester-V1 between 17.06.2023 and 23.06.2023, respectively, as per Memorandum of Understanding between both Colleges.

I highly appreciate her valuable contribution to the continued collaborative effort between our Colleges.

Principal

Government Girls* General Degree College.

Kolkata

Government Cara' General Degree College Kolkata

Principal Maulana Azad College



OFFICE OF THE PRINCIPAL

Maulana Azad College 8, RAFI AHMED KIDWAI ROAD, TALTALA, KOLKATA 700013



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List of activities with Government Girls' General Degree College, Ekbalpore before MoU as linkage

Copy of the Linkage Certificate between two colleges





GOVERNMENT GIRLS' GENERAL DEGREE COLLEGE

7, Mayurbhanj Road, Kolkata - 700 023
Telphone No.: 033-2448-1160, 033-2448-1171
E-mail: gggdc.coff@gmail.com

E-mail: gggdc.coll@gmail.com Website: www.govtgirlsekbalpur.com

Ref. No. : COMMUNICATION CONTRACTOR

Date :.....

LINKAGE/COLLABORATION

This Linkage is hereby solemnised between GOVERNMENT GIRLS' GENERAL DEGREE COLLEGE 7, MAYUR BHANJ ROAD, KOLKATA-700023 between MAULANA AZAD COLLEGE, KOLKATA. 8, RAFI AHMED KIDWAI ROAD KOLKATA-700013 for fostering collaborative academic growth and development, for a period of FIVE YEARS w.c.f. 30, 06 2018

The activities of this linkage are listed below:

- 1. Teacher /Student Exchange Programme
- Joint hosting of seminars.
- 3. Collaborative Research work

This linkage will respect Intellectual Property Rights and any intellectual matter developed by the collaborative efforts of two colleges shall be retained by them. Both the parties shall respect and retain confidentially in each / any of the collaborative efforts, and all collaborative academic exercises shall be guidedirected and impelled by the greater academic interest of both the parties, and not any other /commercial interest. No legal relationship between the two parties is implied through this linkage, and any of the two parties can choose to terminate the linkage with a prior written notice of three months.

This Linkage shall uphold the ethos of holistic and integrated academic excellence and growth followed by all higher education institutions of the country and shall not in any way impede or affect each of the participatory college's individually and distinctiveness, by any way whatsoever.

Officer-in-Charles 30
Government Cliffs General
Degree College

Degree College Kolkata

IOAC

Principal Principal
Principal Principal
Rollege
Kolkata
Govt. of West Bengal

Witness

Principal

Government Girls' General

Degree College

Kolketa

Principal Maulana Azad College



Maulana Azad College 8, RAFI AHMED KIDWAI ROAD, TALTALA, KOLKATA 700013





Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata.ac.in

1. Dr. Ajanata Mukherji, Assistant Professor, Dept. of Chemistry, Maulana Azad College gave a lecture as an invited resource person in the One-day seminar titled "Way to a Greener World' organized by Government Girls' General Degree College. Ekbalpore, on 20th September, 2019.

Notice of the Event

Government Girls' General Degree College 7, Mayur Bhanj Road, Kolkata -700023

Notice

Seminar committee (Science) in collaboration with Physics, Chemistry and graphy Department is organising a One-Day seminar titled "Way to a Greener World" in college on 20.09.2019.

All the teachers and students are requested to register on or before 15.09.2019 with Rs.100/- registration fee.

Convener

Seminar Committee (Science)

Officer-in-Charge

Officer-in-Charge Government Girls' General Degree College Kolkata

List of registered participants (Total 20 teachers and 41 students attended the event out of which 4 students and 2 teachers were from Maulana Azad College

GOVERNMENT GIRLS' GENERAL DEGREE COLLEGE 7, MAYUR BHANJ ROAD, KOLKATA - 7000023 One-Day Inter College Seminar on "Way to a Greener World"

Organised by Seminar Committee (Science) in collaboration with Physics, Chemistry and Geography Departments

LIST OF PARTICIPANTS

SI No.	Name Of The Participant	Designation	Affiliation	Department	Signature Of The Participant
1.	Dr. Syeda Shariqatul Moula Alquadri	Officer-in-Charge & Associate Professor	Government Girls' General Degree College (Ekbalpur)	Persian	Holde Algun 20/2/
2.	Dr. Mumu Chakraborty	Convener Seminar Committee, (Science), Assistant Professor	Government Girls' General Degree College (Ekbalpur)	Chemistry	Mumu Chakrabaty
3.	Dr. Sampa Sen	Teachers' Council Secretary & Associate Professor	Government Girls' General Degree College (Ekbalpur)	Bengali	Rampatur 20/9/19.
4.	Dr. Debaprasada Bandopadhyay	IQAC Coordinator, Associate Professor & Head	Government Girls' General Degree College (Ekbalpur)	English	Sauf 25/9/19
5.	Dr. Bhaswati Bhattacharya	HOD, Chemistry Associate Professor	Government Girls' General Degree College (Ekbalpur)	Chemistry	12 202101.
6.	Dr. Rajashree Dasgupta	HOD, Geography Assistant Professor	Government Girls' General Degree College (Ekbalpur)	Geography	Rajashand agto 20/9/19.
7.	Dr. Soma Mandol	HOD, Physics Assistant Professor	Government Girls' General Degree College (Ekbalpur)	Physics	(Pixtely)
8.	Dr. Koel Adhikari	Member Seminar Committee, Science Assistant Professor	Government Girls' General Degree College (Ekbalpur)	Physics	1/1el Adhibary 20/09/19

SI No.	Name Of The Participant	Designation	Affiliation	Department	Signature Of The Participant
9.	Smt. Suradhuni Ghosh	Assistant Professor	Government Girls' General Degree College (Ekbalpur)	Geography	Flot 20.9.19
10.	Dr. Susobhan Mukhopadhyay	Member Seminar Committee, Assistant Professor	Government Girls' General Degree College (Ekbalpur)	Bengali	0
11.	Dr. Santanu Chakrabarti	Resource Person Principal & Associate Professor	Singur College	Zoology	2014/19
12.	Dr. Dipan Adhikari	Resource Person Assistant Professor	Hooghly Mohsin College	Botany	Digar Adh- 20/01
13.	Dr. Ajanta Mukherji	Resource Person Assistant Professor	Maulana Azad College	Chemistry	Ajanta Mukhey soft
14.	Ms. Sangeeta Yonzon	Resource Person Assistant Professor	Government Girls' General Degree College (Ekbalpur)	Economics	lange de Yman zoroni
15.	Sri. Jayantajoy Chattopadhyay	Associate Professor & Head	Government Girls' General Degree College (Ekbalpur)	Political Science	Sayanta Sold Sold Sol
16.	Dr. Subhosundar Bandopadhyay	Associate Professor	Government Girls' General Degree College (Ekbalpur)	Mathematics	Subharder Breds polly
17.	Dr. Antara Mukherjee	Convener Seminar Committee(Arts) & Assistant Professor	Government Girls' General Degree College (Ekbalpur)	English	an 20/0/14.
18.	Mr. Abdul Matin	Assistant Professor	Government Girls' General Degree College (Ekbalpur)	Arabic	(भव्ये व्यनाप
19.	Dr. Arijit Kundu	Assistant Professor	Maulana Azad College	Chemistry	denteda/19.
20	Dr. Kaushiki Mukherice	Assistant Professor	Government Girls' General Degree College (Ekbalpur)	Mathematics	

Principal Maulana Azad College Principal Maulana Azad College Kolkata Govt. of West Bengal



Maulana Azad College 8, RAFI AHMED KIDWAI ROAD, TALTALA, KOLKATA 700013





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Sl Name Of The No. Participant	Designation	Affiliation	Department	Signature Of The Participant	
21 Dr. Senjuti Gup	a Assistant Arapesson	Govt Girls General Degree College, Ekkalan	Economics	Conjuti Gab topport	
22. Dr. Rupa Baneri	a Assistant Professor ee Associate Professor	Gove Girls General Degree College Expalps	Bengali	Rupa Dampi 2019/19.	
		, ,			
				-	

SI No.	Name Of The Participant	Designation	Affiliation	Department	Semester/Year	Signature Of The Participant
1	ShatavishaAdhikari	Student	Government Girls' General Degree College (Ekbalpur)	Geography	Semester I	Shatavisha Alhikan 20/9/19
2	MunkashifSalauddin	Student	Government Girls' General Degree College (Ekbalpur)	Geography	Semester I	Munkashif Salauddin 20/09/19.
3•	Mah-E-Anwar	Student	Government Girls' General Degree College (Ekbalpur)	Geography	Semester I	Make Anusaic X
4	Mashrafa Safi	Student	Government Girls' General Degree College (Ekbalpur)	Chemistry	Semester I	
5	Fatima Simran Khan	Student	Government Girls' General Degree College (Ekbalpur)	Geography	Semester I	Fatinua Simuan Khan
6	Alisha Khatun	Student	Government Girls' General Degree College (Ekbalpur)	Geography	Semester I	Alisha Xhalin 20 6/10
7	Gayatri Shaw	Student	Government Girls' General Degree College (Ekbalpur)	Geography	Semester III	Cay 25 Shew 20/09/19

LIST OF PARTICIPANTS

Pg. 2

LIST OF PARTICIPANTS

SI No.	Name Of The Participant	Designation	Affiliation	Department	Semester/Year	Signature Of The Participant
8	MahenoorSalim	Student	Government Girls' General Degree College (Ekbalpur)	Geography	Semester III	20/9/19
9	SamaAra	Student	Government Girls' General Degree College (Ekbalpur)	Geography	Semester III	Absent
10	ShariyaFarheen	Student .	Government Girls' General Degree College (Ekbalpur)	Geography	Semester III	Shaviya Fasheen X
11	Ananya Manna	Student	Government Girls' General Degree College (Ekbalpur)	Geography	Semester III	
12	ZarkheenMukhtar	Student	Government Girls' General Degree College (Ekbalpur)	Geography	Semester III	Karkheen Mukhtar 2019/19
13	Subhana Imran	Student	Government Girls' General Degree College (Ekbalpur)	Geography	Semester III	Subhana Invan
14	MaheenNazime	Student	Government Girls' General Degree College (Ekbalour)	Geography	Semester III	20/9/19. mahu Morin 20/9/19.
15.	Sana Noor	Student	Government Girls' General Degree College (Ekbalpur)	Geography	Semester III	Sana Noon 20/9/19
16	KaynatParveen	Student	Government Girls' General Degree College (Ekbalpur)	Geography	Semester I	Kaynat Parveen 2019/19.
17	Kainat Akhtar	Student	Government Girls' General Degree College (Ekbalpur)	Geography	Semester I	** ** *** *** **** **** **************

SI No.		Designation	Affiliation	Department	Semester/Year	Signature Of The Participant
18	AfsaraKhatoon	Student	Government Girls' General Degree College (Ekbalpur)	Geography	Semester I	Afsaxa Khatoom
19	Naushaba Ahmad	Student	Government Girls General Degree College (Ekbalpur)	Geography	Semester I	Mauchaba Amad
20	SimranAzima	Student	Government Girls' General Degree College (Ekbalpur)	Geography	Semester I	Sinyan Azima 20/09/2019
21	AshfiJawaid	Student	Government Girls' General Degree College (Ekbalpur)	Geography	Semester I	Fshfi Jawaid 20/09/2019
22	NavishtaAhamd	Student	Government Girls' General Degree College (Ekbalpur)	Geography	Semester 1	Navishta Ahmad
23	Sana Khatoon	Student	Government Girls' General Degree College (Ekbalpur)	Geography	Semester I	Sana Khatoon
24	Sabina Afrin	Student	Government Girls' General Degree College (Ekbalpur)	Geography	Semester I	Sabina offinia
25,	RifatParveen	Student	Government Girls' General Degree College (Ekbalpur)	Chemistry	Semester III	Rigat Parveer /
26	ShahinaParveen	Student	Government Girls' General Degree College (Ekbalpur)	Chemistry	Semester III	Shahina Parveen
27	Shabnam Sultana	Student	Government Girls' General Degree College (Ekbalpur)	Chemistry	Semester III	Shabnam Sultana 2019/19

Conid......
LIST OF PARTICIPANTS

LIST OF PARTICIPANTS

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SI No.	Name Of The Participant	Designation	Affiliation	Department	Semester/Year	Signature Of The Participant
28	SadatTabraiz	Student	Government Girls' General Degree College (Ekhalpur)	Chemistry	Semester III	Soday Tablaing
29	ReshmiKhatoon	Student	Government Girls' General Degree College (Ekbalpur)	Chemistry	Semester III	Roshoi Hhator . 269.11
30	AnkitaMallick	Student	Government Girls' General Degree College (Ekbalpur)	Chemistry	Semester III	Auto Malleck 20.04.19
31	SaziyaNisa	Student	Government Girls' General Degree College (Ekbalpur)	Chemistry	Semester III	. 22 iya Nise 20 1911
32	Aqsa Ashraf	Student	Government Girls' General Degree College (Ekbalpur)	Chemistry	Semester III	Agra Ashad
33	Dayita Das	Student	Maulana Azad College	Chemistry	Semester I	Dayita Das 20/09/19.
34	Debolina Sarkar	Student	Maulana Azad College	Chemistry	Semester I	Deboum a Sankar
35	Soumstyajii Ghosh	Student	Maulana Azad College	Chemistry	Semester I	Commyadeep Ghosh 20/09/19
36	Amit Chakraborty	Student	Maulana Azad College	Chemistry	Semester I	Shir Charlestory ecloying
37	Kahkashan Zaheer	Student	Government Girls' General Degree College (Ekbalpur)	Geography	Semester III	Kahkashan Zaheer 20/9/14
38	Shahina Firdous	Student	Government Girls' General Degree College (Ekbalpur)	Geography	Semester III	Station Fishers
	Sabiha Khatoon	Student	Government Girls' General Degree College (Ekbalpur)	Geography	Semester III	Sabiha Khatoon 20/09/11

SI No.	Name Of The Participant	Designation	Affiliation	Department	Semester/Year	Signature Of The Participant
40	Aribaa Ahmad	Student	Govt Girls General Degre College (Eth	[m] Geography	SemI	Valstali Agrandi.
41	Vaishali Agrawal	Student			SemI	20/09/19.
42	Shaire Mokeina	Student	Dogree College (Els	(Chemismy	Sem T.	Shaikh Missire Khaloon Mujibey 20 2 Yuwa Kausar 20 19 119
43	Yusta Kansan	Student	Gort. Firth Gar Bug.	. Geography	Dem Mi	Yuna Kausar 2019119
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Principal Maulana Azad College



GOVERNMENT OF WEST BENGAL OFFICE OF THE PRINCIPAL Maulana Azad College 8, RAFI AHMED KIDWAI ROAD, TALTALA, KOLKATA 700013



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Photographs of Dr. Ajanta Mukherji delivering her talk in the event and her felicitation by Dr. D.P. Banerjee, Associate Professor and Head, Dept. of English, Government Girls' General Degree College





2. Conduction of classes under Faculty exchange programme

Date	Department and College	Semester	Course Code	Topics	Teachers Involved	Affiliating College	Number of students
13.3.2023 to 17.04.23	Chemistry, Government Girls' General Degree College College	Sem IV	Chemistry (CC9 - Practical)	Physical chemistry	Dr. Rajendra Saha, Associate Professor, Dept. of Chemistry, Maulana Azad College and Dr. Subhodeep Samanta	Dept. of Chemistry, Maulana Azad College	3







Maulana Azad College 8, RAFI AHMED KIDWAI ROAD, TALTALA, KOLKATA 700013



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Photographs of Dr. Rajendra Saha and Dr. Subhodip Samanta, taking classes of students from both Maulana Azad College and Ekbalpur College at the Dept. of Chemistry, Maulana Azad College





Copy of relevant pages of the Attendance Register

N				STUDENTS' ATTENDANCE BEGISTER															
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Principal Maulana Azad College Principal Maulana Azad College Kolkata Govt. of West Bengal



পশ্চিমবঙ্গ पश्चिम बंगाल WEST BENGAL

AD 851162

Memorandum of Understanding for Academic Co-operation
Between
Maulana Azad College, Kolkata
And
Institute of Spanish Studies, India

This Memorandum of Understanding made on the 18th December 2021, between Institute of Spanish Studies, India, Regd. Office at No. 13, 2nd Floor, Banashankari Complex, 12th Cross, Putenahalli, J P Nagar,7th Phase, Bangalore - 560078 (Near Putenahalli Petrol Pump) (herein after referred to as 'the ISS, India') of the one part and Maulana Azad College, 8, Rafi Ahmed Kidwai Road, Kolkata -700013 (hereinafter referred to as the College) of the other part.

Whereas the ISS, India is engaged in imparting Spanish Language Education Courses to the students of colleges and issuing certificate recognized by INSTITUTE OF SPANISH STUDIES, INDIA,

And whereas the College approached the ISS, India for imparting Spanish Language Certificate Course(s) to the students of the College from the academic session 2021-2022 and the detailed discussion with the ISS, India' on 03.07.21 and 16.09.21 for imparting the courses at the college premises.

And whereas the ISS, India and College agreed to impart the Certificate Course as per the need to the students of the College within the College premises.

INSTITUTE OF SPANISH STUDIES
179-D. 2nd Floor, Khirki Extr.

Opp. Select Citywalk Mall, Malviya Nagar, New Delhi - 17

This Memorandum of Understanding (hereinafter referred to as the "MoU") intends to set out the general modalities for initiating an academic collaboration which is intended to benefit the students and faculty members of both Institutions in their pursuit for achieving academic excellence.

And whereas the parties have agreed as follows:

- This arrangement will commence from 18th December 2021 for a period of 4 years and will expire on 17th December 2026.
- O2. The College will provide adequate convenient space to conduct the Certificate Course. The college shall provide physical infrastructure like theory class room, sitting arrangement and technical infrastructure OHP, computers etc including maintenance and internet facility.
- 03. Teaching will be imparted to the existing students in accordance with a routine to be framed by the College in consultation with the ISS, India.
- Teaching will be imparted during the College/beyond college hours which is to be determined in consultation with principal.
- 05. The course (as agreed by both the parties) will be offered to the enrolled students of the College. The ISS, India will impart only the prescribed courses in the College.
- On successful completion of the course mentioned above each student will be issued a ioint Certificate.
- The College authority will inform the name of the Coordinator for each course to be imparted in this College.
- 08. A review committee will be formed by the Principal of the College as a chairman of the committee for the purpose of overseeing of the conduct of this said Computer Course and will sit two times in each academic year.
- Ouring the period of MOU if any condition mentioned on the MOU is violated then the MOU will be treated as cancelled only after decision by the review committee. In the event of the review committee decides to withdraw/alter any of the courses suitable arrangement for completion of the ongoing course made be taken for those students who are already enrolled.
 - 10, The College shall, all the time, during the official working hour provide access to the officials of the ISS, India its authorized representative/s that may be required for supervising the conduct of the Certificate Course(s). The institute will also provide the reputed faculties who will be involved for taking classes.
- 11. The College will pay the course fee inclusive of GST (as decided by both the parties) for each enrolled faculty to the institute against the invoice submitted by the institute.
- 12. After the expiry of the noted period as stipulated in Para (1) above, the period of Memorandum of Understanding may be extended and on such terms and conditions as may be agreed by the parties or revoked at the option of either of the parties.

#179-D, 2nd Floor, Khirki Extn..

Opp. Select Citywalk Mall, Maluiya Nagar, New Delhi - 17

This MOU has been signed with concurrence of the Governing Body of Maulana Azad College, Kolkata and the Authority of Institute of Spanish Studies, India

Signed by and On Behalf of

Signed and delivered by the INSTITUTE OF SPANISH STUDIES, INDIA Signed and delivered by the College

111 00

# 179-D, 2nd Floor, Khirki Extn., Opp. Select Citywalk Mall. Mennya Nagar, New Delb - 17		Maulana Azad Gillinge Azad College No. of West Bengal No. of West Bengal Road, Kol13 Maulana Azad College
In presence of (Witnessed by)		Principal Maulana Azad College Kolkata Govt. of West Bengal
Signature:	Signature:	A June
Name: Parkonavalhi Murliger Address: 43. D. H. Row, Kol-34	Name: _ Address:_	Dr. Difak Kumar Som Manlana Azad College Kof Kufa-1



GOVERNMENT OF WEST BENGAL

OFFICE OF THE PRINCIPAL Maulana Azad College 8, RAFI AHMED KIDWAI ROAD, TALTALA, KOLKATA 700013





Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com

Website: https://maulanaazadcollegekolkata.ac.in

Activities under MoU between Maulana Azad College, Kolkata 700013 and Institute of Spanish Studies, Bangalore/New Delhi

Start date of MoU: 18.12.2021 End date of MoU: Continuing

Duration: 4 years

Sl. No.	Name of activity	Starting date	Completion date	Hosted by	No. of participants
1.	Joint organization of certificate	18.01.2024	27.07.2024	Maulana Azad	19
	course			College	
	Certificate course in Spanish				
	language Learning (Batch 4) was				
	conducted by Maulana Azad College				
	Institute of Spanish Studies. Dr.				
	Dipak Kumar Som, Associate				
	Professor, Dept. of Zoology,				
	Maulana Azad College, was the				
	Course Co-ordinator. Resource				
	persons were Dr. Subir				
	Bandyopadhyay, Faculty-IGNOU,				
	Guest Faculty-Jadavpur University				
	and Kalyani University and Mr.				
	Partha Mukherjee, Expert in Spanish				
	Language (B2 level), Founder				
	Member - Friends of Latin America -				
	India				

INSTITUTE OF SPANISH STUDIES, INDIA **INSTITUTE OF SPANISH STUDIES** # 179-D, 2nd Floor, Khirki Extn., Opp. Select Citywalk Mall. Marriya Nagar, New Delt - 17

Institute of Spanish Studies

Principal Maulana Azad College Principal Maulana Azad College Kolkata Govt. of West Bengal

Principal Maulana Azad College



OFFICE OF THE PRINCIPAL Maulana Azad College



8, RAFI AHMED KIDWAI ROAD, KOLKATA 700013, INDIA

Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata.ac.in

Report on the activities under MOU for Academic Co-operation between

Maulana Azad College, Kolkata and Institute of Spanish Studies, New Delhi

> DATE of SIGNING THE MOU: 18.12.2021

> OBJECTIVE/PURPOSE:

Initiate a certificate course in Spanish Language Education which will empower the students to seek for newer and alternative avenues in the job market especially in the sectors of foreign language trainers, translators, Spanish travel consultants etc. considering the high demand of Spanish language experts. Additionally, faculty members of different departments, especially those from languages, humanities and social sciences group can also benefit from this course professionally as it will enable them to expand their research horizons simultaneously enhancing their academic credentials.

- > TARGET AUDIENCE/ PARTICIPANTS: Students and faculty members of both Institutions
- > VENUE: Maulana Azad College
- > EXPECTED OUTCOME: Creation of new employment opportunities for students in the job market and empowering faculty members to add further dimensions to their academic and research credentials.

Course Co-Ordinator: Dr. Dipak Kumar Som, Associate Professor, Dept. of Zoology, Maulana Azad college

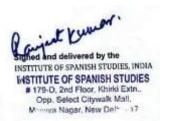
> Resource Persons:

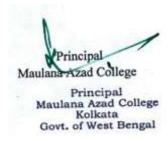
1) Dr. Subir Bandyopadhyay

Faculty-IGNOU, Guest Faculty-Jadavpur University and Kalyani University

2) Mr. Partha Mukherjee

Expert in Spanish Language (B2 level) Founder Member - Friends of Latin America - India







Maulana Azad College



Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata.ac.in

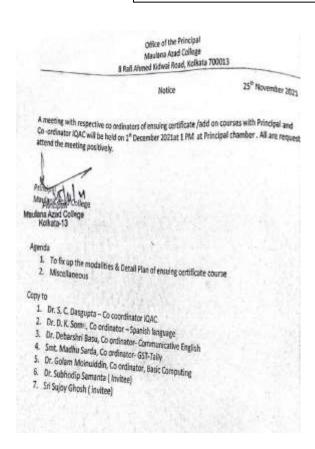


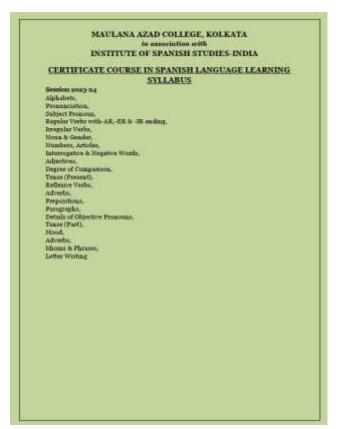
Yearwise report of activities carried out under MoU

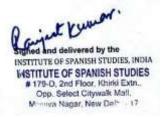
2023-24: Batch 4 Number of provisionally selected students: -19

Date of commencement of classes: 18.01.2024, Duration 36 hours,

Notice regarding modalities of initiation of the certificate course and syllabus of certificate course











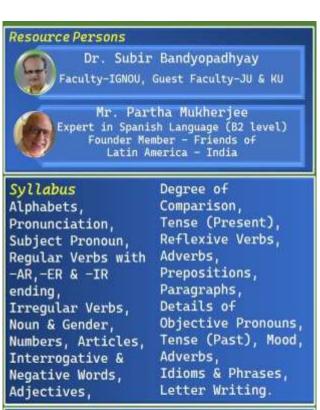
GOVERNMENT OF WEST BENGAL OFFICE OF THE PRINCIPAL **Maulana Azad College**



8, RAFI AHMED KIDWAI ROAD, KOLKATA 700013, INDIA

Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata.ac.in





Course Co-Ordinator Dr. Debasis Mallik Associate Professor of Bengali WhatsApp:94337 59299

Principal, Maulana Azad College, Kolkata







OFFICE OF THE PRINCIPAL Maulana Azad College

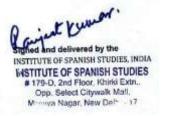


8, RAFI AHMED KIDWAI ROAD, KOLKATA 700013, INDIA

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Photograph of Batch 4 exam going on









GOVERNMENT OF WEST BENGAL OFFICE OF THE PRINCIPAL Maulana Azad College



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Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata.ac.in

Attendance of Batch 4

	CLAS	s_	Students' Atten
Roll No.	NAME OF STUDENTS	Admission No.	19 19 19 19 19 19 19 19 19 19 19 19 19 1
1	Ankana Sarkar (2)		12
2.	Chandrina Kar (2)	-	12.34.
3.	Debasnita Ghosh (2)		123456
4.	Nandini Bose (M)		123456
5.	Ritika Sarkar (2)		123656
6.	Rohan Mondal (M)		
7.	Romit Basse (2)		12.3.
8.	Rudra Roy (Z)		12.3.
9.	Shriparno Pal (2)	-	12.
10.	Shristi Sarkar (Z)	-	12
11.	Stromon Dutta (2)	-	12.34.
12.	Sweekha Maity (Z)	-	12 34
13.	Swarmati Ghosh (M)	-	1
14.	Aishwarya Mishra (2)		123456
15.	Puja Roy (2)	-	12.3.
16.	Falguri Dey (Chem)		1 1 1
17	Somedeep Bandhan (Hist).	-	
18.	Svijan Karmakar (Htot)		1-1-11-1
19	Annesha Mukhanjee (socio)	-	
20.	Dr. Mahna Patra		
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পশ্চিমর্জা पश्चिम बंगाल WEST BENGAL

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Memorandum of Understanding for Academic Co-operation Between Maulana Azad College, Kolkata And West Bengal Electronics Industry Development Corporation Limited (WIL Division)

This *Memorandum of Understanding* made on the 19th Jan. 2022, between West Bengal Electronics Industry Development Corporation Limited (A Govt. of West Bengal Undertaking) Regd. Office at Webel Bhavan, Block EP & GP, Sector-V, Bidhannagar, Salt lake, Kolkata-700091 its WIL Division having office at 225F, AJC Bose Road, (4th. Floor), Kolkata-700020 (herein after referred to as 'the Company') of the one part and Maulana Azad College, 8, Rafi Ahmed Kidwai Road, Kolkata-700013 (hereinafter referred to as the College) of the other part.

Whereas the *Company* is engaged in imparting Computer Training Courses consisting of system development, data processing through Computer, high level computer programming language etc. (hereinafter referred to as the 'Computer Training Course') to the students of colleges and issuing certificate recognized by West Bengal Electronics Industry Development Corporation Limited (A Govt. of West Bengal Undertaking).

And whereas the *College* approached the *Company* for imparting Computer Training tailor made Course to the students of the *College* from the academic session 2021-2022 and the detailed discussion with the company on 03.11.21 and 16.11.21 for imparting the computer courses at the college premises.

S.E. No. Sold To. Addrs.

Rs. Addrs.

G.C. SAHA

(Gowt.) LICENSED STAMP VENDOR

11A, Mirza Galib Street, Kol - 87

Issue Date. Sign.

Sign.



And whereas the *Company* (vide Letter No.LT-KWC-2022-2023-001) and *College* agreed to impart the *Optional Computer Training Course as per the need* to the students of the *College* within the *College* premises.

This Memorandum of Understanding (hereinafter referred to as the "MoU") intends to set out the general modalities for initiating an academic collaboration which is intended to benefit the students and faculty members of both Institutions in their pursuit for achieving academic excellence.

And whereas the parties have agreed as follows:

- 101. This arrangement will commence from 10th Feb. 2022 for a period of 4 years and will expire on 31th Jan. 2026.
- 02. The **College** will provide adequate convenient space to conduct the **Computer Training Course**. The college shall provide physical infrastructure like theory class room, sitting arrangement and **technical infrastructure like computers**, **accessories** including maintenance and internet facility.
- 03. Training will be imparted to the existing students in accordance with a routine to be framed by the *College* in consultation with the *Company*.
- 04. Training will be imparted during the *College/beyond college* hours which is to be determined in consultation with principal.
- 05. The course (as agreed by both the parties) will be offered to the enrolled students of the *College*. The *Company* will impart only the prescribed course in the *College*.
- On successful completion of the course mentioned above each student will be issued a joint Certificate.
- 07. The **College** authority will inform the name of the **Coordinator** for each course to be imparted in this **College**.
- 08. A review committee will be formed by the Principal of the College as a chairman of the committee for the purpose of overseeing of the conduct of this said Computer Course and will sit two times in each academics year.
- 09. During the period of MOU if any condition mentioned on the MOU is violated then the MOU will be treated as cancelled only after decision by the review committee. In the event of the review committee decides to withdraw/alter any of the courses suitable arrangement for completion of the ongoing course made be taken for those students who are already enrolled.
 - 10, The College shall, all the time, during the official working hour provide access to the officials of the Company/ its authorized representative/s that may be required for supervising the conduct of the Computer Training Course. The company will also provide the industry standard faculties who will be involved for taking classes.





- The College will pay the course fee (as decided by both the parties) for each 11. enrolled candidate to the Company against the invoice.
- After the expiry of the noted period as stipulated in para (1) above, the period of 12. Memorandum of Understanding may be extended and on such terms and conditions as may be agreed by the parties or revoked at the option of either of the parties.

This MOU has been signed with concurrence of the Governing Body of Maulana Azad College and Higher Authority of West Bengal Electronics Industry Development Corporation Limited (WIL Division)

Signed by and On Behalf of

Signed and delivered by the Company

Signed and delivered by the 19.01-20N College.

Co-Ordinator, IQACA C

Maulana Azial College Govt. of West Bengal t, R.A. Kidwai Road, Kol.

In presence of (Witnessed by)

Maulana Azad Gol Maulana Azad College Kolkata

Govt. of West Bengal

Signature: 1

Signature:

19.01.22

BASAB BIJAY BANDYOPADHYAY

Name:

Name:

Course Co-ordinator Maulana Azad College Govt, of West Bengal





GOVERNMENT OF WEST BENGAL OFFICE OF THE PRINCIPAL

Maulana Azad College

8, RAFI AHMED KIDWAI ROAD, KOLKATA 700013, INDIA

Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata.ac.in



Report on Certificate Course in Financial Accounting with GST Batch IV: From 19th December, 2023 to 16th March, 2024

Introduction: Maulana Azad College introduced Certificate Course in Financial Accounting with GST in collaboration with West Bengal Electronics Industry Development Corporation Limited (WBEIDC) - WIL Division with an objective to enhance skills related to Tally and GST, of the students. The College started Batch IV of the above-mentioned certificate course from 19th of December, 2023. Mrs. Madhu Sarda, Assistant Professor, Department of Commerce is appointed as the Course Co-ordinator and Camellia C. Burman, Assistant Professor, Department of Commerce, is appointed as the Assistant Course Co-ordinator.

Course Features: This course is mainly designed for Under Graduate Commerce students. Course duration is 36 hours (9 weeks) and in-take capacity is maximum thirty students. At the end of the course, certificates are to be issued to the eligible students on the basis of their performance in class and evaluation test.

Resource Person: Mr. Arindam Ghosh

Faculty at West Bengal Electronics Industry Development Corporation

Limited (WBEIDC)

Number of Applicant: Batch IV - 25 Students

Course Outcome:

- ➤ Increased Employability / Better Job Prospects
- ➤ Improved Accounting
- Salary Hike
- ➤ Updated Taxation Skills



Maulana Azad College

8, Rafi Ahmed Kidwai Road, Kolkata-13
in collaboration with WBEIDC
introduces



CERTIFICATE COURSE IN FINANCIAL ACCOUNTING WITH GST

Batch 4 (Session 2023-24)



COURSE FEATURES

- Eligibility: Current and Former Commerce Students of Maulana Azad College
- Course Duration: 9 Weeks / 36 Hours
- Two offline classes per Week spanning 2 Hours per class including Evaluation
- Students in-take: 30 students (maximum)
- Admission: First-come-first-served basis.
- Teaching, Learning and Evaluation included.
- Certificate is based on performance in Class and Evaluation Test.
- Course Fee for Students: Rs. 1250/- (Online Payment)

Register Now!

https://forms.gle/nJ CtS8q1QVXMnyy3A

TRAINING CONDUCTED BY

West Bengal Electronics Industry Development Corporation Limited (WIL Division)



SYLLABUS

- Accounting in TALLY PRIME: Gateway of Tally ERP 9.0, Company creation and configurations, Day to Day Transaction recording, Bills & Outstanding Management
- Inventory Management: Inventory Creation/ Alteration, Inventory Features, Invoicing of daily Trades, Inventory Reporting
- Tax Deducted at Source (TDS): Understanding TDS, Ledger Creation and Calculation, TDS Payment, Tax Reports
- Goods & Services Tax (GST) Management: GST Introduction, GST Features, GST Configuration, GST Invoicing
- Data Management: Data Control, Data Export and Import, Data Alteration
- Reporting: Books of Accounts, Party Outstanding, Trial Balance, Final Accounts
- Goods & Services Tax (GST) & E-Filing: Basic Concept of GST, Calculation & Rate of GST, Introduction of GST E-Filling, GST Rules, New GST Registration, GST Return: GSTR-1, GSTR-2, GSTR-3B., GSTR-4, Last Updated rates in GST Form, GST Tax Form Download, Fill up & Upload.

Course Coordinator: Dr. Madhu Sarda

Department of Commerce, Maulana Azad College Email: madhu.sarda@maulanaazadcollegekolkata.ac.in

Principal

Maulana Azad College, Kolkata

Office of the Principal Maulana Azad College, Kolkata-700013

Notice No.: 91

Date: 29'11 23

This is to notify that the Provisional List of Selected Candidates for the Certificate Course in Financial Accounting with GSTfor December 2023 Batch-IV is attached herewith.

Provisionally selected candidates are directed to confirm their admission to the abovementioned course by following the Enrolment Process given below:

Enrolment Process:

Step 1: The provisionally selected candidates must make the prescribed course fee payment of Rs. 1250/- (for the Certificate Course in Financial Accounting with GST) through NEFT/IMPS/UPI to the following account:

Bank & Branch	HDFC BANK 45 Lenin Sarani, Kolkata-700013
Account Number	50100486275160
IFSC Code	HDFC0002788
Name of Account Holder	Mac Certificate Course Fund

Step 2: The selected candidates must properly fill up the following Google form and upload the documents (in pdf or image format) of:

- 1. Receipt of the Course Fee Payment
- 2. CU Registration/ CU Admit Card / College Admission Receipt

Google Form Link: https://forms.gle/LvshUCdhGRUraWnz8

Last Date for Payment of Course Fee & filling up the Google Form: 08/12/2023

Failing the aforementioned criteria will automatically cancel their candidature from the list. Classes will start before Christmas Vacation.

Dr. Madhu Sarda

Course Coordinator Assistant Professor Maulana Azad College Kolkata Dr. Shampa Dattta Gupta

IQAC Coordinater
IQAC
Maulana Azad College
Govt. of West Bengal
8, R.A. Kidwai Road, Kol.-13

Dr. Jubhasis Dutta

Principal

Maulana Azad College

Kolkata

Provisional List of Selected Candidates for the Certificate Course in Financial Accounting with GST (Batch IV, December, 2023)

Sl. No.	Name of the Student	Semester
1	RANAJIT SAMADDAR	B.Com Semester-5
2	ALAFIA ZAINAB	B.Com Semester-1
3	ERAM SULTANA	B.Com Semester-1
4	SAYYEDA FALAK NAAZ	B.Com Semester-1
5	ABIK DUTTA	B.Com Semester-1
6	ZOYA FAROGH	B.Com Semester-1
7	SATTEERTHA SARDAR	B.Com Semester-3
8	AVISHAK DAS	B.Com Semester-3
9	PRITHIBRAJ MURMU	B.Com Semester-3
10	MD TABREZ ALAM	B.Com Semester-3
11	MD ABDUL SAHID MONDAL	B.Com Semester-1
12	SAYAN KUMAR SAMANTA	B.Com Semester-1
13	SOUJATYA MUKHERJEE	B.Com Semester-1
14	RUPANJAN DAS	B.Com Semester-1
15	HENA PARVEEN	B.Com Semester-1
16	SUVRONIL DEY	B.Com Semester-5
17	DAIPAYAN BHATTACHARYYA	B.Com Semester-5
18	NAMIRA FATIMA	B.Com Semester-5
19	TANMOY GHOSH	B.Com Semester-5
20	ABU MOHD SAJIDUL HAQUE LASKAR	B.Com Semester-5
21	SWAGATA BISWAS	B.Com Semester-5
22	RIYAZ MULLA	B.Com Semester-1
23	MD ERFAN GAZI	B.Com Semester-1
24	MUSARRAT ARA	B.Com Semester-1
25	KAMRUTTAMAN	Sanakitt (Horn.) Sam - 3

Special Control

Dr. Madhu Sarda

Course Coordinator Assistant Professor Maulana Azad College Kolkata Dr. Shampa Dattta Gupta

IQAC Coordinator

Maulana Azad College Covt. of West Bengal ... K.c. Kidwai Road, Kol.-13 Dr. Jubhasis Dutta

Principal

Maulana Azad College Kolkata **Proposal Letter to West Bengal Electronics Industry Development Corporation Limited** (WBEIDC) - WIL Division to Begin Batch IV:



Maulana Azad College

8, Rafi Ahmed Kldwai Road, Kolkata-700013, West Bengal, India Phone: +91 33 2249-3737 / 2226-7814 Fax: +91 33 2249-3737 / 2226-4306 Web : www.maulanaazadcollege.in e-mail : maulanaazadcollegekolkata@gmail.com



Date 18/12/2023

468/Webel

To The General Manager (Education) West Bengal Electronic Industry Development Corporation Limited WIL Division 225 FAJC Bose Road 4th Floor Kokata - 700020

Subject: Proposal to begin Batch IV of the Certificate Course in Financial Accounting with GST - Tally ERP 9

Sir.

With reference to the conversation between Dr. Madhu Sarda, Course Co-ordinator and Mr. Basab Bandopadhyay, I am pleased to propose the beginning of Batch IV of the Certificate Course in Financial Accounting with GST - Tally ERP 9 (36 hours) on and from 21st December, 2023. Till date twenty-five students have registered. Remuneration will be offered as per the previous arrangement.

We look forward to hearing from you.

Maulana Azad College Principal Maulana Azad College Kolkata

Page: 2 of 2

Final List of Candidates for the Certificate Course in Financial Accounting with GST

Batch IV, December, 2023

ROLL NO.	NAME OF THE CANDIDATE	DEPARTMENT	SEMESTER
1	SUVRONIL DEY	B.Com (Hons.)	Semester-5
2	PRITHIBRAJ MURMU	B.Com (Hons.)	Semester-3
3	SAYAN KUMAR SAMANTA	B.Com (Hons.)	Semester-1
4	ABIK DUTTA	B.Com (Hons.)	Semester-1
5	SWAGATA BISWAS	B.Com (Hons.)	Semester-5
6	ABU MOHD SAJIDUL HAQUE LASKAR	B.Com (Hons.)	Semester-5
7	DAIPAYAN BHATTACHARYYA	B.Com (Hons.)	Semester-5
8	RUPANJAN DAS	B.Com (Hons.)	Semester-1
9	ALAFIA ZAINAB	B.Com (Hons.)	Semester-1
10	SAYYEDA FALAK NAAZ	B.Com (Hons.)	Semester-1
11	ZOYA FAROGH	B.Com (Hons.)	Semester-1
12	NAMIRA FATIMA	B.Com (Hons.)	Semester-5
13	MUSARRAT ARA	B.Com (Hons.)	Semester-1
14	TANMOY GHOSH	B.Com (Hons.)	Semester-5
15	HENA PARVEEN	B.Com (Hons.)	Semester-1
16	RIYAZ MULLA	B.Com (Hons.)	Semester-1
17	MAYUKH DUTTA	B.Com (Hons.)	Semester-1
18	MD ZUNAID RASHID	B.Com (Hons.)	Semester-5
19	KAMRUJJAMAN	Sanskrit (Hons.)	Semester-3
20	ERAM SULTANA	B.Com (Hons.)	Semester-1
21	SOUJATYA MUKHERJEE	B.Com (Hons.)	Semester-1
22	ABUL KYAR BARBHUIYA	B.Com (Hons.)	Semester-1
23	RANAJIT SAMADDAR	B.Com (Hons.)	Semester-5
24	ADNAN AKHTAR	B.Com (Hons.)	Semester-1
25	TOUKIR RAZA	B.Com (Hons.)	Semester-1

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Dr. Madhu Sarda Course Co-Ordinator Assistant Azad College Maulana Azad College Kolkata Dr. Shampa Datta Gupta Co-Ordinator (IOAC)

Maulana Azad College ovt. of West Bengal c, K.A. Kidwai Road, Kol.-13 Dr. Subhasish Dutta

Principal

Principal Maulana Azad College Kolkata

Government of West Bengal Office of the Principal Maulana Azad College, Kolkata -13

Notice No: 106

Date: 19.12.2023

Notice

Students enrolled for the Batch IV of the Certificate Course in Financial Accounting with GST – Tally ERP 9 (December 2023) are notified that their weekly offline classes will be held as per following schedule with effect from 21st December, 2023. No class will be held on registered national holiday. Students are also advised to be regular in their classes to fulfil minimum contact hours to be eligible for evaluation. Final list of selected candidates is attached herewith.

WEEKLY CLASS SCHEDULE

BATCH	DAY	TIME
	THURSDAY	4:00PM - 6:00 PM
	SATURDAY	2:30 PM - 4:30 PM

Dr. Madhu Sarda Course Co-Ordinator Assistant Professor Maulana Azad College

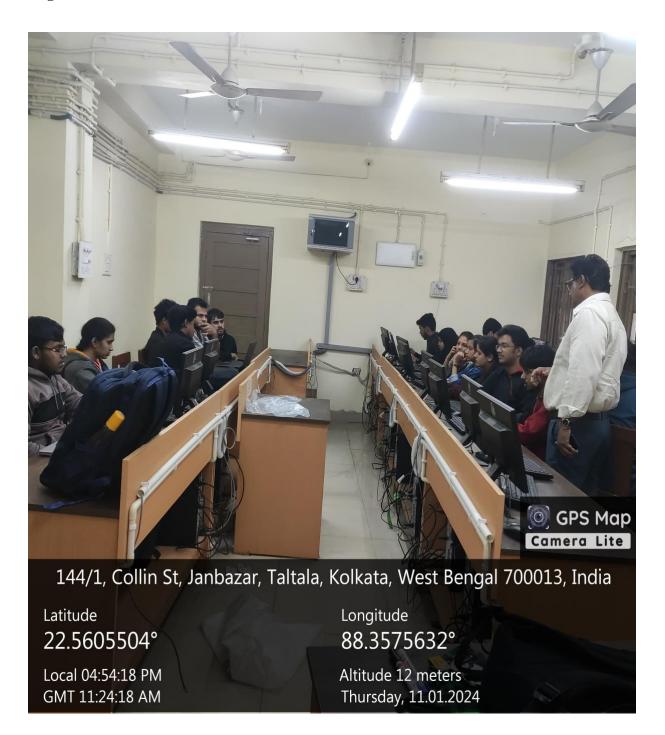
Kolkata

Dr. Shampa Datta Gupta
Co-Ordinator (IQAC)

'Aaulana Azad College Govt. of West Bengal 6, R.A. Kidwai Road, Kol.-13 Di Subhasish Dutta

Principal
Principal
Maulana Azad Colleg
Kolkata

Image:



Attendance:

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Adm. No.	Serial No.	Roll No.	NAME OF STUDENTS	1 1			5	6	7.	N@	F	OR	T	HE	M	ON	TH	01			7				24	23	26	27	28	29	30	31
	2 3	1-4-23	Enthibraj Musmu	2	5	000	16,0	A	A	1/2	3/	12	21	2 4 2	1			17				21	22	_				_	_			
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	6 7 8	7-1-23	Abu Mold Cajidal Haque Caskon	PF		000	800	P	100	AP	P	PI	4	A	A	A	AAA	0720	PPA	200										_		
	9	9-4-23	Alaga Zainab	PF	1	PPP	P	P	PP	9	P	000		-	PI	1			PA	PPO		_		_								
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	14	14-4-23	Janmay Ghesh Hena Parmen	PF	F	P	+-	P	PPP	PAP	P	PI		P	P	P	2		PA	P												
	16 17 18	17-4-23	Riyaz Mulla	PF	, 5	60	P	P	P	PP	PA	PR	A	2	P	AI	3	P	3	PPP												
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	22	23-4-23	Saijatya Mukherjee	PF	1		P	P	PPO	P	7	6 2	2	İ	g f	P	2	PF	1	P											•	
	24 25	29-4-23	Adnan Akhtan	PF	2 6	P	P		8	APK	5	9	. 1	9 9 9		0	A .	F 1		P						-						

Completion Certificate:

To The Manager West Bengal Electronic Industry Development Corporation Limited Webel Education & Training DN - 53, Sector - V, Salt Lake, Kolkata - 700091.

Date: 1/7/2024

This is to inform you that the Certificate Course in Financial Accounting with GST -Tally ERP 9 has been successfully completed as per the schedule (36 hours) on 16th March, 2024 by Mr. Arindam Ghosh. Total twenty four (24) students have completed the course and one (1) student was unable to complete the course.

We take this opportunity to thank you and hope to work with you in the near future.

Dr. Subhasis Dutta Principal Maulana Azad College Principal

Maulana Azad College Kolkata

Govt. of West Bengal

Dr. Shampa Datta Gupta Co-Ordinator (IQAC) Maulana Azad College

IQAC

Maulana Azad College Govt. of West Bengal s, R.A. Kidwai Road, Kol.-13 Camellia C. Burman

Camellia C. Burman

Assistant Course Co-Ordinator

Maulana Azad College

Maulana Azad College Kolkata



/					vith GST - Tall			
			BATCH -IV					
	Starting Date	:21.12.2023		End Da	te:16.03.20	24		_
ROLL NO.	NAME OF STUDENTS	ATTENDANCE	ASSIGNMENT	ATTENDANCE	ASSIGNMENT	EXAM	TOTAL MARKS	GRADE
_ 1	Suvronii Dey	72%	16	7.2	16	68	91.2	AH
2	Prithibraj Murmu	17%	1	9.4	7	0	16.4	
3	Sayan Kumar Samanta	100%	17	10	17	71	98	AH
4	Abik Dutta	94%	18	9,4	18	68	95.4	AH
5	Swagata Biswas	72%	16	6.7	17	70	93.7	A++
6	Abu Mohd Sajidul Haque Laskar	61%	16	6.1	16	68	90.1	A++
,	Daipayan Bhattacharyya	83%	18	8.3	18	70	96.3	A++
	Rupanjan Das	83%	17	7.2	17	66	90.2	A++
_	Alafia Zainab	83%	16	6.7	16	66	88.7	A+
_	Sayyeda Falak Naaz	78%	17	7.8	17	66	90.8	A++
	Zoya Farogh	72%	15	7.2	15	68	90.2	A++
	Namira Fatima	78%	16	7.8	16	63	86.8	A+
	Musarrat Ara	94%	18	9.4	18	68	95.4	AH
	Tanmoy Ghosh	89%	15	8.9	15	67	90.9	A++
_	Hena Parveen	83%	16	8.3	16	63	87.3	A+
	Riyaz Mulla	100%	. 18	10	18	63	91	A++
	Mayukh Dutta	83%	18	9,4	18	67	94.4	Att
	MD Zunald Rashid	61%			17	60.2	83.9	A+
-	Kamrujjaman	61%	15		15	61.6	83.3 90.3	A+ A++
20	Eram Sultana	83%			17 18	65 63	90.4	A++
21	Soujatya Mukherjee	94%		9.4	17	68	94.4	A++
22	Abul Kyar Barbhuiya	94%	17	9,4	17	66	92.4	A++
23	Ranajit Samaddar	72%	15	7.2	15	64	86.2	A+
24	Adnan Akhtar Toukir Raza	78%			17	64	88.8	A+

24 nos. Certificate handed over to the collage authority

Received 24 pieces. Col 22/7/24.

Notice for Certificate Distribution:

Office of the Principal Maulana Azad College, Kolkata-700013

Notice No. 203 Date: 02.08.2024

This is to notify that the Certificates of Certificate Course in Financial Accounting with GST will be distributed to Batch IV (19th December 2023 to 16th March 2024) from 2nd August 2024 to 10th August 2024 (excluding Thursday and Sunday). Students are requested to collect their certificates from the department from 1:30 pm to 2:30 pm.

Camellia C. Burman.

Camellia C. Burman

Assistant Course Coordinator

Maulana Azad College, Kolkata

rincipal

Certificate Distribution:

CertificateinFinancial Accounting withGST- TallyERP 9

٧.	NAMEOFSTUDENTS	GRADE	SIGNATURE
1	SuvronilDey		[10 [629 August 2]
2	PrithibrajMurmu	A++	Swyrouz (Dey (6290451313)
3	SayanKumarSamanta		Farran KV. Samarta (743905456
4	AbikDutta	A++	Jayon KV. Samanta (743905456
5	SwagataBiswas	A++	Abik Dutto 9002462059
6	Abultatiswas	A++	Swagala Bisasas 440+45409
	AbuMohdSajidulHaqueLaskar	A++	Mond Sajidw (69000 86(04)
	DaipayanBhattacharyya	A++	Paipayan Bhattachary (833589334
- 8	RupanjanDas	A++	Rupayian Dos (7980151881)
	AlafiaZainab	A+	Nalis Laine (8409175946)
10	SayyedaFalakNaaz	A++	Saryeda Talak Nanz (875238392
11	ZoyaFarogh	A++	Xeya Faraph (7654182355
12	NamiraFatima	A+	Namer Fating (62035 21800)
13	MusarratAra	A++	Mulanoral Asia (6291758382)
1	TanmoyGhosh	A++	Tarmet 6 chosh (9330315059)
	Hena Parveen	A+	Hena Parveen (8584903 903)
10	RiyazMulla	A++	Ryan hulla (8800918223)
1	MayukhDutta	A++	Maruel Dutta (9875644855)
18	MDZunaidRashid	A+	MD Zwowid 7549198119
	Kamrujjaman	A+	Kampunjamas 6001498006
	EramSultana	A++	Eyam Sultana
	SoujatyaMukherjee	A++	Societya mukherica (7003808224)
	AbulKyarBarbhuiya	A++	Asulityan 6001527129
	RanajitSamaddar	A++	Ranoth Lamad 1898 177904
	AdnanAkhtar	A+	Adnon Akhter 9852137905
2	ToukirRaza	A+	LEANNE GOSO STABLESON



MAULANA AZAD COLLEGE



8, Rafi Ahmed Kidwai Road, Kolkata - 700 013

in association with

West Bengal Electronics Industry Development Corporation Limited

(A Government of West Bengal Undertaking)
Webel Education & Training
DN - 53, Sector -V, Saltlake, Kolkata - 700091

CERTIFICATE

Certified that **Suvronil Dey** has successfully completed 36 hours training on 'Certificate Course in Financial Accounting with GST-Tally ERP 9' conducted by Maulana Azad College from 19th December, 2023 to 16th March, 2024 and secured Grade A++.

	GRADE SCHEME
A++	Outstanding (90-100)
A+	Excellent (80-89)
A	Very Good (70-79)
B+	Good (60-69)
В	Fair (50-59)

Burmair.

Camellia C. Burman Assistant Course Co-ordinator Maulana Azad College Dr. Shampa Datta Gupta Co-ordinator (IQAC) Maulana Azad College

Mr. Puspal Ghosh GM (Education) WBEIDCL Maulana Azad College



পশ্চিমবংগ पश्चिम बंगाल WEST BENGAL

63AB 199805

Memorandum of Understanding for Academic Co-operation
Between
Maulana Azad College, Kolkata
And
Adamas University, Kolkata

Principal, Maulana Azad College, Kolkata and Registrar, Adamas University, Kolkata (hereinafter referred to as "Sides") noting the importance of mutual collaborative endeavors to foster student and faculty research, student exchange programmes as well as to practice and promote social outreach initiatives agree for Academic co-operation in relevant and interdisciplinary subjects of both Institutes in accordance with terms and conditions set forth in the following paragraphs.

Paragraph 1

Objectives

- 1. This Memorandum of Understanding (hereinafter referred to as the "MoU") intends to set out the general modalities for initiating an Academic Collaboration which is intended to benefit the students and faculty members of both Institutions in their pursuit for achieving academic excellence. Mutual collaboration will be implemented in the following academic activities
- A) Student Exchange programme
- B) Joint organization of Seminars and conferences
- C) Joint Initiation of Social Outreach programmes.
- 2. This MoU will be carried out within the framework of the respective regulations and guidelines set forth by the two Institutions/the affiliating body of the Institutions.

Principal
Maulana Azad College
Principal
Maulana Azad College
Kolkata
Govt. of West Bengal



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Issue DateSignSign		10/1/3

Paragraph 2

Objective and scope of co-operation

A1. The aim of the Student Exchange Programme is to foster i) research culture, ii) ability to think independently and iii) teamwork in order to groom them for their future doctoral

A2. Under student exchange programme, selected students will engage in execution of short term research projects under the guidance of faculty members of the host Institution and these will preferably be carried out during the summer and winter vacations during semester breaks. However, the mentors of the two Sides will jointly decide the actual duration of the project from case-to-case basis.

A3. The number of students under this programme shall not exceed three per host Institute per academic year.

A4. The host Institute will reserve the right to decide acceptance of students under this programme depending on the recommendation issued from their parent Institute/University as well as their academic performance.

A5. The host Institute will waive fees pertaining to application and entrance into these programmes. However, the students have to arrange their own transportation and accommodation including the cost involved therein as well as bear any incidental charges including food, clothing and medical care. The host Institute may charge an amount pertaining to use of lab facilities including consumables which will be intimated at the time of offering and has to be bore by the student.

A6. The host Institute will award certificates to the students upon successful completion of the programme.

A7. Any intellectual property borne out of these projects will be jointly owned by the two parties and the credit for any publication will also be jointly shared by the two Sides.

B1. The two Institutes will organize from time-to-time seminars/webinars/conferences/econferences/workshops/e-workshops to disseminate knowledge as well as to promote and foster academic and scientific ambience.

B2. The two Institutes will mutually apply for funding to organize these events and the programmes will be held only after consent from both institutions regarding finalization of funding, duration and schedule of such events.

C1.Both Institutes will also make endeavors time to time to organize Social Outreach Programmes which will involve arrangement of lab visits by school students, dissemination of scientific knowledge to the society through models and scientific lectures as well as other activities as will be deemed to be fit by both Institutions. Selected students will be groomed by the faculty members for conduction of these activities.

C2. The cost for organization of these events will be decided jointly by the two Sides and accordingly either the funding bodies will be approached or both Institutions will bear the cost equally from their internal resources as will be decided by the concerned competent authorities.



Paragraph 3

Arrangement of Funding and Implementation

1. Sides may jointly decide upon the cost of running the programme under the budget heads

a) T.A./D.A. to the participating faculties

b) Transportation and tiffin allowance to the participating students

c) Consumables for the Laboratory work

d) Contingency.

e) Other incidental charges including refreshments in case of seminars/social outreach initiatives.

Accordingly the expenses associated with the programme may be decided and application may be made to the competent funding agencies.

Auphi

- 2. Sides may place the modalities, duration and associated cost of the course to their respective competent authorities for approval. The programme may be implemented only after such sanction is
- 3. All cooperative activities under this MoU will be subject to the availability of funds to the Sides.

Paragraph 4

Dispute Settlement

The Sides will consult together upon request of either side regarding any emergent dispute or debate relating to the terms of this MoU and will endeavor jointly in a spirit of co-operation and mutual trust to resolve the difficulties or misunderstandings involved therein.

Paragraph 5

Amendment

This MoU may be amended by mutual written consent of both Institutes as and according to any emergent need.

Paragraph 6

Effect and Termination

This MoU will remain in effect from the date of signature of competent authorities from both Sides for an initial period of three (3) years and will be extended for successive periods of one (1) year, unless either side notifies the other side, in writing, of its intention to terminate this MoU at least three (3) months before the expiry date of the relevant period. In the event of prior termination of this MoU, all ongoing programmes and/or activities will be implemented as planned unless otherwise agreed between the Sides.

The MoU has been signed with concurrence of the Governing Body of Maulana Azad College and Adamas University, as per the provision of Adamas University Act, 2014.

Signed by and On Behalf of

Co-Ordinator, Maulana Azad Gollege

Maulana Azad College Govt. of West Bengal

3. R. A. Kidwai Road, Ka-13 Principal

Maulana Azad Colleg Govt. of WB, Kolkata

> **Principal** Maulana Azad College Kolkata Govt. of West Bengal

Witnessed by: 1

Dean, School of Life Science and Biotechnology Adamas University, Kolkata

Registrar

Adamas University

E-mail: registrar@adamasuniversity.ac.in Registrar Ph. No.: 9073364738 Registral Adamas University

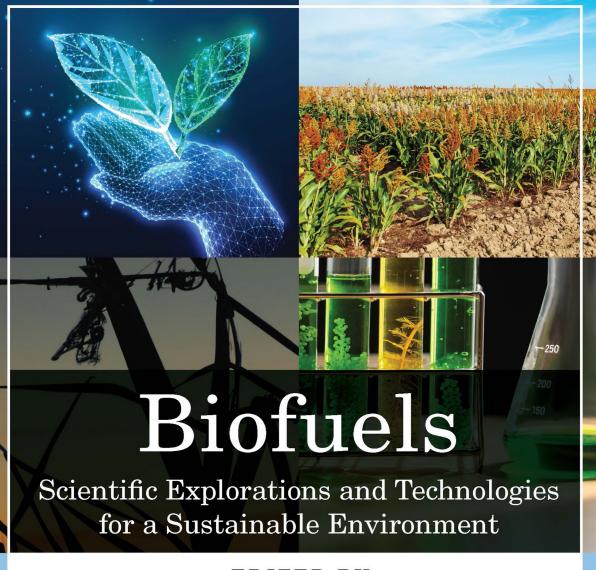
Kolkata

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2. Samble Procal for

Head

Department of Microbiology Maulana Azad College 8, Rafi Ahmed Kidwai Road Kolkata - 700013



Samudra Prosad Banik Debasis Bagchi



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19 Biofuel from Algae The Long Road to Commercial Viability

Biprojit Singha Roy, Priyanjana Nath, Sanmitra Ghosh, Arpita Das, and Rajib Majumder

19.1 INTRODUCTION

Biofuel is a cost-effective, environment-friendly, safe fuel that is produced from various renewable sources, like vegetable oil, woodchips, lignocellulosic crops, and also from various species of algae and cyanobacteria. The classification of biofuels and their production output from different lignocellulosic crops, microalgae, and macroalgae will all be covered in the current study. There is also proper discussion about the possible biofuel production pathway, algal biomass production, and harvesting methods. We will go over the procedure for extracting the oil and turning it into biofuel. In addition to vegetable oil, LCB, and algae, we have also explored cyanobacteria whose various species can be utilized for biofuel production. We have also covered the cutting-edge technology of CRISPR-based genetic editing in cyanobacteria for enhanced biofuel production. A technoeconomic study to determine the commercial viability of algal biodiesel production is presented at the end of this chapter, along with opportunities and challenges linked to biofuel production and the biofuel sector. This report goes into great detail on all the most recent research developments about the aforementioned subjects.

19.2 THE GLOBAL NEED FOR BIOFUELS IN THE TWENTY-FIRST CENTURY

"Biofuel" – the term refers to the liquid fuels and associated blending components that are produced from biomass material called feedstocks. On the other hand, fossil fuels are fuels that are produced from decomposed plants plankton and animals that decompose to form natural gas and coal after about 150 million years. Currently, our world runs in fossil fuel mostly, and burning fossil fuel emits about 33 billion tons of CO₂ per year worldwide (International Energy Agency, Data, and Statistics). The major threat of increasing CO₂ is the greenhouse effect, where excessive CO₂ creates a cover (CO₂ has molecular mass = 44.01 g/mol and of air has molecular mass = 28.96 amu) which traps the heat energy from the sun and increases the temperature on Earth; as a result, glaciers and icebergs have started melting, and water level on Earth is increasing. Biofuels can replace fossil fuels and can reduce the greenhouse effect by about 41% compared to fossil fuel burning utilizing biodiesel (Hill et al., 2006). It can also reduce the depletion of exhaustible resources and reliance on unsteady international traders. Need for biofuels could also elevate farm income, because firstgeneration biofuels are made from sugar crops like sugarcane and sugarbeet, starch crops like corn and sorghum, and oilseed crops like canola, soybean, and animal fats. Second-generation biofuels refer to cellulosic biofuels, which are produced from cellulose and are obtained from non-food crops and waste biomass, such as corncobs, corn stover, wood, straw, and wood by-products. Thirdgeneration biofuels employ algae as a raw material for biofuel (Fischer et al., 2009).

Amid late 1900s, due to the increase in crude oil (fossil fuel) prices and worries over security of the energy, the USA and numerous European nations created different policies which boosted the biofuel industries, plans for climate change alleviation, and diminish GHG emissions from the

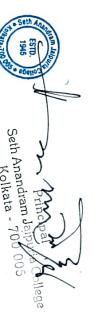
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পশ্চিমবংগ पश्चिम बंगाल WEST BENGAL

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Maulana Azad Kolkata

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Memorandum of Understanding for Academic Co-operation Between Seth Anandram Jaipuria College, Kolkata And Maulana Azad College, Kolkata

Principal, Seth Anandram Jaipuria College, Kolkata and Principal, Maulana Azad College, Kolkata (hereinafter referred to as "Sides") noting the importance of mutual collaborative endeavours to foster student and faculty research, student exchange programmes as well as to practice and promote social outreach initiatives agree for Academic co-operation in relevant and interdisciplinary subjects of both Institutes in accordance with terms and conditions set forth in the following paragraphs.

Paragraph 1

Objectives

- 1. This Memorandum of Understanding (hereinafter referred to as the "MoU") intends to set out the general modalities for initiating an Academic Collaboration which is intended to benefit the students and faculty members of both Institutions in their pursuit for achieving academic excellence. Mutual collaboration will be implemented in the following academic activities:
- A) Student and Faculty Exchange Programmes
- B) Joint Organization of Seminars and Conferences.
- C)Joint Initiation of Social Outreach Programmes.

मणा Seth Anandram Jaihuria college
नाः 10 Raja Nabakrishna Street . Kol-7000 5
रण्या कृतात हों बुती
कारणा अ, छि, अम, जाव, जिक्स

তেলা- দঃ ২৪ পরগণা

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2. This MoU will be carried out within the framework of the respective regulations and guidelines set forth by the two Institutions/the affiliating body of the Institutions.

Paragraph 2

Objective and scope of co-operation

- A1. The aim of the **Student Exchange Programme** is to foster i) research culture, ii) ability to think independently and iii) teamwork in order to groom students for their future doctoral studies.
- A2. Under student exchange programme, selected students will engage in execution of short term research projects under the guidance of faculty members of the host Institution and these will preferably be carried out during the summer and winter vacations during semester breaks.

However, the mentors of the two Sides will jointly decide the actual duration of the project on a case-by-case basis.

- A3. The number of students under this programme shall not exceed SIX per host Institute per academic year.
- A4. The host Institute will reserve the right to decide acceptance of students under this programme depending on the recommendation issued from their parent Institute/University as well as their academic performance.
- A5. The host Institute will waive fees pertaining to application and entrance into these programmes. However, the students have to arrange their own transportation and accommodation including the cost involved therein as well as bear any incidental charges including food, clothing and medical care. The host Institute may charge an amount pertaining to use of lab facilities including consumables which will be intimated at the time of offering and has to be bore by the student.
- A6. The host Institute will award certificates to the students upon successful completion of the programme.
- A7. Any intellectual property borne out of these projects will be jointly owned by the two parties and the credit for any publication will also be jointly shared by the two Sides.
- A8. The two institutions shall seek to promote **Faculty Exchanges**:
- (i) The exchange of faculty to the mutual benefit of both institutions,
- (ii) Collaboration in teaching as required and research in the field of mutual interest,
- (iii) The exchange of academic materials and publications,
- (iv) Conducting lectures,
- (v) Undertaking joint research,
- (vi) Training of staff for purposes of upgrading of teaching and research skills,
- (vii) Participating in seminars, symposiums, and other forms of academic discussions,
- (viii) Co-supervising student dissertations/Projects,
- (ix) Conducting study tours and joint workshops.

A suitable, mutually agreed upon plan will be worked out for each activity. Terms and conditions for each activity pertaining to such exchanges, including those concerning funding will be worked out between the institutes.

B1. The two Institutes will organize from time-to-time seminars/webinars/conferences/e-conferences/workshops/e-workshops to disseminate knowledge as well as to promote and foster academic and scientific ambience.

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Principal
Seth Anandram Jaipuria College
Kolkata - 700 005

B2. The two Institutes will mutually apply for funding to organize these events and the programmes will be held only after consent from both institutions regarding finalization of funding, duration and schedule of such events.

C1.Both Institutes will also make endeavours from time to time to organize Social Outreach Programmes which will involve arrangement of lab visits by school students, dissemination of scientific knowledge to the society through models and scientific lectures as well as other activities as will be deemed fit by both Institutions. Selected students will be groomed by the faculty members for the conduct of these activities.

C2. The cost for the organization of these events will be decided jointly by the two Sides and accordingly either the funding bodies will be approached or both Institutions will bear the cost equally from their internal resources as will be decided by the concerned competent authorities.

Paragraph 3

Arrangement of Funding and Implementation

- 1. Sides may jointly decide upon the cost of running the programme under the budget heads
- a) T.A./D.A. to the participating faculties
- b) Transportation and tiffin allowance to the participating students
- c) Consumables for the Laboratory work
- d) Contingency.
- e) Other incidental charges including refreshments in case of seminars/social outreach initiatives.

Accordingly the expenses associated with the programme may be decided and application may be made to the competent funding agencies.

- 2. Sides may place the modalities, duration and associated cost of the course to their respective competent authorities for approval. The programme may be implemented only after such sanction is obtained.
- 3. All cooperative activities under this MoU will be subject to the availability of funds to the Sides.

Paragraph 4

Dispute Settlement

The Sides will consult together upon request of either side regarding any emergent dispute or debate relating to the terms of this MoU and will endeavor jointly in a spirit of co-operation and mutual trust to resolve the difficulties or misunderstandings involved therein.

Paragraph 5

Amendment

This MoU may be amended by mutual written consent of both Institutes as and according to any emergent need.

Paragraph 6

Effect and Termination

This MoU will remain in effect from the date of signature of competent authorities from both Sides for an initial period of three (3) years and will be extended for successive periods of one

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(1) year, unless either side notifies the other side, in writing, of its intention to terminate this MoU at least three (3) months before the date of expiry of the relevant period. In the event of prior termination of this MoU, all ongoing programmes and/or activities will be implemented as planned unless otherwise agreed between the Sides.

This MOU has been signed with concurrence of the Governing Bodies of Seth Anandram Jaipuria College and Maulana Azad College.

Signed by and On Behalf of

Co-Ordinator, IQAC

Maulana Azad Gollege

IQAC Maulana Azad College Govt. of West Bengal E, R.A. Kidwai Road, Kol.-1?

Principal

Mailana Azad College

of WB, Kolkata

Maulana Azad College Kolkata

Govt. of West Bengal

Princip

2. Arijit Kundu 23.8.22.

Rajio Roy 23/08/2022

Co-Ordinator, IQAC Seth Anandrametaripuria College

IQAC Seth Anandram Jaipuria College

10 Raja Naba Krishna Street Kolkata-700 005

Principal

Seth Anandram Jaipuria College

Principal Kolkata

Seth Anandram Jaipuria College

Kolkata - 700 005

Palslut 23/03/2022



GOVERNMENT OF WEST BENGAL OFFICE OF THE PRINCIPAL

Maulana Azad College 8, RAFI AHMED KIDWAI ROAD, TALTALA, KOLKATA 700013





Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata.ac.in

Activities under MoU between Maulana Azad College, Kolkata 700013 and

Seth Anandaram Jaipuria College, Kolkata 700006

Start date of MoU: 23.08.2022 End date of MoU: Continuing

Duration: 3 years

Sl. No.	Name of activity	Starting date	Completion date	Hosted by	No. of participants
1.	Faculty Exchange and Student Exchange Programme Prof. Subir C. Dasgupta, Professor and Head, delivered an online lecture on Toxinology: an emerging area in biomedical science and its therapeutic application.	28.06.2023	28.06.2023	Seth Anandram Jaipuria College	51 from both colleges

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Principal Seth Anandram Jaipuria College

Principal Maulana Azad College



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Maulana Azad College



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Report on the activities under MOU for Academic Collaboration between

Maulana Azad College Kolkata and Jaipuria College, Kolkata

Date of Signing of MoU: 23.08.2022

- > TITLE OF THE EVENT: Toxinology: an emerging area in biomedical science and its therapeutic application
 - THEME OF THE EVENT/ PROGRAMME: WEBINAR organized as a MoU activity by the Department of Zoology, Maulana Azad College, Kolkata-700013 with Seth Anadaram Jaipuria College for the students and faculty members of both colleges.
- > ACADEMIC SESSION: 2022-2023
- **DATE:** 28.06.2023
- > Speaker: Prof. Subir Chandra Dasgupta
- ➤ **VENUE:** Online Google Meet platform
- ➤ **OBJECTIVE/ PURPOSE:** to aware the students regarding therapeutic applications of biomedical science.
- ➤ TARGET AUDIENCE/ PARTICIPANTS: Students and faculty members of Undergraduate and Postgraduate Departments from both Colleges

> BRIEF REPORT ABOUT THE EVENT/ PROGRAMME:

- Toxinology is the study of the toxins, poisons, and venoms from plants, animals, and microbes. The basic idea of Toxinology was discussed by the speaker. Toxinology and biomedical science is an emerging area of biological science. The therapeutic applications of biomedical science were described along with the process of the new therapies used in medical science.
- **EXPECTED OUTCOME:** Students have been enriched through this on line webinar so that they can perform these experiments themselves. The knowledge they have gathered in their theoretical classes were demonstrated in front of them for a better understanding.
- > Number of participants: 51



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Maulana Azad College
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Maulana Azad College
Kolkata
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Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata.ac.in



Notice of the Event

Notice

This is to notify that Zoology Department of Maulana Azad College and Jaipuria College are jointly organizing a seminar on "Toxinology: An Emerging Area in Biomedical Science and its Therapeutic Applications" on 28th June 2023 at 8 P.M. We are pleased to announce that the esteemed speaker for this event will be Prof..Subir Chandra Dasgupta (HOD of Zoology Department, Maulana Azad College).

We invite all students, faculty members, and researchers interested in biomedical science to attend this enlightening seminar. Prof.Subir Chandra Dasgupta's expertise and insights promise to make this event both informative and engaging.

For further details and registration, please contact the Zoology Department of Maulana Azad Collegeor Jaipuria College

Date: 28th June 2023

Time: 8 PM

Venue: Virtual Mode

Head Zoology Department

Maulana Azad College

Seth Anani

Principal. Maulana Azad College

Principal Maulana Azad College Kolkata Govt. of West Bengal

Maulana Azad College Govt. of West Bengal 8. R. A. Kidwai Road, Kol.-12

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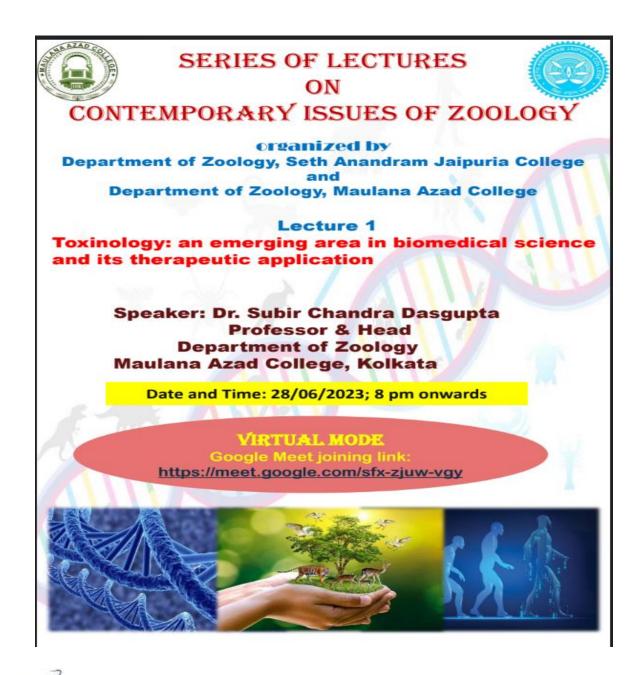
Maulana Azad College



Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata.ac.in



Flyer of the event:



Principal Amandram Jaipuria College
Kolkata
Principal

Principal
Maulana Azad College
Principal

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Maulana Azad College

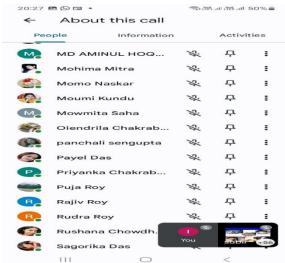


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> Screenshots of the event and attendance of participants















পশ্চিমবংগ पश्चिम बंगाल WEST BENGAL

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Conor Coefficient

Memorandum of Understanding

BETWEEN

Maulana Azad College, 8 Rafi Ahmed Kidwai Road, Kolkata 700013, West Bengal, India

AND

'Vital waste' Redivivus Recyclers Private Limited, having its registered office at 10/2A, Alipore Park Place, Kolkata - 700027 and Operation office at 54/7B, D.C Dey Road, Kolkata - 700015 duly Authorized by board

•

15 FEB	2023
ক্রমিক নং 6.81 g জারিব ক্রমান মূলা ভাষা ব্রী আমভাঙ্গা এ,ডি, এস, আর, অফিস	Md. Oamen Advectte of Seeldah Court, Krit-14
ভতর ২৪ পরগণা হুরের তরিধ মোট মূল্য ট্রেক্তারী অফিস - বারাসাত	

(Hereinaster referred to as 'Vital Waste')

This Memorandum of Understanding (hereinafter called as "MOU") is made and executed on this 22 rd day of 2023 by and between; Maulana Azad College Kolkata at 8 Rafi Ahmed Kidwai Road, Kolkata 700013, West Bengal, India acting through its Authorized Signatory Principal Maulana Azad College Kolkata (hereinafter referred to as "The CLIENT", which expression unless repugnant to the context or subject shall mean and include its successors, representatives, assigns, administrators and executors) of the party of FIRSTPART.

AND

The expressions "The CLIENT" and "Vital Waste" are hereinafter collectively referred to the 'Parties' and individually as the 'Party'.

WHEREAS

- A. Vital Waste is engaged in providing Recycling and Waste Management services in India.
- B. Vital Waste approached The CLIENT to provide recycling and allied waste management services for its premises in Kolkata and The CLIENT agreed to appoint Vital Waste for providing the aforementioned services on the following terms and conditions as set herein.

NOW THE PARTIES MENTIONED HEREIN HAVE WITNESSETH AND HEREBY DECLARE, UNDERTAKE AND AGREE AS UNDER:

Principal Maulana Azad College Kolkata Govt. of West Bengal

REDIVIVUS RECYCLERS PVT. LTD.

Direct

ARTICLE-1 DEFINITIONS

Unless otherwise clearly required by the context, the following terms shall have the respective meanings as defined below:

- a. "Collection Staff" shall mean employees/staff of Vital Waste responsible for packaging and collection of Recyclables and other waste
- b. "Main Storage Location" shall mean storage location where all the Dry Recyclables and other waste will be stored for collection and this location should be accessible to collection vehicle of Vital Waste.
- c. "Collection Site" shall be at Maulana Azad College Campus located at 8 Rafi Ahmed Kidwai Road, Kolkata 700013, West Bengal, India

ARTICLE-2 APPOINTMENT OF VITAL WASTE

- The CLIENT hereby appointed Vital Waste to provide the recycling and allied waste (i) management services for its Collection Site.
- Vital Waste will collect the dry recyclables and other waste from the premises of The (ii) CLIENT as per the terms and conditions mentioned in this MOU.

ARTICLE-3

WASTE MANAGMENT PROGRAMME

- The CLIENT will collect all the Dry Recyclables and other waste from the main storage (i) location.
- The representative of The CLIENT shall intimate to Vital Waste to collect Recyclables (ii) and other waste. Minimum collection quantity being 100 kgs.
- After expiry of first 1 (one) month from the date of first collection, Vital Waste will (iii) decide the collection frequency of future collections with mutual discussion with The CLIENT.
- After finalization of the collection frequency, Collection Staff of Vital Waste will call (iv) The CLIENT and check the collection requirement of Recyclables and other waste.

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REDIVIVUS RECYCLERS PVT. LTD. Pagnar Guel Director

- Collection Staff of Vital Waste will collect the Recyclables and other waste from the (v) premises of The CLIENT after getting the collection requirement from the office of The CLIENT on next day or within 3 working days from the receipt of collection request from the office of The CLIENT.
- If the office of The CLIENT is located in high rise building in such case the (vi) housekeeping staff of The CLIENT will bring the Recyclables and other waste to location accessible to Collection Staff of Vital Waste or assist the Collection Staff of Vital Waste for collections of Recyclables.
- (vii) Collection Staff of Vital Waste will be equipped with the weighing machines to perform the measurement of Recyclables and other waste in the presence of representative of The CLIENT.
- (viii) Collection summary will be given to The CLIENT upon collection either in physical or electronic form.

ARTICLE-5 MISCELLANEOUS

Roles and Responsibilities

Vital Waste agrees to:

- Understanding the quantity and quality of waste generated at source (waste audit).
- Develop a plan of action for setting up a waste management system
- Train facilitators on the Waste Management Program
- Develop and conduct waste management awareness-based programs and initiatives for the students, faculty, and other reliable staff at the institute level.
- Handholding support in reporting and monitoring skill development.
- Review and assess the quarterly reports.

Maulana Azad College agrees to

- Conduct waste audit at the campus
- Analyze the current situation on ground

Govt. of West Bengal

REDIVINUS RECYCLERS PVT. LTD. George Goal Director

 Collect, process, and hand store the dry waste in an environmentally friendly manner.

Share monthly updates on program-based activities

Share monthly updates on the quantity and types of waste materials collected and

recycled with Vital Waste

Formally introduce Vital Waste as their knowledge partners with all students,

faculty, and ground-level staff.

Mode of Operation

Vital Waste will provide For the College One orientation session with the

Teachers/educators/staff of the college

Term

This MOU shall commence on the date first written above and shall remain

in force for a period of 5 years. The MOU may be renewed by mutual written

agreement of both parties.

Arrangement of Funding and Implementation

The agreement is absolutely non-financial in nature and does not involve any monetary

transactions between the parties for carrying out the objectives of the MoU.

Confidentiality

All information shared between the parties during this MOU shall be treated as

confidential

And not disclosed to third parties without the prior written consent of the disclosing party.

Termination

Either party may terminate this MOU with a one-month written notice to the other party

ncipal Maulana Azad College Kolkata

Govt. of West Bengal

REDIVIVUS RECYCLERS PVT. LTD.

Director

Dispute Settlement

The Sides will consult together upon request of either side regarding any emergent dispute or debate relating to the terms of this MoU and will endeavour jointly in a spirit of co-

Operation and mutual trust to resolve the difficulties or misunderstandings involved therein.

Amendment

This MoU may be amended by mutual written consent of both parties as and according to any emergent need.

Principal
Maulana Azad College
Kolkata
Govt. of West Bengal

REDIVIVUS RECYCLERS PVT, LTD.



IN WITNESS WHEREOF the Parties hereto have executed this MOU the day and year first herein above written.

Signed and delivered for and on behalf of:

REDIVIVUS RECYCLERS PVT. LTD.

Redivivus Recyclers Pvt Ltd

PRINCIPAL (Maulana Azad College Kolkata)

Principal Maulana Azad College Kolkata

Govt. of West Bengal

(Pranov Goel)

Director



In the presence of:

Witness-

1. Pravin Patel

2. Nitu Baidya

1

Co-ordinator
IQAC
Maulana Azad College
Govt. of West Bengal
8, R.A. Kidwai Road, Kol.-13

2. Samoka Borad Sonfo

Associate Professor Maulana Azad College Kolkata



Maulana Azad College 8. RAFI AHMED KIDWAI ROAD, TALTALA, KOLKATA 700013



Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata.ac.in



Vital Waste, Kolkata 700020

SL No.	Name of activity	Starting date	Completion date	Hosted by	No. of participants
1.	Recycling of Metal waste Maulana Azad College recycled 628 Kgs of metal waste facilitated by Vital Waste	18.03.2024	18.03.2024	Maulana Azad College, Kolkata.	12
2.	Recycling of Paper waste Maulana Azad College recycled 1691 Kgs of paper waste facilitated by Vital Waste	18.03.2024	18.03.2024	Maulana Azad College, Kolkata	11
3.	Recycling of Metal waste Maulana Azad College has recycled 568 Kgs of metal waste facilitated by Vital Waste	27.05.2024	27.05.2024	Maulana Azad College, Kolkata	12
4.	Recycling of Paper waste Maulana Azad College recycled 495 Kgs of paper waste facilitated by Vital Waste equivalent to saving 8 tress	27.05.2024	27.05.2024	Maulana Azad College, Kolkata	12
5.	Recycling of Plastic waste Maulana Azad College recycled 56 kgs of plastic waste facilitated by Vital Waste	27.05.2024	27.05.2024	Maulana Azad College, Kolkata	12
6.	Recycling and channelization of E-waste Maulana Azad College recycled 537 kgs of electronic waste facilitated by Vital Waste	27.05.2024	27.05.2024	Maulana Azad College, Kolkata	10

REDIVINUS RECYCLERS PVT. LTD.

Bearon Grand Director

Director

Vital waste

Principal

Maulana Azad College



OFFICE OF THE PRINCIPAL

Maulana Azad College



8, RAFI AHMED KIDWAI ROAD, KOLKATA 700013, INDIA

Report on status of MOU signed between Maulana Azad College, Kolkata-13 and 'Vital waste' Redivivus Recyclers Private Limited, Kolkata 700015

- > DATE of SIGNING THE MOU: 22.02.2023
- > OBJECTIVE/ PURPOSE: Efficient environment friendly waste management of the college campus including metal waste (junk unserviceable instruments and furniture), paper waste (very old documents which are no longer required), plastic waste (disposable laboratory consumables), e-waste (old and unserviceable CPUs, monitors, UPS, laptops and other accessories) through training of college support staff about proper waste disposal and timely collection of waste.

Yearwise activities conducted under MoU

1. Name of the Activity: Recycling of metal waste

Category of Activity: Waste disposal

Organizing Unit: Maulana Azad College & 'Vital waste' Redivivus Recyclers Private Limited

Date, Time, Duration, Venue: 18.03.2024, 12 noon, 3 hrs, College campus.

No. of staff members from college and Vital waste who facilitated the collection and pick-up of the

waste: 12

Brief Description of the activity: On 18th March 2024, Vital Waste facilitated the collection of 628 kg of metal waste from the college chiefly arising from the old unserviceable instruments.

Outcome/impact of the activity: The clearance of junk metal waste freed up a lot of storage space of the college and also ensured that these wastes were recycled in as much environment friendly manner as possible.

Copy of certificate awarded to college by Vital Waste







Principal Maulana Azad College Kolkata Govt. of West Bengal

Principal



OFFICE OF THE PRINCIPAL

Maulana Azad College



8, RAFI AHMED KIDWAI ROAD, KOLKATA 700013, INDIA

2. Name of the Activity: Recycling of paper waste

Category of Activity: Waste disposal

Organizing Unit: Maulana Azad College & 'Vital waste' Redivivus Recyclers Private Limited

Date, Time, Duration, Venue: 18.03.2024, 3 P.M., 1 hr, College campus.

No. of staff members from college and Vital waste who facilitated the collection and pick-up of the

waste: 11

Brief Description of the activity: On 18th March 2024, Vital Waste facilitated the collection of 1691 kg of paper waste from the college from the extremely old documents/ answer scripts which are no longer required.

Outcome/impact of the activity: The clearance of the old documents freed up a lot of storage space of the college and also ensured that these wastes were recycled in as much environment friendly manner as possible. Recycling of this much paper is approximately equal to saving 29 trees.

Copy of certificate awarded to college by Vital Waste











OFFICE OF THE PRINCIPAL

Maulana Azad College



8, RAFI AHMED KIDWAI ROAD, KOLKATA 700013, INDIA

3. Name of the Activity: Recycling of metal waste

Category of Activity: Waste disposal

Organizing Unit: Maulana Azad College & 'Vital waste' Redivivus Recyclers Private Limited

Date, Time, Duration, Venue: 27.05.2024, 11 A.M. 3 hrs, College campus.

No. of staff members from college and Vital waste who facilitated the collection and pick-up of the

waste: 12

Brief Description of the activity: On 27th May, 2024, Vital Waste facilitated the collection of 568 kg of metal waste from the college chiefly arising from the old unserviceable instruments.

Outcome/impact of the activity: The clearance of junk metal waste freed up a lot of storage space of the college and also ensured that these wastes were recycled in as much environment friendly manner as possible.

Copy of certificate awarded to college by Vital Waste









OFFICE OF THE PRINCIPAL

Maulana Azad College



8, RAFI AHMED KIDWAI ROAD, KOLKATA 700013, INDIA

4. Name of the Activity: Recycling of paper waste

Category of Activity: Waste disposal

Organizing Unit: Maulana Azad College & 'Vital waste' Redivivus Recyclers Private Limited

Date, Time, Duration, Venue: 27.05.2024, 2 P.M., 1 hr, College campus.

No. of staff members from college and Vital waste who facilitated the collection and pick-up of the

waste: 12

Brief Description of the activity: 27th May, 2024, Vital Waste facilitated the collection of 495 kg of paper waste from the college from the extremely old documents/ answer scripts which are no longer required.

Outcome/impact of the activity: The clearance of the old documents freed up a lot of storage space of the college and also ensured that these wastes were recycled in as much environment friendly manner as possible. Recycling of this much paper is approximately equal to saving 8 trees.

Copy of certificate awarded to college by Vital Waste









OFFICE OF THE PRINCIPAL

Maulana Azad College



8, RAFI AHMED KIDWAI ROAD, KOLKATA 700013, INDIA

5. Name of the Activity: Recycling of plastic waste

Category of Activity: Waste disposal

Organizing Unit: Maulana Azad College & 'Vital waste' Redivivus Recyclers Private Limited

Date, Time, Duration, Venue: 27.05.2024, 3 P.M., 1 hr, College campus.

No. of staff members from college and Vital waste who facilitated the collection and pick-up of the

waste: 12

Brief Description of the activity: On 27th May 2024, Vital Waste facilitated the collection of 56 kg of plastic waste from the college generated by the disposable consumables (plasticwares) at the different science laboratories.

Outcome/impact of the activity: Plastic waste has become an alarming menace to the ecosystem especially to the marine life. Kolkata, being a riverside city, needs extra precaution in segregation and disposal of plastic waste since indiscriminate dumping will lead to eventual deposition of these plastic wares to the Hooghly River from where they will be carried away downstream to the Bay of Bengal. Proper segregation of these plasticwares by Vital Waste ensured that these will be recycled in an environment friendly manner.

Copy of certificate awarded to college by Vital Waste









OFFICE OF THE PRINCIPAL

Maulana Azad College



8, RAFI AHMED KIDWAI ROAD, KOLKATA 700013, INDIA

Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata.ac.in

6. Name of the Activity: Recycling of e-waste

Category of Activity: Waste disposal

Organizing Unit: Maulana Azad College & 'Vital waste' Redivivus Recyclers Private Limited

Date, Time, Duration, Venue: 27.05.2024, 4 P.M., 2 hr, College campus.

No. of staff members from college and Vital waste who facilitated the collection and pick-up of

the waste: 12

Brief Description of the activity: On 27th May 2024, Vital Waste facilitated the collection of 537 kg of e-waste from the college in the form of unserviceable computer monitors, CPUs, UPS, printers and other accessories along with few other small instruments.

Outcome/impact of the activity: Electronic devices are concentrated sources of hazardous materials such as lead, mercury, cadmium, and brominated flame retardants. Indiscriminate dumping of these things in landfills or incineration result in the release of these extremely toxic pollutants into the environment posing serious threat to local biodiversity as well as human beings. Vital Waste ensured that these will be recycled in an environment friendly manner avoiding leaching of these harmful chemicals into the environment.

Copy of certificate awarded to college by Vital Waste









OFFICE OF THE PRINCIPAL





8, RAFI AHMED KIDWAI ROAD, KOLKATA 700013, INDIA

Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata.ac.in

Copy of appreciation certificate awarded to Maulana Azad College for Environmental excellence







FORM 10 [See rule 19 (1)]

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's Name & Mailing Address	;	Maulana Azad College
	(including Phone No. & e-mail)	:	8, Rafi Ahmed Kidwai Rd, Taltala,
		*	Koikata, West Bengal 700013
		:	
2	Sender's Authorization No.	:	
3	Manifest Document No.	:	303
4	Transporter's Name & Address	:	Self
	(including Phone No. & e-mail)	:	
		;	
5	Type of Vehicle	:	(Truck/ Tanker/ Special Vehicle)
6	Transporter's Registration No.	:	N/A
7	Vehicle Registration No.	;	WB974208
8	Receiver's Name & Mailing Address	;	NILAY NARAYAN POLYCHEM LLP
	(including Phone No. & e-mail)	;	Plot D-167(P)No.4&5, Kandra Industrial Area,
		:	Govindpur, Dhanbad-828109, Jharkhand.
		;	
	Receiver's Authorization No.	:	JSPCB/HO/RNC/HWM-10052121/2021/23 24/03/2021
)	Waste Description	;	Used Chemicals
l	Total Quantity	:	162 Ltrs.
	No. of Containers		*
2	Physical form	:	(Solid/ Semi Solid/Sludge/Oily/Tarry/Slurry/Liquid)
	Special Handling Instructions & Additional	:	Use Personal protection equipments while handling.
	Information	:	
	Sender's Certificate	:	

I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorized, packed, marked, and labeled, and are in all respects in proper condition for transport by road according to applicable national government regulations.

Date:

27.06.2024

15 Transporter Acknowledgement of receipt of wastes.

Date:

27.06.2024

16 Receiver's Certification of Receipt of Hazardous waste and other waste.

Date:

27.06.2024

Stamp to Standars

Stamp & Supratora

Stamp & Signature



পশ্চিম্বল पश्चिम वंगाल WEST BENGAL

81AB 243839



Memorandum of Understanding for Academia-Industry Co-operation Between MAULANA AZAD COLLEGE, 8 RAFI AHMED KIDWAI ROAD, KOLKATAB And SETU PRAKASHANI, Kolkata 7000 06

Principal, Maulana Azad College, 8 Rafi Ahmed Kidwai Road, Kolkata 700013 and Publisher Setu Prakashani, 12A Shankar Ghosh Lane, Kolkata 7000 06, India, a known Publishing House, noting the importance of connection between Academia and Industry through mutual collaborative endeavors to foster student, as well as topractice and promote social outreach initiatives, agree for Academic Cooperation in relevant and interdisciplinary subjects of both Institute & Setu Prakashani, in accordance with terms and conditions set forth in the following paragraphs.

Name of Collaborator, Setu Prakashani, 12A Shankar Ghosh Lane, Kolkata 7000 06, India, a known Publishing House, having its registered office at 12A Shankar Ghosh Lane, Kolkata 7000 06, (hereinafter referred as "Company" which expression shall, unless excluded by or represent to the context, bedeemed to include its successors and assigns); Maulana Azad College, Kolkata and, Setu Prakashani, (a known Publishing House), are individually referred to asparty and collectively as parties.

aulana Azad College
Kolkata

Betu Prakashani Prekana Sas

> of the following projects or any such other projects as may be mutually agreed in between the Parties:

- (a) Summer internship and paid internship to Undergraduate/Postgraduate Students of Maulana Azad College, as per convenience of the Setu Prakashani.
- (b) Explore job opportunities for students of Maulana Azad College, Kolkata in the field of

1 0 MAR 2023 Name..... Address..... VENDOR: MAMATAJUDDIN GAZI

ALIPORE JUDGES' COURT KOLKATA-700027

Signature of Vendor



WHEREAS:

- (a) Maulana Azad College, Kotkata is a Higher Educational Institution of Government of West Bengal to provide education and research in various branches of Science, Commerce, Humanities and Languages for the advancement of learning and dissemination of knowledge in such branches. Maulana Azad College, Kolkata works diligently to realize its mission of providing the best learning, teaching and research opportunities to students and academicians alike, it continues to support students with the basics of modern knowledge and high values. The hallmark of Maulana Azad College, Kolkata has its strong and widespread alumni network.
 - (b) Setu Prakashani, 12A Shankar Ghosh Lane, Kolkata 7000 06, India, a known Publishing House, is engaged in the Publication of Books etc. its marketing, distribution and sale.
 - (c) The Memorandum of understanding is a statement of joint interest of both parties with the objective of fostering collaboration between the two institutions to promote necessary academic collaboration relating to publication industry and imparting internship. Maulana Azad College, Kolkata and Setu Prakashani wish to enter into a Memorandum of understanding where in the Parties can explore possibilities of engagement & collaboration through the various publishing technologies offered by Setu Prakashani, Kolkata leading effective Academia-Industry ambience.
 - (d) The Parties intend to cooperate and focus their efforts on cooperation within theareas of skill- based education, training and internship, placement, industrial visit, expertlecture, collaborative research projects etc.

Objectives

This Memorandum of Understanding (hereinafter referred to as the "MoU") intends to set outthe general modalities for initiating an Academic Collaboration which is intended to benefit the students and faculty members of both parties in their pursuit for achieving academic excellence, training, internship, placement, industrial visit, expert lecture, collaborativeresearch projects etc.

Scope of co-operation

- A. The two Institutes organize from time-to-time Certification programme, Hand-on training to disseminate Knowledge as well as to promote and foster academic ambience.
- B. The two Institutes will mutually engage themselves in framing necessary curriculum relating to necessary certification/internship/hands-on training suitable for students in their future engagement in the publishing industries. Both parties will finalize the schedule as per convenience.
- C. Both Institutes will also make endeavors time to time to organize publishing industry visits as outreach activities for the students and faculties of Maulana Azad College, for dissemination of knowledge in the society through models and lectures as well as other activities as will be deemed to be fit by both parties. Selected students will be groomed by the faculty members for conduction of these activities.
 - Maulana Azad College, Kolkata and Setu Prakashani may collaborate through one or more of the following projects or any such other projects as may be mutually agreed in between the Parties:
 - (a) Summer internship and paid internship to Undergraduate/Postgraduate Students of Maulana Azad College, as per convenience of the Setu Prakashani.
 - (b) Explore job opportunities for students of Maulana Azad College, Kolkata in the field of

publishing farm engaged in publishing books, journals etc. identified by both parties.

- (c) Short visits of students and faculty to Setu Prakashani, engaged in publishing books etc. for internship and training etc. of mutual interest.
 - (d) Short-term Hands-on training /Orientation programme to students of Maulana Azad College, Kolkata.
- (e) Any other appropriate mode of interaction agreed upon between Maulana Azad College, Kolkata and Setu Prakashani.
- D. Future potential opportunities such as following can be mutually explored:
- (a) Activities relating to existing/new Journals of Maulana Azad CollegeKolkata.
- (b) Sponsoring of college students in skill-development.
- (c) Training/Education including practical exposure to students of Maulana Azad College, Kolkata, through internship/training Programs conducted by Setu Prakashani, Kolkata 700 006 in areas of interest to Maulana Azad College, Kolkata and Setu Prakashani(as the case may be).

Terms And Termination

(a) This MoU shall be valid for a period of 5 years with effect from 11th April, 2023 and can be terminated by either party with a prior written notice of 3 months served on the other Party.

This MOU has been signed with concurrence of the Governing Body of Maulana Azad College and as per provision of the Setu Prakashani, Kolkata 06, West Bengal, India.

Signed by

Archana Das.

ARCHANA DAS

Setu Prakashani, Kolkata 06

Maulana Azad College Kokincipal

ana Azad College Kolkata

Principal

1. Witnessed by:

SUBRATA DAS

Subreata Dan

Place: Kolkata

Co-ordinator

1. Witnessed Byt. of West Bengal

Jaulana Azad College

o, K.A. Kidwai Road, Kol.-13



OFFICE OF THE PRINCIPAL Maylana Azad College

Maulana Azad College 8, RAFI AHMED KIDWAI ROAD, TALTALA, KOLKATA 700013



Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com

Website: https://maulanaazadcollegekolkata.ac.in

Activities under MoU between Maulana Azad College, Kolkata 700013

and Setu Prakashani, Kolkata 700006

Start date of MoU: 11.04.2023

End date of MoU: Continuing

Duration: 5 years

Sl. No.	Name of activity	Starting date	Completion date	Hosted by	No. of participants
1.	Collaborative programme for launching certificate course Resource Persons: Dr. Ashis Pathak, Deputy Manager (Production), Visva Bharati University and Mr. Subrata Das, Setu Prakashani	18.03.2024	18.03.2024	Maulana Azad college	19

Setu Prakashani Archana Sas

Partner

Principal
Maulana Azad College
Principal
Maulana Azad College
Kolkata
Govt. of West Bengal

Principal

Maulana Azad College

Setu Prakashani



Maulana Azad College



Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata.ac.in



Report on the activities under MoU between Maulana Azad College Kolkata and Setu Prakashani for strengthening Industry-Academia tie-ups

> DATE of SIGNING THE MOU: 11.04.2023

> OBJECTIVE/PURPOSE:

To strengthen Industry-Academia interface between the two parties so that the students of Maulana Azad College get adequate exposure to industrial practices through certificate courses, internships and related activities and acquire the skillset for exploring job opportunities in the industry; at the same time the faculty members can benefit with regards to publication of their research and other literary works.

- ➤ TARGET AUDIENCE/ PARTICIPANTS: Students and faculty members of Maulana Azad College
- ➤ VENUE: Maulana Azad College and Setu Prakashani

EXPECTED OUTCOME:

Students will learn the fundamentals of a publishing industry and harness the necessary skillset to apply in related job sectors. At the same time, the faculty members will also reach out to a wider audience and disseminate the acquired knowledge through publication of their literary works and other research related documents.

Report on activities conducted under MoU

1. Induction cum Orientation session for initiation of a certificate course along with Internship in Printing and Publication in collaboration with Setu Prakashani

Course Co-ordinators: Dr. Santanu Chattopadhay, Associate Professor, Dept. of Bengali, Maulana Azad College and Dr. Dipak K. Som, Associate Professor and Head, Dept. of Zoology, Maulana Azad College

Date and time of the event: 18th March, 2024 3 P.M. onwards

Resource Persons: Dr. Ashis Pathak, Deputy Manager (Production), Visva Bharati

University and Mr. Subrata Das, Setu Prakashani







Maulana Azad College



Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata.ac.in



Number of participants: 19

Copy of Notice for Initiation of Certificate Course



GOVERNMENT OF WEST BENGAL

OFFICE OF THE PRINCIPAL Maulana Azad College Kolkata

B, RAFI AHMED KIDWAI ROAD, KOLKATA 700013, INDIA
Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com



NOTICE

No. 15.1...

date 12/03/21

This is to notify that the Certificate Course along with Internship in Printing and Publication will be started on and from 18/3/2024.

The Induction cum Orientation session will start on the same day at 3.00 pm in the College Seminar Hall.

Dr. Ashis Pathak, Deputy Manager (Production) Visva Bharati University and Mr. Subrata Das of Setu Prakashani will be present as Guest Speaker.

All enrolled students are directed to attend the session in time,

All interested faculty members of this college are requested to attend the programme.

Dr. Santanu Chattopadhyay & Dr. Dipak kr. Som

Course Co-Ordinators

Principal

Principal
Maulona Azad College
Kolkata

Setu Prakashani Arrehana Sas

Principal Maulana Azad College



Maulana Azad College



Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata.ac.in



Representative Photographs of the event





Attendance of the event

18th March 2024 INTRODUCATRY CLASS
at Seminar Room, 3 Pm

attend students & Teachers

2 March 2013/2026

2 Trook (MX Hoffies)
2 Mars 12 Mars 14/28

2 Mars 202 Hoffes
2 Mars 202 Hoffes
2 Mars 202 Hoffes
2 Mars 202 Hoffes
2 Mars 202 - 26/2028

2 Mars 202 - 26/2020/2028

2 Mars 202 - 26/2020/2028

1 Mars 202 - 26/2020/2028

1 Mars 1 Nasz - 18/03/2024

2 Mars 1 Nasz - 18/03/2024

3 Mars 1 Nasz - 18/03/2024

4 Mars 1 Nasz - 18/03/2024

5 Mars 2






পশ্চিমকণ पश्चिम बंगाल WEST BENGAL

31AA 568548

MEMORANDUM OF UNDERSTANDING

This MEMORANDUM OF UNDERSTANDING(MOU) has been entered into on this day of May, 2023(TWO THOUSAND AND TWENTY THREE)

BY AND BETWEEN

Women's Christian College, a degree college affiliated with University of Calcutta situated at 6,Greek Church Row, Kolkata 700 026 duly represented through its Principal & Secretary DR. AJANTA PAUL (which expression unless excluded by or repugnant to the subject or context shall be deemed to mean and include it's, successor or successors in office, administrator/s and/or assigns) of the ONE PART (hereunder referred to as the FIRST PART);

(Dr Ajanta Paul) Principal & Secretary Women's Christian College, Kolkata

D 2 MAY 2023

W. 294	Date Re 20 46	
Name	Women's Christian	Callege
Address	6. Grocel Chire	h Reigni
VEN	IDOR: MAMATAJUDDIN GAZI	Tallygue kur 26
A	LIPORE JUDGES' COURT	00 0
	KOLKATA-700027	

Signature of Vendor

0 2 MAY 2023

(Dr Ajanta Paul) Principal & Secretary Women's Christian College, Kolkata

Principal & Secretary Women's Christian College Kolkata - 700 026 Principal
Maulana Azad College

Maulana Azad College, a Government degree college affiliated with University of Calcutta situated at8, Rafi Ahmed Kidwai Rd, Taltala, Kolkata - 700013, West Bengalduly represented duly represented through its Principal DR. SUBHASIS DUTTA (which expression unless excluded by or repugnant to the subject or context shall be deemed to mean and include it's, successor or successors in office, administrator/s and/or assigns) of the OTHER PART (hereunder referred to as the SECOND PART);

The said Women's Christian Collegeand Maulana Azad College are hereinafter collectively referred to as the "Parties" and individually as a "Party".

WHEREAS the party of the first part herein after a series of discussions and deliberations has agreed to extend the required support and cooperation to the party of the second part with respect to various academic and educational programmes which would be conducted between the parties under the terms and conditions as more-fully discussed hereinbelow.

AND WHEREAS the entire scope of this present Memorandum of Understanding would be restricted to extension of mutual cooperation between the parties with respect to the various educational projects which would be undertaken from time to time and which would be in the areas of mutual interest of both the parties as has been agreed upon.

and whereas the said scope of this MOU would although relate to implementation of the various educational projects and programmmes as stipulated hereinabove but would not be limited to the same and would include providing opportunities to the prospective students enrolled under the said programmes through jointly conducted skill based Add-On Courses / Certification Courses in the areas of study within the scope of this MOU,



organization of seminars, webinars, conferences and /or symposia relating to the subjects falling within the scope of this MOU, by the two institutions.

AND WHEREAS the organization of such activities as stipulated hereinabove shall be contingent upon the availability of funding and prior approval of the relevant authorities as has been mutually agreed upon by the parties.

AND WHEREAS the venue for organization of such events and programmes shall be either at the campus of Women's Christian College at the campus of Maulana Azad College based on the needs and requirement of any particular event and the parties herein shall make all necessary endeavors for smooth operation of such events. Furthermore, any change of venue of any such event would be based upon the mutual agreement arrived at between the parties.

AND WHEREAS the programmes which would be conducted by the parties under the scope of the present MOU shall be in offline mode however in case of any difficulty which might occur in the future pertaining to conducting such programmes in offline mode the parties herein shall make all possible endeavors to ensure that such events could be organized through online mode also.

AND WHEREAS the present MOU shall be valid and subsisting for a period of a period of five(5) years and may be extended for another period of five(5) years by the mutual written consent of the Parties. Furthermore, either of the parties may terminate this MOU at any time by giving written notice to the other Party on its intention to terminate this MOU, six(6) months prior to the date of the termination. The termination of this MOU shall not affect the completion of any project/s and programme/s in progress and not completed at the time of termination.

Hark Jaul
Dr Ajanta Paul)
Principal & Secretary
Vomen's Christian College,
Colkata

Maulana Azad College
Principal
Maulana Azad College
Kolkata
Govt. of West Bengal

Principal

AND WHEREAS this MOU may be amended or revised at any time by mutual written consent of the Parties and such amendment shall form an integral part of this MOU. Further any such future amendment/s or revision/s shall come into force on the date as may be determined by the Parties.

AND WHEREAS all disputes, controversies and questions directly or indirectly arising under, out of, in connection with, or in relation to this MOU including, without limitation, all disputes, controversies and questions relating to the validity, interpretation, construction, performance, termination of this Agreement, shall be finally, exclusively and conclusively settled amicably through consultations or negotiations between the Parties. However, in case of failure of such mutual consultations or negotiations the Civil Courts at Kolkata shall have exclusive jurisdiction to adjudicate the disputes between the parties.

AND WHEREAS any failure or delay of any Party to perform any obligation (including but not limited to payment obligations) under this MOU solely by reason of act of God, acts of Government, riots, wars (collectively referred to as "Force Majeure") shall not be deemed to be a breach of this MOU, provided, that the Party so prevented from performance of its obligation herein, shall not have caused such Force Majeure. The party suffering such Force Majeure shall notify the other Party in writing within seven (7) days after the occurrence of such Force Majeure and shall in every instance, to the extent reasonable and lawful under the circumstances, use its best efforts to remove or remedy such causes with all reasonable diligence. Further, if the Force Majeure persists for a consecutive period of more than two (2) months, then either Party shall have the option to terminate this MOU without incurring any liability.

AND WHEREAS indemnification rights of the indemnified parties under this are without prejudice to, independent of and in addition to, such other rights



and remedies as the indemnified parties may have at law or in equity or otherwise, including the right to seek specific performance, rescission, restitution or other injunctive relief, none of which rights or remedies shall be affected or diminished thereby.

IN WITNESS WHEREOF the Parties hereto have set their hands to these presents the day month and year first above written.

In two (2) originals

1. Party of the First Part

Sante Saul 08.05.2023

(Dr Ajanta Paul) Principal & Secretary Women's Christian College, Kolkata

Principal & Secretary
Women's Christian College
Kolkata - 700 026

1. Party of the Second Part

(Dr Subhasis Dutta)

IQAC Coordinator

Kolkata

Maulana Azad College,

Principal

2.

Maulana Azad College

Kolkata Maulana Azad College Kolkata

Govt. of West Bengal

2.

Nabarita Mitra 8.5.23

IQAC Coordinator Women's Christian College, Kolkata

IQAC COORDINATOR

Women's Christian College Kolkata-700 026

WITNESS

1. Cantanu Ghosh

PROFESSOR, W.B.S.E.S.

HEAD DEPARTMENT OF ECONOMICS
MAULANA AZAD COLLEGE, KOLKATA
GOVT. OF WEST BENGAL

2. Sudeshna Biswas 85 2023

Dr. Sudeshna Biswas
Associate Professor & Head
Bepartment of Economics
Wemen's Christian College
Kelkata-700026

1.









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Website: https://maulanaazadcollegekolkata.ac.in

Activities under MoU between Maulana Azad College, Kolkata 700013 and

Women's Christian College, Kolkata, 700026

Start date of MoU: 8.05.2023

End date of MoU: Continuing

Duration: 5 years

Sl.	Name of activity	Starting date	Completion	Hosted by	No. of
No.			date		participants
1.	Faculty Exchange and	23.05.2023	28.06.2023	Women's	24 students
	Student Exchange			Christian	from Maulana
	Programme: Resource			College,	Azad College
	person in Add-on Course			Kolkata.	and 20 from
	with students of both				Women's
	colleges.				Christian
					College,
	Prof. Santanu Ghosh,				Kolkata.
	Professor and Head, Dept.				
	of Economics, Maulana				
	Azad College and Shri				
	Ujjwal Chattopadhyay,				
	Associate Professor of				
	Economics, Maulana Azad				
	College acted as resource				
	persons in the Add-on				
	course on development				
	studies.				

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Principal & Secretary Women's Christian College Kolkata - 700 026

Principal

Women's Christian College

Principal Maulana Azad College

Principal Maulana Azad College Kolkata Govt. of West Bengal

Principal

Maulana Azad College



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Report on activities of MOU signed between Maulana Azad College, Kolkata-13 and Women's Christian College, Kolkata-26

> DATE of SIGNING THE MOU: 08.05.2023

> OBJECTIVE/ PURPOSE:

Initiate an academic Collaboration between departments of two colleges for conducting skill-based add on courses, certificate courses, seminars and workshops for the benefits of both students and faculty members of both institutions.

YEARWISE ACTIVITY REPORT UNDER MOU

Year of report: 2022-23

Name of the event: Add-on course on development studies held in 2022-23 session

Date of the event: 23.05.2023 to 28.06.2023

> Resource person/s from both colleges engaged in teaching:

- Prof. Soumyen Sikdar, Former Professor, Department of Economics, University of Calcutta and Indian Institute of Management, Calcutta
- Dr. Simantini Mukhopadhay, Assistant Professor of Economics, IDSK
- Dr. Mausumi Kar, Associate Professor of Economics, WCC
- Dr. Arnab Majumdar, Assistant Professor of Economics, WCC
- Dr. Senjuti Saha, Associate Professor and HOD, Department of Geography, WCC
- Dr. Sudeshna Biswas, Associate Professor and HOD, Department of Economics, WCC
- Dr. Suparna Gangopadhyay, Associate Professor & Head, Department of Economics, Surendranath College for Women
- Dr Shirsendu Mukherjee, Associate Professor in the Department of Economics of St. Paul's C. M. College

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Kolkata - 700 026

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- Shri Ujjwal Chattopadhyay, Associate Professor of Economics, Maulana Azad College
- Dr Jaya Mukherjee, Associate Professor and Head, Department of Economics, St. Paul's C. M. College
- Dr Sudeshna Mitra, Assistant Professor in the Department of Economics of St. Paul's C.
 M. College
- Dr. Madhumita Sen, Associate Professor and Head of the Department of Sociology, Government General Degree College for Women, Ekbalpore.
- Dr. Kingshuk Sarkar, Associate Professor and Head of the Department of Economics, Goa Institute of Management
- Prof. Santanu Ghosh, Professor and Head, Dept. of Economics, Maulana Azad College
- > TARGET AUDIENCE/ PARTICIPANTS: UG students of St. Paul's Cathedral Mission College, Womens' Christian College and Maulana Azad College.
- > **VENUE:** Classes were conducted in blended mode at the campus of the three Institutions as well in google meet platform.

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Flyer of the event

DEPARTMENT OF ECONOMICS WOMEN'S CHRISTIAN COLLEGE

in collaboration with
DEPARTMENT OF ECONOMICS
ST. PAUL'S CATHEDRAL MISSION
COLLEGE

å

DEPARTMENT OF ECONOMICS
MAULANA AZAD COLLEGE

Organizes

Add-On Course on Development Studies

Inauguration: 23rd May 2023

Venue: Women's Christian College Auditorium Time: 12 Noon

Chief Guest:

Professor Soumyen Sikdar

Former Professor, IIM Kolkata

Department of Economics
University of Calcutta

Invited Speaker:

Dr. Simantini Mukhopadhyay

Assistant Professor

Institute of Development Studies, Kolkata







Chief Patrons

Dr. Ajanta Paul Principal Women's Christian College

Sri Debasish Mondal Teacher-in-charge St. Paul's Cathedral Mission College

Dr. Subhasis Datta Principal Maulana Azad College

Target
Participants:
Undergraduate
students of
Economics

ABOUT THE COURSE

This is a 30-hours blended-mode course, focusing on Issues of Development Studies.

The Course is open to the Undergraduate students (Economics) of Women's Christian College, St. Paul's Cathedral Mission College and Maulana Azad College.

COURSE OBJECTIVE

The Course introduces the students to the theories and historical experiences of Development, as well as cutting-edge policy debates. It will give the students an orientation to engage with the economic, political, social and cultural dimensions of development policy and practice. It will also motivate them to pursue Masters in Development Studies in future

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Principal Maulana Azad College



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Detailed report of the event DAY 1 (23.05.2023)

Inaugural Session

The Add-on course on Development Studies was inaugurated on 23rd May, 2023 at 12 noon, with magnificence with the presence of more than 60 students of the Departments of Economics of three reputed colleges of Kolkata namely Women's Christian College (the host of the inaugural session, here in after WCC), St. Paul's Cathedral Mission College (here in after SPCMC) and Maulana Azad College (here in after MAC), the faculty members of the Departments of Economics of the three colleges and the guests of honour. Dr. Mausumi Kar, Associate Professor of Economics, WCC conducted the session with the august presence of the Hon'ble Principal Madam, Prof. (Dr.) Ajanta Paul. Dr. Kar mentioned the purpose and objective of conducting such course and thanked the faculty members of the other colleges for their assistance in designing the course curriculum for this well-shaped course on development studies to be offered in a blended mode with a vision to enrich the participants on diverse aspects of development studies without making them burdened with the course work.

The welcome address was then offered by the Principal Madam of WCC, without whose all round support, motivation and inspiration, it would not have been possible to organize the event in such a stature. Dr. Jaya Mukherjee, Head of the Department of Economics, St. Paul's C. M. College and Shri Ujjwal Chattopadhyay, Associate Professor of Economics, Maulana Azad College also addressed the audience. The Head of the Department of Economics of Women's Christian College, Dr. Sudeshna Biswas introduced the Chief guest of the inaugural session, Prof. Soumyen Sikdar, the extraordinary teacher and mentor, formerly attached to the Department of Economics, University of Calcutta and Indian Institute of Management, Calcutta and invited him to offer his inaugural lecture. It was really an amazing and thought-provoking lecture on 'Rise and Fall of Globalisation and India', offered by Prof. Sikdar that had kept the audience spell bound for about an hour. The participants and the faculty present there were grateful to Prof. Sikdar for offering such splendid food for thought that actually marked the beginning of an immensely interesting course work to be continued for a month's span. After the inaugural lecture, another senior faculty member of WCC, Dr. Arnab Majumdar offered his vote of thanks and announced the end of the first part of the inaugural session.

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Kolkata

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The second session of the day started with the introduction of the other guest of honour, Dr. Simantini Mukhopadhay, Assistant Professor of Economics, IDSK by Dr. Arnab Majumdar. Dr. Mukhopadhyay presented a very well –thought lecture on 'Human development and Inequalities in It'. The presentation encompassed different income-based and non-income based parameters of Human Development and indicators of inequality and was truly inspiring for the students willing to study Development Studies, especially Development Economics.

Number of participants: 41 (including students and faculty members

Geo-tagged pictures of Day 1 of the event









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DAY 2 (24.05.2023):

Two sessions each for one and half hours duration was scheduled for the 2nd day of the Add-on course at Women's Christian College, Kolkata from 12 noon onwards. The speaker of the first session was Dr. Mausumi Kar, Associate Professor of Economics, WCC and her title of talk was 'Trade and Development: Some Contemporary Theoretical Issues'. She elaborated special issues of international trade ranging from traditional to contemporary framework including virtual trade with Time-Zone differences, outsourcing of services and other interesting issues in the backdrop of digital revolution. Students took ample curiosity in the conceptual ideas and examples shown and participated in the discussion with great enthusiasm and attention. Then Dr. Arnab Majumdar, Assistant Professor of Economics, WCC spoke on 'Development Issues in Indian Industry'. Students were very much cooperative and claimed that they took interest in the sessions.

Geo-tagged pictures of Day 2





for Ajanta Paul) Principal & Secretary Women's Christian College, Kolkata

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DAY 3 (27.05.2023):

The lectures on the third day of the course were designed to be offered in the online mode and was arranged by WCC. Two consecutive lectures, each for one and half hours duration were offered on Demographic studies. The first speaker was, Dr. Senjuti Saha, Associate Professor and HOD, Department of Geography, WCC and the title of her presentation was 'Demography – A Key to Development'. The Second speaker was Dr. Sudeshna Biswas, Associate Professor and HOD, Department of Economics, WCC and she presented on 'Demographic Dividend and Youth Unemployment'. The presentations were very lucid, receptive to the young pupils and indicative of a very important path of development, namely the demographic transitions, yet they differ in the approaches of stride, the former being the Geographer's perception while the later is precisely from a much more technical and economic point of view.

Number of participants in online mode: 61

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Attendance of participants

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DAY 4 (31.05.2023):

The fourth class of this add-on course was a three-hour practical session that was held in the computer lab of St. Paul's Cathedral Mission College on 31st May, 2023. This class was attended by 56 students. The session was conducted by Dr. Suparna Gangopadhyay, Associate Professor & Head, Department of Economics, Surendranath College for Women.



The topic of her session was "Application of STATA on Economic Data: An Introductory Approach". In this session, the students were given a hands-on training on handling statistical data for analyzing different issues of development studies using the statistical software STATA. The students thoroughly enjoyed this session as they learnt the application of different economic theories to real life

data. Dr. Gangopadhyay addressed all the queries of the students and the session extended well beyond the scheduled hours.

DAY 5 (09.06.2023):

The fifth class was held on 9th June in the Sesquicentenary Seminar Hall of St. Paul's Cathedral Mission College from 11 am to 2pm. Dr Shirsendu Mukherjee, Associate Professor in the Department of Economics of St. Paul's C. M. College, conducted this three-hour session on "Environment and Development". The session was attended by 33 students. The attendance was relatively low in this session compared to the other sessions because the Semester 4 results were published on that day and the students were very tensed on account of that. However, those who attended had a highly interactive session. This session gave the students an exposure to some

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burning environmental issues affecting the world today and efforts made at the international level to deal with these problems.

DAY 6 (12.06.2023):

The Department of Economics, Maulana Azad College was one of the collaborators of the **Add-On Course on Development Studies** initiated by the Department of Economics, Women's Christian College, Kolkata; the course was held during May-June, 2023.

As a collaborating institution, Maulana Azad College, Kolkata conducted the three hours' lecture session delivered by Shri Ujjwal Chattopadhyay, Associate

Professor of Economics, Maulana Azad College on 12th June, 2023. Shri Chattopadhyay delivered his lectures in the Seminar Room of the college; the topic of his lecture was "Cultural Studies and Thoughts of Economic Development".

DAY 7 (14.06.2023):

The seventh class of the course was held online from 10.45 am to 2pm with a 15 minutes break from 12.15 to 12.30. Because of the extreme heat and humidity, students were finding it difficult to commute and so this class was held on the Google Workspace platform. The first one and half hour session was conducted by Dr Jaya Mukherjee, Associate Professor and Head, Department of Economics, St. Paul's C. M. College. The topic of her lecture was "The Social Route to Development". She gave the students an idea about the crucial role played by social sectors in the development process of nations. The second lecture, also of one and half hour duration, was

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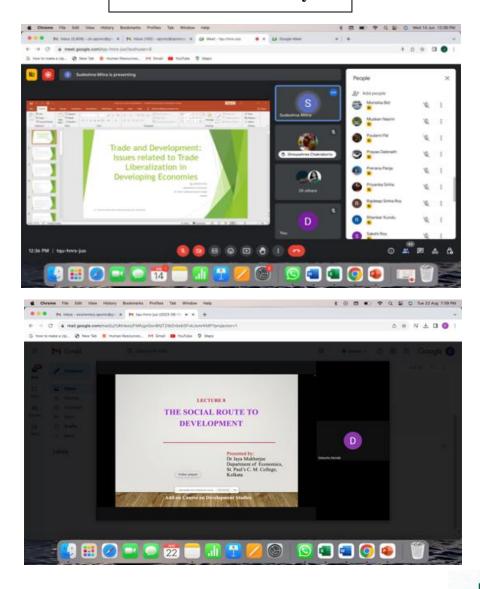


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delivered by Dr Sudeshna Mitra, Assistant Professor in the Department of Economics of St. Paul's C. M. College. Her topic was "Trade and Development". She introduced the students to the impact of trade liberalization on the formal and informal sectors of developing countries.

Screenshots from Day 7



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DAY 8 (21.06.2023)

On the eighth day of the Add-on Course there were two online sessions of duration one and half hours each conducted by Maulana Azad College. In the first session Dr. Madhumita Sen, Associate Professor and Head of the Department of Sociology, Government General Degree College for Women, Ekbalpore, Kolkata delivered her lecture on "Women in the Context of Development: the Myth and the Reality. The speaker of the second session was Dr. Kingshuk Sarkar, Associate Professor and Head of the Department of Economics, Goa Institute of Management. His deliberation was on "The State of Labour Market in India".

Number of students who attended the online event: 25

Screenshots from Day 8





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DAY 9 (27.06.2023)

Prof. Santanu Ghosh delivered the concluding lecture of the course on June 21, 2023; the theme of his lecture was "Institutional Issues in Agrarian Development" and the session was conducted in the Seminar Room of Maulana Azad College, Kolkata.





Concluding Day (28.06.2023):

The Add-on course on Development Studies was completed on 28th of June, 2023 at 12 noon with splendor as all the participants were in high spirits. The Principal of Women's Christian College, Prof. (Dr.) Ajanta Paul has addressed the participants, encouraged them and thanked them for successfully completing this 30-hour long course. The two senior professors Dr. Indrani Banerjee of St. Paul's Cathedral Mission College and Professor Santanu Ghosh of Maulana Azad College also addressed the audience. Dr. Sudeshna Biswas, Head of the Department of Economics, Women's Christian College introduced the chief guest of the Valedictory Session, Prof. Achin Chakraborty, Professor and Former Director, Institute of Development Studies Kolkata. Prof. Chakraborty explained the importance and relevance of development studies in today's Social Science curricula.

for Ajanta Paul)
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Kolkata

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The students also participated in the evaluation test and after successful evaluation, the participants were offered Course-Completion certificates by the guest of honour and our Honourable Principal Madam. The certificate distribution programme was conducted by Dr. Jaya Mukherjee, Associate Professor and Head, Department of Economics, St. Paul's C. M. College.

With a thanks note the Valedictory session came to an end. Everyone associated with the entire course happily agreed to conduct this in coming years also.

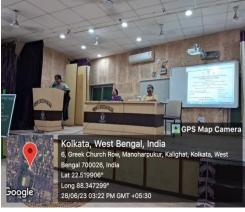
Selected geo tagged images from the concluding day











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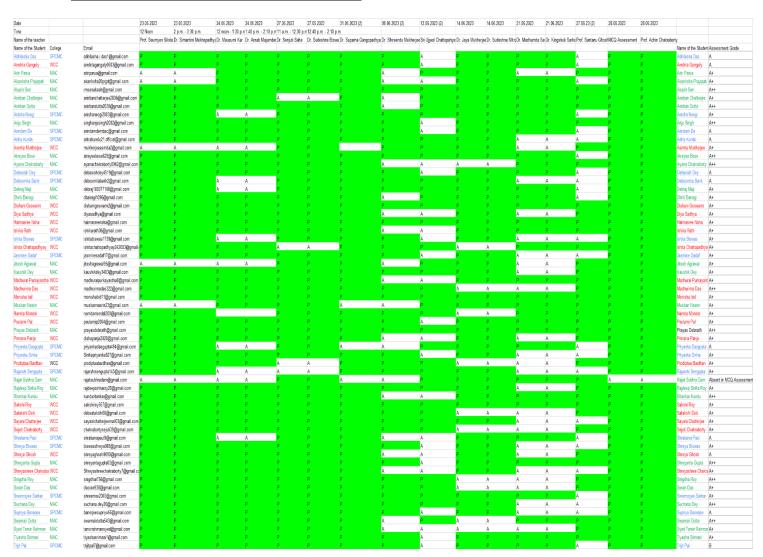


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Daywise attendance record and grade of students

Total students obtaining grades: 60



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পশ্চিমবঙ্গা पश्चिम बंगाल WEST BENGAL

AP 205900

MEMORANDUM OF UNDERSTANDING BETWEEN ASUTOSH COLLEGE, KOLKATA AND MAULANA AZAD COLLEGE, KOLKATA

The MOU is entered into on 24th May 2023 by and between Asutosh College, situated at 92, Shyamaprasad Mukherjee Road, Kolkata 700026 and Maulana Azad College situated at 8, Rafi Ahmed Kidwai Rd, Taltala, Kolkata, West Bengal, Kolkata - 700013.

Incumbent I	Asutosh College	Incumbent 2	Maulana Azad College
Represented by	Dr. Manas Kabi	Represented by	Dr. Subhasis Dutta
Address (Office)	92, Shyamaprasad Mukherjee Road, Kolkata 700026	Address (Office)	8, Rafi Ahmed Kidwai Rd, Taltala, Kolkata, West Bengal, Kolkata - 700013.
Email	mail@asutoshcollege.in	Email	maulanaazadcollegekolkata@gmail.com
Phone number	033-24554504	Phone number	033-29730203

The aforesaid institutions are hereinafter referred to individually as institute and collectively as institutes.

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Maulana Azad College Covt. of West Bengal

N. 1593 Date 17.5.2023	.60	
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THE OBJECTIVES OF THE MOU:

- 1. The MOU involves activities primarily organized by the Post graduate Department of Zoology, Asutosh College with the Post graduate Department of Zoology and Undergraduate Department of Microbiology, Maulana Azad College.
- 2. These Departments after discussion and on mutual consent shall also collaborate with other Research Institutes/Universities Laboratories/IITs/Autonomous Universities for Interdisciplinary lectures/hands on training/workshops.
- 3. Departments shall work towards the further enrichment in the quality of teaching at both undergraduate and postgraduate level by the following exchange programmes;
 - a. Faculty Exchange Programme
 - b. Student Exchange Programme
 - c. Remote Usage of Library
- 4. Faculty exchange program The Zoology and Microbiology departments of the above institutions shall be exchanging their faculties (online/offline as the case may be) in order to impart lectures that will enhance knowledge of the students. This may involve students from both undergraduate and postgraduate curriculum.
- 5. Student exchange program Each of the institutions will be sending over the willing students to the other institution's campus to learn relevant and allied topics from the other discipline through seminar/workshop/hands on training etc.
- 6. Utilization of Library e resources Students can access e resources available at the Library at both Colleges.
- 7. Joint research activities The above institutions shall co-operate, explore in collaborative interdisciplinary research wherever feasible.
- 8. Both departments shall also be engaged in organizing activities as mentioned below involving teaching and non-teaching staff members of both Colleges:
 - a. Capacity Building Hands on Training for Faculty members
 - b. Research Innovation and Entrepreneurship Development programmes
 - c. Programmes on Skill Development and Employability
 - d. Digital empowerment and online education
 - e. Activities related to Academic Social Responsibilities (ACR)
- 9. Professional development/administrative training programs shall be organized jointly by both institutions for teaching and non-teaching staff members.
- 10. Orientation and training programmes for teaching and non-teaching staff members shall be arranged to further entrain them for e governance services like e Pension, e PF, WBHS, HRMS.

OLLEGE STORY

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And College *

Principal

Maulana Azad College

Covt. of West Bengal

POINT OF CONTACT:

Both the institutions shall be assigning an individual as a Point of contact for carrying out the above said activities.

FINANCIAL OBLIGATION:

The agreement is non-financial in nature and does not involve any monetary transactions between the parties for carrying out the objectives of the MOU.

TENURE AND RENEWAL OF THE MOU:

The understanding should initially be for a period of five years and shall be renewed on the mutual consent of both the institutions.

TERMINATION OF THE MOU:

- The MOU shall be terminated in writing and with the mutual consent of both the institutions and involvement of both the heads of institutions will be must in case of termination.
- In case of any dispute concerning this understanding the same shall be tried in mediation through the respective representatives of this understanding or any other person nominated by them.
- All disputes and differences arising out of this understanding if not settled in mediation shall be resolved in arbitration before a sole arbitrator to be jointly nominated by both the institutions herein to that effect upon mutual discussion and in terms of provisions of the arbitration and conciliation act 1996 (as amended till date). The proceedings before the arbitrator shall be in English.
- The laws of India shall be followed while adjudicating the disputes under this understanding.
- The venue of the arbitration shall be decided by the parties with mutual consent within the limits of city of Kolkata.

EFFECTIVE PERIOD OF MEMORANDUM:

This cooperation agreement shall be become effective as soon as the authorized persons of all sides agree on it. There will be two copies of the memorandum equally valid one for each party effective from its dates of signing.

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PRINCIPAL UTOSH COLLEGE

ASUTOSH COLLEGE 92, S. P. MUKHERJEE ROAD KOLKATA-700 026 A Lad Co

Maulana Azad College Covt of West Bengal

Authorized signatory

Dr. Manas Kabi Principal Asutosh college

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Souparna

Datta Ray

Dr. Sriparna Datta Ray IQAC Coordinator Asutosh College

CO ORDINATOR
I Q A C
ASUTOSH COLLEGE
92, S. P. MUKHERJEE ROAD
KOLKATA- 700 026

Bidisha Sankan Datte

WITNESS Asutosh College

Authorized signatory

Dr. Subjasis Dutta
Principal
Maulana Azad College
Principal
Maulana Azad College
Covt. of West Bengal

Dr. Dipak Lumar Som IQAC Coordinator Maulana Azad College Co-ordinator IQAC

Maulana Azad College Govt. of West Bengal 8, R.A. Kidwai Road, Kol.-13

WITNESS Maulana Azad College

Dr. Subir Chandra Dasgupta Professor & Head (W.B.S.E.S.) Department of Zoology Maulana Azad College Covt. of West Bengal



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Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata@gmail.com

Activities under MoU between Maulana Azad College, Kolkata 700013

and Asutosh College, Kolkata 700026

Start date of MoU: 24.05.23

End date of MoU: Continuing

Duration: 5 years

Sl. No.	Name of activity	Starting date	Completion date	Hosted by	No. of participants
1.	Faculty Exchange Programme	9.06.23	9.06.2023	Maulana Azad College	24
	Dr. Siddhartha Kar, Associate Professor, Dept. of Sociology, Asutosh College took classes of UG Sem V students of Sociology Dept. of Maulana Azad College	16.06.23	16.06.23		23
		23.06.23	23.06.23		27
	Participation of students in Add-on course "Hands-on training on biomedical techniques", conducted by the Department of Zoology, Maulana Azad College, Kolkata.	7.08.23	11.08.23	Maulana Azad College	19 (5 from Asutosh College and 14 from Maulana Azad College)

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Principal

Principal

Principal Maulana Azad College

Principal
Maulana Azad College
Kolkata
Govt. of West Bengal

Asutosh College Maulana Azad College



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Report on activities carried out under MOU signed between Maulana Azad College, Kolkata-13 and Asutosh College, Kolkata 700026

> DATE of SIGNING THE MOU: 24.05.2023

> OBJECTIVE/ PURPOSE:

Initiate an academic Collaboration between different departments of the two colleges which would benefit the students and faculty members of both the institutions in their pursuit of academic excellence through Faculty exchange Programmes, Student Exchange Programmes, Remote usage of Library as well as through organization of collaborative workshops, seminars and joint research activities.

> REPORT OF COLLABORATIVE ACTIVITY CARRIED in 2022-23:

1) Faculty Exchange Programme

Sri. Siddhartha Kar, Associate Professor, Dept. of Sociology took online classes of the Semester V students of Sociology Dept., Maulana Azad College, as per details given in the following table. Dr. Shampa Dutta Gupta, Associate Professor, Maulana Azad College Sri Kar to the students before the classes.

> VENUE: Google Meet platform of Maulana Azad College domain Gsuite

Sl No.	Title of the programme	Date	Topic/s taught	Convenor/Teachers involved	Semester	No. of students
1.	Faculty Exchange Programme in Sociology for online classes	9/06/23	Indian sociological thinkers: R.K. Mukherjee	Dr. Siddhartha Kar, Associate Professor	V	24
2.	Faculty Exchange Programme in Sociology for online classes	16/06/23	Indian sociological thinkers D.P. Mukherjee	Dr. Siddhartha Kar, Associate Professor	V	23
3.	Faculty Exchange Programme in Sociology for online classes	23/06/23	Indian sociological thinkers: M.N. Srinivas	Dr. Siddhartha Kar, Associate Professor	V	27

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Invitation letter to Dr. Siddhartha Kar for taking classes from Principal, Maulana Azad College

MAULANA AZAD COLLEGE 8, RAFI AHAMED KIDWAI ROAD, KOLKATA-13

Ref. No. 50A/4/23

Dated the Kolkata, 28.4.23

From: The Principal,

Maulana Azad College,

Kolkata-13.

To: Dr. Siddhartha kar, Associate Prof, & Head, Department of Sociology, Asutosh College, Kolkata-

> Sub.: Invitation to deliver a series of lectures for Department of Sociology, Maulana Azad College.

Dr. Siddhartha Kar,

You are kindly requested to deliver a series of lectures on Indian Sociological Thinkers as per CBCS syllabus for the students of Semester - V, Department of Sociology from the month of May,23 onwards as per your suitable dates. As per your choice you are also free to take classes on hybrid mode. This can also be considered as a part of MoU with your institution.

regards.

Principal

Principal *
Maulana Azad College
Kolkata

Govt, of West Bengal

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Principal
Maulana Azad College

Principal Maulana Azad College Kolkata Govt. of West Bengal



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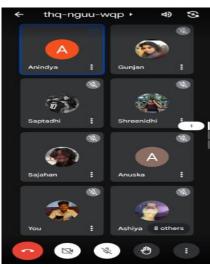


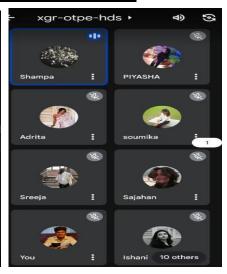
Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata.ac.in



Representative Screenshots of the online classes taken by Sri. Siddhartha Kar













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2) HANDS ON TRAINING ON BIOMEDICAL TECHNIQUES as a part of the Add-on course between Department of Zoology, Maulana Azad College and Dept. of Zoology, Asutosh College. Students of Victoria Institution also participated in the said programme.

Date of the event: 7th August, 2023 to 11th August, 2023

VENUE: Postgraduate Department of Zoology, Maulana Azad College

OBJECTIVE/ PURPOSE: To provide hands on training on biomedical techniques

SPEAKER/S / RESOURCE PERSON/S:

- 1. Prof. Subir C. Dasgupta
- 2. Dr. Dipak Kumar Som
- 3. Dr. Sushanta Roy Karmakar
- 4. Dr. Sujit Kumar Bhowal
- 5. Dr. Rajarshi Ghosh
- 6. Dr. Abhishek Mukherjee
- 7. Dr. Nabanita Ghosh

TARGET AUDIENCE/ PARTICIPANTS: Students of Undergraduate and Postgraduate Studies from all three institutions

BRIEF REPORT ABOUT THE EVENT/ PROGRAMME:

DAY 1: Welcome address by Prof. Subir Ch. Dasgupta, HOD, Department of Zoology, Maulana Azad College and Dr. Dipak K. Som, IQAC Co-Ordinator, Maulana Azad College followed by Hands on training on "Determination of Some Haematological Parameters" by Dr. Rajarshi Ghosh, Assistant Professor in Zoology (WBES), Department of Zoology, Maulana Azad College.

DAY 2: Hands on training on "Effect of pH on Enzyme Activity" by Dr. Abhishek Mukherjee, Assistant Professor in Zoology (WBES), Department of Zoology, Maulana Azad College.

DAY 3: Hands on training on "Mitotic Chromosome Preparation from Bone Marrow of Albino Rat (Rattus sp.)" by Dr. Susanta Roy Karmakar, Associate Professor in Zoology (WBES), Department of Zoology, Maulana Azad College.

Day 4: Hands on training on "Restriction endonuclease digestion and demonstration"

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by Dr. Sujit Kumar Bhowal, Associate Professor in Zoology (WBES), Department of Zoology, Maulana Azad College.

Day 5: Hands on training on "RNA isolation from animal tissue using Trizol reagent" by Dr. Nabanita Ghosh, Assistant Professor in Zoology (WBES), Department of Zoology, Maulana Azad College.

EXPECTED OUTCOME: Students have been entrained through this hands-on training so that they can perform these experiments themselves. The knowledge they have gathered in their theoretical classes were demonstrated in front of them for a better understanding.

Number of participants: Students- 24, Faculty members as resource persons-7

PARTICIPANTS FROM ASUTOSH COLLEGE, DEPARTMENT OF ZOOLOGY (SEM VI)

Sl. No.	Name	Email id
1	Aishali Pal	aishalipal@gmail.com
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4	Sharmistha Chell	sharmisthachell9091@gmail.com
5	Shridipta Kar	shridipta13@gmail.com

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PARTICIPANTS FROM MAULANA AZAD COLLEGE, DEPARTMENT OF ZOOLOGY (SEM VI)

	DEPARTMENT OF ZOOLOGY (SEM VI)					
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14	Deepsikha Mitra	deepsikha.mitra.1996@gmail.com

PARTICIPANTS FROM VICTORIA COLLEGE, DEPARTMENT OF ZOOLOGY (SEM 6)

SI. No.	Name	College Roll no	Gmail
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5	DEBASMITA GHOSH	1260	ghoshdebasmita2002@gmail.com

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Copy of Departmental notice and resolution regarding the workshop

Maulana Azad College, Kolkata Post Graduate Department of Zoology Notice No Z/Gen/73 Dated: 05.6.2023| This is to notify that a DC meeting will be held on 9.6.23 at 12.15 pm in the departmental room to discuss the following agenda: 1. Workshop for the session 2022-2023 2. Matters arising All esteemed colleagues are requested to attend the meeting Principal Maulana Azad College Principal Matulana Azad College Covt. of West Bengal Nolkata -700013 Nolkata -700013

Maulana Azad Collège, Kolkata Post Graduate Department of Zoology Resolution adopted in the meeting: 1. An add-on Course on "Hands-on-Training on Biomedical techniques" will be offered for UG Semester 6 students (both in-house and external students) which will be of 30 hours duration. 2. Time schedule: 7th August, 2023, 2023 to 11th August, 2023, from 11am to 4pm 3. It has been resolved that Dr. Susanta Roy Karmakar, Dr. Abhishek Mukherjee, Dr. Rajarshi Ghosh, Dr. S.K. Bhowal and Dr. Nabanita Ghosh, faculty members of this department will act as Resource person for the aforementioned course. 4. The Syllabus framed by the faculties has also been approved. **Principal Maulana Azad College Ort. of West Bengal Soil of the Syllabus framed by the faculties has also been approved.** **Principal Maulana Azad College Ort. of West Bengal Kolkata -700013 **Principal Maulana Azad College Ort. of West Bengal Kolkata -700013 **Principal Maulana Azad College Ort. of West Bengal Kolkata -700013

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Photographs from the workshop







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REPORT ON MOU ACTIVITY BETWEEN ASUTOSH COLLEGE AND MAULANA AZAD COLLEGE

TITLE OF THE EVENT/PROGRAMME: Faculty/Student Exchange Programme between Asutosh College and Maulana Azad College as part of their MOU activity. This was a 2-day event.

DAY 1

- THEME OF THE EVENT/PROGRAMME: Faculty/Student Exchange Programme
- **▶ ACADEMIC SESSION:** 2023 − 2024
- **DATE:** 06.05.2024
- **VENUE:** Seminar Hall, Centenary Building, Asutosh College
- ➤ **OBJECTIVE:** To gain knowledge from experts in the field of UV, Visible and Fluorescence Spectroscopy and Flow Cytometry and its applications.
- > SPEAKER/RESOURCE PERSON:

Speaker from Maulana Azad College

Dr. Samudra Prosad Banik, Assistant Professor and Head, Department of Microbiology
Maulana Azad College

Speaker from Asutosh College

Dr. Satabdi Nandi, Assistant Professor, Department of Zoology, Asutosh College

> TARGET AUDIENCE/PARTICIPANTS:

Students of B.Sc Zoology Honours and Microbiology Honours (Semester VI) from Asutosh College and Maulana Azad College

Students of M.Sc Zoology (Semester II & IV) from Asutosh College and Maulana Azad College

BRIEF REPORT ABOUT THE EVENT:





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SPEAKER 1: The topic was "UV, Visible and Fluorescence Spectroscopy". Our first speaker spoke extensively about the principle, applications of Spectroscopy. It was a highly interactive session in which students participated and learnt the detailed mechanisms of spectroscopy. He discussed about the following;

- ✓ Beer Lamberts Law and principles of scattering
- ✓ Importance of chromophore, its properties
- ✓ The different ranges for absorption by different proteins/amino acids
- ✓ The absorption spectral shift when proteins are dissolved in water and ethanol
- ✓ Hypochromatic and hyperchromatic shifts were discussed through graphical representations
- ✓ Florescence and Phosphorescence
- ✓ Intrinsic and extrinsic flurophores of biomolecules
- ✓ Labelling should not change the conformity of the protein ideation
- ✓ Natural fluorescence observed Inosine and Wyosine, Application of ethidium bromide in staining nucleic acids
- ✓ The application of ethidium bromide as an intercalating agent when it reacts with DNA and shows fluorescence
- ✓ Static quenching half life unaltered and dynamic quenching half life changes
- ✓ Green fluorescence tag is used extensively in RDT, Localization of proteins can be visualized under the microscope

SPEAKER 2: The topic of her talk was "Flow cytometry Concepts and applications on Biomedical Research". The basic principle of FACS was discussed thoroughly with the students. She discussed the various aspects of flowcytometry;

- ✓ The high throughput instrument has several applications, The basic scattering principle such as FSC/SSC and identify the sub populations of an organ
- ✓ The benefits and advantages of FACS are plenty, gives unbiased data
- ✓ The fluorescence activated cell sorter can simultaneously sort the data and sub populations can be identified
- ✓ The integral components of a FACS includes a fluidics, optics and electronics system
- ✓ The Graphical representation of FSC/SSC was explained using human blood sample
- ✓ The various fluorescence markers, unique fluorescence tags that are used to identify cells
- ✓ Fluorescence labelling with markers, is an unbiased technique, Green vs red fluorophore data is analysed using conjugated antibodies.
- ✓ The different applications of biomedical research were discussed at length, Cell counting, immunophenotyping, cell cycle analysis, imaging, biomarker discovery, apoptosis, cytokine was also discussed
- ✓ Bead based assays were done, Oncology and immuno-oncology was taken up as a case study for detection by FACS.
- ✓ Treatment of cancer is immensely benefitted by FACS, Imaging analysis can also be done.
- ✓ The disadvantages like single cells, live cells, tissue structure being lost, data analysis requires training etc were also taken up for discussion

Principal Principal Principal Maulana Azad College Kolkata



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At the end of both the talks, an active student interaction session was held to further enrich our students. The session concluded with an engaging question-and-answer session and thoughtful discussion among the faculty members.

EXPECTED OUTCOME: To further enrich our students and encourage them to study and apply these high throughput instruments.

BANNER AND GEO-TAGGED PHOTOGRAPHS:



Principal Principal Maulana Azad College Kolkata



Maulana Azad College

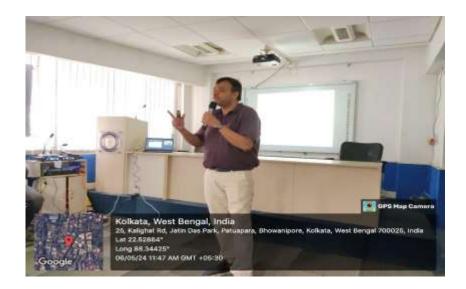
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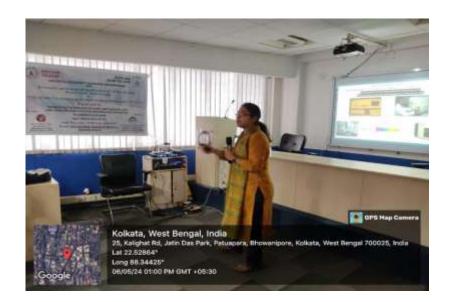




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DAY 2

- > TITLE OF THE EVENT/PROGRAMME: Student Exchange Programme between Asutosh College and Maulana Azad College as part of their MOU activity
- THEME OF THE EVENT/PROGRAMME: Experiential Learning for Post graduate students of Asutosh College and Maulana Azad College
- **▶ ACADEMIC SESSION:** 2023 − 2024
- **DATE:** 07.05.2024
- **VENUE:** Bose Institute Unified Campus, Central Instrumentation Facility, Sector V, Salt Lake
- **OBJECTIVE:** To gain knowledge from experts in the field of Spectroscopy and
- Flow Cytometry, Gene Sequencing, Confocal Microscopy and other instruments and its applications.
- > ACCOMPANYING FACULTY MEMBERS:
 - Dr. Sriparna Datta Ray, Associate Professor in Zoology, Asutosh College Dr. Subhabrata Ghosh, Assistant Professor in Zoology, Asutosh College
- > TARGET AUDIENCE/PARTICIPANTS: Students of M.Sc Zoology (Semester IV) from Asutosh College and Maulana Azad College
- **ATTENDANCE SHEET:** Attached with this report as scanned copy
- PROJECT REPORT ON ONE DAY VISIT TO BOSE INSTITUTE:

https://drive.google.com/file/d/1zPX31WrZJUDR5-164w_xQQPJBTocu0vH/view?usp=sharing

Principal Principal Principal Maulana Azad College Kolkata



CPI

Maulana Azad College

8, RAFI AHMED KIDWAI ROAD, KOLKATA - 700013, WEST BENGAL, INDIA





(बिजान एवं प्रौद्योगिकी विभाग, भारत सरकार के एक स्वापन संस्था) (An Autonomous ristium of Department of Science & Technology, Gost, of India)



सम्पर्कतः विकार विकार | Department of Chemical Sciences समित्रतः श्रीप्ततः परिमा | Unified Academic Campus करोड - वे एउ. प्राट ट ८०, सेक्टर V. मीन्ट लेक मिटी, कोलकाना 700 091 Block-EN, Plot No. 80. Sector-V. Salt Lake City, Kolkata-700 091

संदर्व सं, / Ref. No.

दिनांक / Date : 7/5/24

To Whom It May Concern

This is to certify that the students of the PG department 4th semester and faculty members of Ashutosh College and Maulana Azad College visited Bose Institute, Unified Academic Campus, Salt Lake on the 7th of May,2024. The students visited the Central Instrument Facility and had the opportunity to observe the operation and applications of various sophisticated instruments available at the facility like FACS, Confocal Microscope, HPLC, DNA Sequencer, LCMS, MALDI TOF, and RT PCR. They also had the opportunity to engage in discussion with the technical staff regarding the specifications and principles of the instruments. The list of students and faculty members is attached herewith. I wish them good luck in their future endeavour.

Prof Jayanta Mukhopadhyay Chairman, CIF

Dr. Jayanta Mukhopadhyay CHASHMAN Central Security Facility BOSL INSTITUTE

Telephone : 25693-301 (Chemical Sciences Office), Website : www.jcbose.ac.in

Principal' Principal Maulana Azad College Kolkata



Maulana Azad College





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CPE (1st Cycle) * NAAC Accredited 'A' Grade (2nd Cycle) * DBT STAR College

ISO Certified - 14001: 2015, 50001: 2018, 9001: 2015





Maulana Azad College

8, RAFI AHMED KIDWAI ROAD, KOLKATA - 700013, WEST BENGAL, INDIA





CPE (1st Cycle) * NAAC Accredited 'A' Grade (2nd Cycle) * DBT STAR College

ISO Certified - 14001: 2015, 50001: 2018, 9001: 2015



PHOTOGRAPHS TAKEN DURING VISIT TO BOSE INSTITUTE ON 07.05.2024

Principal Principal Maulana Azad College Kolkata



পশ্চিম্বুজ पश्चिम बंगाल WEST BENGAL

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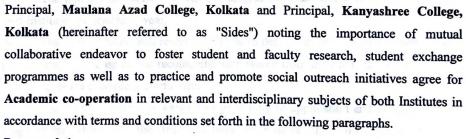
Memorandum of Understanding for Academic Co-operation

Between

Maulana Azad College, Kolkata

And

Kanyashree College, Kolkata



Paragraph 1

Objectives

- 1. This Memorandum of Understanding (hereinafter referred to as the "MoU") intends to set out the general modalities for initiating an Academic Collaboration which is intended to benefit the students and faculty members of both Institutions in their pursuit of academic excellence. Mutual collaboration will be implemented in the following academic activities:
- A8. The two institutions shall seek to promote Faculty Exchanges:
- (i) The exchange of faculty to the mutual benefit of both institutions which has been already established as per Govt order for the department of English and Sociology.
- (ii) Collaboration in teaching as required and research in the field of mutual interest specially Computer Science, Economics, Sociology, Mathematics, Geography etc.,



Principal W. 6 16 16 KANYASHREE COLLEGE (Govt. College for Girls)
Behala: Kolkata

- A) Student and Faculty Exchange Programmes in NEP Perspective.
- B) Joint Organization of Seminars and Conferences and Workshops.
- C) Joint Initiation of Social Outreach Programmes & Skill developmental courses for employability etc.
- D) Initiation and participation of Interdisciplinary courses and add on certificate courses.
- E) Use of Central Instrumental facilities for Research purpose.
- F) Participation in Entry in services & job fair through Placement cell activities
- 2. This MoU will be carried out within the framework of the respective regulations and guidelines set forth by the two Institutions/the affiliating body of the Institutions.

Paragraph 2

Objective and scope of co-operation

- A1. The aim of the Student Exchange Programme is to foster i) research culture, ii) ability to think independently and iii) teamwork in order to groom students for their future doctoral studies.
- A2. Under student exchange programme, selected students will engage in execution of short term research projects under the guidance of faculty members of the host Institution and these will preferably be carried out during the summer and winter vacations during semester breaks.

However, the mentors of the two Sides will jointly decide the actual duration of the project on a case-by-case basis.

- A3. The number of students under this programme shall not exceed maximum 10 per host Institute per academic year.
- A4. The host Institute will reserve the right to decide acceptance of students under this programme depending on the recommendation issued from their parent Institute/University as well as their academic performance.
- A5. The host Institute will waive fees pertaining to application and entrance into these programmes. However, the students have to arrange their own transportation and accommodation including the cost involved therein as well as bear any incidental charges including food, clothing and medical care. The host Institute may charge an amount pertaining to use of lab facilities including consumables which will be intimated at the time of the commencement of the course and has to be borne by the student.
- A6. The host Institute will award certificates to the students upon successful completion of the programme.
- A7. Any intellectual property borne out of these projects will be jointly owned by the two parties and the credit for any publication will also be jointly shared by the two Sides.
- A8. The two institutions shall seek to promote Faculty Exchanges:
- (i) The exchange of faculty to the mutual benefit of both institutions which has been already established as per Govt order for the department of English and Sociology.
- (ii) Collaboration in teaching as required and research in the field of mutual interest specially Computer Science, Economics, Sociology, Mathematics, Geography etc.,



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Principal (14.06.101

KANYASHREE COLLEGE
(Govt. College for Girls)

Behala: Kolkata

- (iii) The exchange of academic materials and publications,
- (iv) Conducting lectures,
- (v) Undertaking joint research-cum Project work
- (vi) Training of staff for purposes of upgrading of teaching and research skills,
- (vii) Participating in seminars, symposiums, and other forms of academic discussions,
- (viii) Co-supervising student dissertations/Projects,
- ix) Capacity building Hands on training for faculty members
- (x) Conducting study tours and joint workshops.

A suitable, mutually agreed upon plan will be worked out for each activity. Terms and conditions for each activity pertaining to such exchanges, including those concerning funding will be worked out between the institutes.

- B1. The two Institutes will organize seminars/webinars/conferences/e-conferences/workshops/e-workshops etc. from time to time to disseminate knowledge as well as to promote and foster academic and scientific ambience.
- B2. The two Institutes will mutually apply for funding to organize these events and the programmes will be held only after consent from both institutions regarding finalization of funding, duration and schedule of such events.
- C1.Both Institutes will also make endeavors from time to time to organize Social Outreach Programmes and Development of skill based courses which will involve arrangement of lab visits by school students, dissemination of scientific knowledge to the society through models and scientific lectures as well as other activities as will be deemed fit by both Institutions. Selected students will be groomed by the faculty members for the conduct of these activities.
- C2. The cost for the organization of these events will be decided jointly by the two Sides and accordingly either the funding bodies will be approached or both Institutions will bear the cost equally from their internal resources or will 1 be decided by the concerned competent authorities.
- D. Initiation of interdisciplinary course and certificate course in the interest of students of the both institute
- E. Use of Central Instrumental facilities for collaborative research purpose.
- F. Arrangement of Job fair and courses in different programme for entry in to services

Paragraph 3

Arrangement of Funding and Implementation

The agreement is absolutely non-financial in nature and does not involve any monetary transactions between the parties for carrying out the objectives of the MoU.

Paragraph 4

Dispute Settlement

The Sides will consult together upon request of either side regarding any emergent dispute or debate relating to the terms of this MoU and will endeavor jointly in a spirit of cooperation and mutual trust to resolve the difficulties or misunderstandings involved therein.

Paragraph 5

Amendment

This MoU may be amended by mutual written consent of both Institutes as and according to any emergent need.

Paragraph 6

Effect and Termination

This MoU will remain in effect from 14 June, 2023 from both Sides for an initial period of three (3) years and will be extended for successive periods of one (1) year, unless either side notifies the other side, in writing, of its intention to terminate this MoU at least three (3) months before the date of expiry of the relevant period. In the event of prior termination of this MoU, all ongoing programmes and/or activities will be implemented as planned unless otherwise agreed between the Sides.

This MOU has been signed with concurrence of the Governing Bodies of Maulana Azad College and Kanyashree College

Signed by and On Behalf of

Maulana Azad College

Govt. of WB, Kolkata t. of West Bengal

Co-Ordinator, IQAC

Maulana Azad Colle

Witnessed by:

Co-Ordinator, IQAC 1916. 23

Kanyashree College

Co-ordinator

IQAC

KANYASHREE COLLEGE

2.



GOVERNMENT OF WEST BENGAL OFFICE OF THE PRINCIPAL

Maulana Azad College 8, rafi ahmed kidwai road, taltala, kolkata 700013





Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata.ac.in

Activities under MoU between Maulana Azad College, Kolkata 700013 and

Kanyashree College, Behala, Kolkata 700034

Start date of MoU: 14.06.2023 End date of MoU: Continuing

Duration: 3 years

Sl. No.	Name of activity	Starting date	Completion date	Hosted by	No. of participants
1.	Resource person in Workshop under Faculty Exchange Programme A Workshop for UG Sem II and Sem IV students of Mathematics on "Ordinary & Partial Differential Equation" where one of the two invited resource persons was Dr. Bimal Kumar Sett, Assistant Professor, Dept. of Mathematics, Kanyashree College, Behala, Kolkata.	24.06.23	28.06.2023	Maulana Azad College, Kolkata.	53
2.	Faculty Exchange Programme Dr. Abhishek Dey, Assistant Professor, Dept. of Physics is taking classes of UG Sem I and Sem IV students of Information Technology (BCA) Dept. at Kanyashree college.	01.07.23 onwards	Continuing	Kanyashree College	15
	Dr. Bimal Kumar Sett, Associate Professor, Dept. of Mathematics is taking classes of UG Sem IV and Sem VI of Mathematics at Maulana Azad College.	01.07.23 onwards	Continuing	Maulana Azad College	52

KANYASHREE COLLEGE (Govt. College for Girls) Behala: Kolkata

Principal Maulana Azad College Principal Maulana Azad College Kolkata Govt. of West Bengal

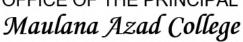
Principal

Principal Maulana Azad College

Kanyashree College



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Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata.ac.in

Report on the activities under MOU for Academic Collaboration between Maulana Azad College Kolkata and Kanyashree College

DATE of SIGNING THE MOU: 14.06.2023

OBJECTIVE/PURPOSE:

Initiate an academic Collaboration between departments of Maulana Azad College and Kanyashree College which would benefit the students and faculty members of both the institutions in their pursuit of academic excellence through faculty exchange programmes, Joint organization of seminars/conferences and workshops, joint initiation pf social outreach programmes etc.

- > TARGET AUDIENCE/ PARTICIPANTS: Students and faculty members of both **Institutions**
- ➤ VENUE: Maulana Azad College and Kanyashree College campus

EXPECTED OUTCOME:

Students and faculty members of both Institutions will be benefited in terms of their academic pursuit in areas of Joint conference organization, student exchange, faculty exchange, training to students in the areas of teaching, innovation and entrepreneurship. Exchange of academic materials and publications, conducting lecture, undertaking joint research cum project work etc.

Report of yearwise activities conducted

A) Before initiation of MOU as linkage between two Institutions

2020-21: Faculty exchange programme

Dr. Mahua Patra, Assistant Professor, Dept. of Sociology, Maulana Azad College took GE 3 & 4 Sociology classes of Geography Hons. students and Smt. Jayeeta Saha Nag, Assistant Professor, Dept. of Economics, Maulana Azad College took Economics GE 1 & 2 classes of Geography Hons. students in the Kanyshree College.

Number of students enrolled: 6







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Copy of Appointment letters and class routine of Dr. Mahua Patra and Smt. Jayeeta Saha Nag

Government of West Bengal Higher Education Department, Appointment Branch Bikash Bhavan Salt Lake, Kolkata-91

No.995-Edn(A)/10M-36/20

Dated, Kolkata, 23rd December, 2020

NOTIFICATION

The Governor is pleased, in the interest of public services, to entrust the following Assistant Professors in Sociology under the West Bengal Educational Service with the additional charge of teaching in newly established Kanyashree College, Behala along with their regular duties at their present place of posting, until further order.

1. Dr. Mahua Patra, Assistant Professor of Sociology, Maulana Azad College, Kolikata.

2. Dr. Roddur Dey, Assistant Professor of Sociology, Chandernagore College, District - Hooghly.

The above mentioned teachers shall report for their new assignment at the earliest.

Sd/ S. Banerjee Assistant Secretary

No.995/1(10)-Edn(A)/10M-36/20

Dated, Kolkata, 23rd December, 2020

Copy forwarded for information and necessary action to:-

- The Director of Public Instruction, West Bengal.
- The Additional Director of Public Instruction (Administration), West Bengal.
- The Principal/ Officer-in-charge, Chandernagore College, District Hooghly. He is requested to continue to draw and disburse the salary of Dr. Roddur Dey as usual, until further order.
- The Principal/ Officer-in-charge, Maulana Azad College, Kolkata. He is requested to continue to draw and disburse the salary of Dr. Mahua Patra as usual, until further order.
- The Principal/ Officer-in-charge, Kanyashree College, Behala, Kolkata.
- Dr. Roddur Dey, Assistant Professor of Sociology, Chandernagore College, District Hooghly.
- Dr. Mahua Patra, Assistant Professor of Sociology, Maulana Azad College, Kolkata.
- The P.S. to the HMIC of this Department.
- The Sr. P.A. to the Principal Secretary of this Department.
- Guard file.



Government of West Bengal Higher Education Department, Appointment Branch Bikash Bhavan Salt Lake, Kolkata-91

No.994 Edn(A)/10M-36/20

Dated, Kolkata, 23" December, 2020

NOTIFICATION

The Governor is pleased, in the interest of public services, to entrust the following Assistant professors / Associate Professors in Economics under the West Bengal Educational Service with the dditional charge of teaching in newly established Kanyashree College, Behala along with their regular uties at their present place of posting, until further order.

1. Dr. Tapas Kumar Pal, Associate Professor of Economics, Bidhannagar College, Salt Lake, Kolkata.

2. Smt. Jayeeta Saha, Assistant Professor of Economics, Maulana Azad College, Kolkata.

The above mentioned teachers shall report for their new assignment at the earliest

Sd/ S. Banerjee Assistant Secretary

No.994/1(10)-Edn(A)/10M-36/20

Dated, Kolkata, 23rd December, 2020

Copy forwarded for information and necessary action to:-

- The Director of Public Instruction, West Bengal
- The Additional Director of Public Instruction (Administration), West Bengal.
- The Principal/ Officer-in-charge, Bidhannagar College, Salt Lake, Kolkata. He is requested continue to draw and disburse the salary of Dr. Tapas Kumar Pal as usual, until further order.
- The Principal/ Officer-in-charge, Maulana Azad College, Kolkata. He is requested to continue draw and disburse the salary of Smt. Jayeeta Saha as usual, until further order
- The Principal/ Officer-in-charge, Kanyashree College, Behala, Kolkata.
- Dr. Tapas Kumar Pal, Associate Professor of Economics, Bidhannagar College, Salt Lake, Kolkata
- Smt. Jayeeta Saha, Assistant Professor of Economics, Maulana Azad College, Kolkata.
- The P.S. to the HMIC of this Department.
- The Sr. P.A. to the Principal Secretary of this Department.
- Guard file.

Assistant Secretary

KANYASHREE COLLEGE, BEHALA SESSION: JULY-JUNE, 2021-22 B.SC. GEOGRAPHY (HONOURS) ROUTINE FOR 1ST AND 3RD SEMESTERS W.E.F. 2:30 – 3:30pm AECC/MIL (RS/DKM) GE (PR/TKP Sem -III Sem-III Sem -III CC (SS) Sem-III DRM-English, RS-English; TB-Economics, TKP-Economics, JS-Economics Day 28.01.21

Principal KANYASHREE COLLEGE (Govt. College for Girls) Behala: Kolkata

Principal Maulana Azad College Principal

Maulana Azad College Kolkata Govt. of West Bengal



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2022-23:

Dr. Mahua Patra, Assistant Professor, Dept. of Sociology, Maulana Azad College took GE 3 & 4 Sociology classes of Geography Hons. students and Smt. Jayeeta Saha Nag, Assistant Professor, Dept. of Economics, Maulana Azad College took Economics GE 1 & 2 classes of Geography Hons. students in the Kanyshree College.

Copy of class routine of Dr. Mahua Patra and Smt. Jayeeta Saha Nag

		SE	SSION: JU	LY-JUNE,	2022-	23	
		E	S.SC. GEOG	RAPHY (HO	NOURS)	
		ROUTIN	FOR 1ST.	SRD AND 5	TH SEM	ESTERS	
		1500000000				W.E.F. 17.	08.2022
Day	Semester	10:30 - 11:30am	11:30 - 12:30am	12:30 - 1:30pm	1:30 - 2:30 pm	2:30 - 3:30pm	3:30 - 4:30pm
Mon	Sem - I	CC (SKS)	GE (TB)	GE (TB)	R	CC(X)	
	Sem - III		CC (SKS)		e	GE - (PR)	GE (PR)
	Sem -V		CC(X)	CC(X)	0	DSE (SKS)	DSE (SKS)
Tue	Sem - I	CC(X)		GE (TB)	S 5	AECC - (RS/DS)	
	Sem - III		CC (SKS)	CC (SKS)		GE - (PR)	
	Sem -V		CC(X)	- Control of the Cont	or	DSE(X)	
Wed	Sem - I	CC(X)	CC (SKS)			GE (JS)	GE (JS)
	Sem - III		CC(X)	CC (SKS)	L	GE (MP)	GE (MP)
	Sem -V	DSE (SKS)		CC (X)	b b	DSE (PR)	
Thu	Sem - I		CC(X)	GE (TB)	r a	AECC - (DRM/DKM)	
	Sem - III		GE (RD)	GE (RD)	1	CC (CSD)	CC(X)
	Sem -V	CC (CSD)	CC (CSD)	CC (CSD)	У	CC(X)	
Fri	Sem - I	CC (SS)		CC (SKS)	W	GE (TKP)	GE (TKP)
	Sem - III		CC (SS)	CC (SS)	0	CC (SKS)	
	Sem -V		DSE (SKS)		k	CC (SS)	CC (SKS)
Sat	Sem - I	CC(X)					
	Sem - III		CC(X)	CC (SKS)			
	Sem -V		CC (SKS)	DSE (PR)			
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Snapshots of Dr. Mahua Patra and Smt. Jayeeta Saha Nag with students of Kanyashree College





Activities after MOU (Year of report – 2022-23)

1. Name of the Activity: A Workshop on "Ordinary & Partial Differential Equation".

Date: 24.06.2023 to 28.06.2023

Venue: Dept. of Mathematics, Maulana Azad College

Resource Persons:

- Dr. Bimal Kumar Sett, Assistant Professor, Dept. of Mathematics, Kanyashree College
- Dr. Debasish Biswas, Assistant Professor, Dept. of Mathematics, Calcutta Girls'
 College

Number of participants: 53

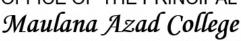
Brief Report of the event: The Department of Mathematics has organized a Workshop on "**Ordinary & Partial Differential Equation**" from 24.06.2023 to 28.06.2023 for the students of Mathematics honours. All the 53 students of







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Semester-2 & Semester-4 actively participated in this Workshop. The participants were enriched by learning the techniques for solving the ODE & PDE using computer programming. In the feedback session the students requested for arranging such Workshop at least two in an academic session.

Permission letter from Principal, Maulana Azad College regarding workshop

To

June 19, 2023

The Principal

Maulana Azad College 8, Rafi Ahmed Kidwai Road, Kolkata 700013.

Sub: Permission for a Workshop on "Ordinary & Partial Differential Equation".

Respected Sir,

The Department of Mathematics has decided in the meeting held on 15th June 2023 that a Workshop on "Ordinary & Partial Differential Equation" will organize from 24.06.2023 to 28.06.2023 The main objective of this Workshop is to motivate the students for several entrance examinations like JAM, TIFR, CMI, etc.

Dr. Debashis Biswas, Assistant Professor, Department of Mathematics, Calcutta Girls' College and Dr. Bimal Kumar Sett, Assistant Professor, Kanyashree College, Behala are agreed to deliver lectures on the above-mentioned Workshop.

We shall be very grateful if you would kindly give your permission to organize this Workshop.

With Regards

Head

Department of Mathematics

Revised allins of

ANYASHREE COLLEGE Govt. College for Girls)



OFFICE OF THE PRINCIPAL





Programme Schedule of the workshop

Maulana Azad College Department of Mathematics

Workshop on "Ordinary & Partial Differential Equation".

Date: 24th June, 2023

Tentative programme schedule:

11:00 A.M. to 11.20 A.M.	Enrollment of Participants.
11:20 A.M. to 11:25 A.M.	Inaugural lecture by Principal, Maulana Azad College
11:25 A.M. to 11:30 A.M.	Speech by IQAC Coordinator, Maulana Azad College
11:30 A.M. to 1:00 P.M.	Lecture-1 on Ordinary Differential Equation by Dr. Bimal Kumar Sett.
1:00 P.M. to 1:15 P.M.	Break
1:15 P.M. to 2:45 P.M.	Lecture-1 on Partial Differential Equation by Dr. Debashis Biswas.
2:45 P.M. to 4:45 P.M.	Problem Solving on both topics

Date: 26th June, 2023

11:00 A.M. to 1:00 P.M.	Lecture-2 on Ordinary Differential Equation by Dr. Bimal Kumar Sett.
1:00 P.M. to 1:15 P.M.	Break
1:15 P.M. to 3:00 P.M.	Lecture-2 on Partial Differential Equation by Dr. Debashis Biswas.
3:00 P.M. to 4:30 P.M.	Problem Solving on both topics.

Date: 27th June, 2023

Date. 27 Guile, 2020	
11:00 A.M. to 1:00 P.M.	Lecture-3 on Ordinary Differential Equation by Dr. Bimal Kumar Sett.
1:00 P.M. to 1:15 P.M.	Break
1:15 P.M. to 3:00 P.M.	Lecture-3 on Partial Differential Equation by Dr. Debashis Biswas.
3:00 P.M. to 4:30 P.M.	Solution of ODE and PDE using computer programming.

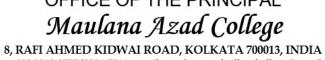
Date: 28th June, 2023

Date. 20 Julie, 2025	
11:00 A.M. to 12:00 P.M.	Lecture-4 on Ordinary Differential Equation by Dr. Bimal Kumar Sett.
12:00 P.M. to 1:00 P.M.	Lecture-4 on Partial Differential Equation by Dr. Debashis Biswas.
1:00 P.M. to 1:30 P.M.	Break
1:30 P.M. to 2:30 P.M.	MCQ Test on both topics.
2.30 P.M to 3.00 P.M	Feedback from participants.
3.00 P.M to 3.30 P.M	Valedictory Session and Certificate distribution.





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Attendance record of participants:

Department of Mathematics Attendance for the Workshop on "Ordinary Partial Differential Equation".

SI. No.	Name	Signature
1	ABHIJEET SAHA	Abhijeet Saha
2	ANKANA SARKAR	Ankana Saman
3	ANKIT DAS	Ankit Das
4	ARCHIRSHMAN ROY	Archironnen Ray
5	BISWAJIT SHEE	Bisional shee
6	CHITRITA HAZRA	Chitrita Hazra
7	KISMAT KHANAL	Kismat Khanal
8	KRISHNENDU GHOSH	Krishnendu Ghosh.
9	MD SAFIR UDDIN	Md. Safinadin.
10	MD ZEESHAN ALAM	Md Zeeshan Afam
11	MD KAIF ALAM	Md. Kaif Afan.
12	MEGHA MONDAL	Megha Mondal.
13	NABEELA JAHAN	Nabeela Jahan
14	NUR AKTAR JAMIL	Nas Aktar Jamel
15	PALASH KARMAKAR	Palash Karmakar
16	PREET CHOKHANI	Pucet Chokhani
17	RANAJIT GHOSH	Romayit Whash
18	RITAJA GHOSH	Ritaja Ghosh
19	SAMIRAN DAS	Bountain Da
20	SK IMROZ ALI	Sk Imroz Ali
21	SOMYAJIT SAHA SAHA	Somyajit Saha
22	SRIJAN DAS	5-Dur
23	SUBHRO CHAKRABORTY	Subhre chakraborty.
24	SUVECCHA BHATTACHARYYA	Sureccha Bhattacharrya
25	TANISHA RAJAK	Tanisha Rajak
26	TITLI BISWAS	titli Bisvas

Principal
KANYASHREE COLLEGE
(Govt. College for Girls)
Behala: Kolkata



GOVERNMENT OF WEST BENGAL OFFICE OF THE PRINCIPAL





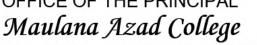
Department of Mathematics Attendance for the Workshop on "Ordinary Partial Differential Equation".

		1 4 1 1 1/
27	ANIRBAN KARAN	Animban Kaman
28	ARHANA DAS	Arhana Dao
29	ARNAB CHHARI	Arnab Chhari Mastura Parovin
30	MASTURA PARVIN	Mastura Farovin
31	MASUDUZZAMAN GAZI	Masuduzzamom - Gazi
32	MASUM YEHANA	Masum Yehana
33	NILAVO ROY	Nilavo Roy
34	NIRMALYA NASKAR	Absent
35	PROMIT BHATTACHARYA	Posomit Bhattachanga.
36	PUSKAR DAS	Pulkar Dal
37	RAKHI HAZRA	Rakhi Hazma.
38	RANJAN PATRA	Raman Patra
39	SAGNIK BEJ	Sagnik Bej
40	SAMUDRA MITRA	Samudra Mitra
41	SAYAN DUTTA	Layan Brutta.
42	SENEPTA YEASMIN GOLDER	Senepla Yeasmin Greders.
43	SHINJAN MUKHERJEE	Shryon Mukhofer
44	SHRESTHA SATPATHI	Shrustha Satpathi
45	SHREYA BASAK	Shreya Basak
46	SHUBHAJIT GHOSH	Shubbasit alosh
47	SK SAID HOSEN	Absent
48	SK SAIDUL ISLAM	Absent
49	SOHEL SK	Sohel SK
50	SOUMYADIP GHOSH	Soumyadit ghosh
51	SUBHANJAN MAHATA	Subhanjan Mahata
52	SUJAY BANERJEE	Sujay Baneyel.
53	SUMIT MANDAL	Sumit Moondal.
54	SUNEETH DEBNATH	Sumeeth Debroth
55	SUPRATIM MANDAL	Supration Mondal
56	SUSHOVAN JANA	Sushovan Jana





GOVERNMENT OF WEST BENGAL OFFICE OF THE PRINCIPAL





Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata.ac.in



Photographs of the event

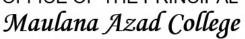








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1. Name of the activity: Faculty exchange Programme

Date	Department	Semester	Course Code	Topics	Teachers Involved	Affiliating College	Number of students
01.07.23 onwards	Information Technology (BCA)	Sem I Sem IV	BCAC403 and BCAC493	Programming for Problem Solving through C Python programming	Dr. Abhishek Dey, Assistant Professor, Dept. of Physics	Maulana Azad College	6 (Sem I) 9 (Sem IV)
01.07.23 onwards	Mathematics	Sem IV Sem VI	CC10 CC14	Statics Numericals	Dr. Bimal Kumar Sett, Assistant Professor, Dept. of Mathematics	Kanyashre e College	26 (Sem IV) 26 (Sem VI)

Copy of letters from Principals of both colleges regarding the faculty Exchange Programme









GOVERNMENT OF WEST BENGAL OFFICE OF THE PRINCIPAL







Class going on at Maulana Azad College by Dr. Bimal Kumar Sett



Class going on at Kanyashree college by Dr. Abhishek Dey









পশ্চিমবুঁজ पश्चिम बंगाल WEST BENGAL

81AB 607147



MEMORANDUM OF UNDERSTANDING On SHARING OF EXPERTISE & EXPERIENCE ON OUALITYINITIATIVE

Between Maulana Azad College 8, Rafi Ahmed Kidwai Road, Kolkata- 700013 and

The Muslim Institute 21A, Haji Md. Mohsin Square, Kolkata-700016



By and Between

MAULANA AZAD COLLEGE, KOLKATA, 8, Rafi Ahmed Kidwai Road, Kolkata 700013, West Bengal, India, The First Party represented herein by its Principal as Representative and Competent Authority(Hereinaster referred as "First Party", the institution which expression, unless excluded by or repugnant to the subject or context shall include its successors –in office, administrators and assigns)

Maulana Azad College Kolkata



Nisar Ahmed Hony General Secretary





THE MUSLIM INSTITUTE, KOLKATA, 21A, Haji Md. Mohsin Square, Kolkata 700016, West Bengal, India, The Second party and represented herein by the Secretary, as Representative and Competent Authority (Hereinafter represented as "Second Party", the institute which expression, unless excluded by or repugnant to the subject or context shall include its successors—in office, administrators and assigns)

(First Party and Second Party are hereinafter jointly referred to as 'Parties' and individually as 'Party') WHEREAS

Both parties having the objective of initiating and sustaining Quality Initiatives towards the common goal of empowering their respective institutions, look forward to share each other's expertise and experience for mutual benefit in Quality Assurance.

In view of the above and in the spirit of mutually of esteem and recognizing the common vision of institutional empowerment both parties enter into an understanding of trust and belief to work together towards the said common cause.

Both Institutes agree to develop the following collaborative activities in the academic and other areas of mutual interest, on a basis of equality and reciprocity. The two institutions shall seek to promote:

- 1. Arrangement of special lectures by faculty /Experts to share their expertise.
- 2. Participation in seminars, symposiums, and other types of academic discussions so as to bring forth innevations and mutual enrichment.
- 3. Organization of joint seminars, conferences, and workshops on topics of mutual interest and to invite each other's faculty /Experts to participate therein in the interest of the students.
- 4. Students' visit to Library and Gym subject to availability of seats.
- 5. Students' will be invited to attend seminars, conference or workshop.
- 6. Both institutes may use the Auditorium/Seminar Hall of the institutions without any fee subject to availability of dates.
- 7. The teaching faculty of Maulana Azad College Kolkata may be made available to deliver lecture as Counsellors in different Competitive examinations conducted by the Muslim Institute as and when required.

Each institution shall appoint one member of its faculty to coordinate the programme on its behalf.

Further, a ccordination committee consisting of a programme coordinator from the side of the

Muslim Institute, and a programme coordinator from the side of Maulana Azad College, will

Periodically review and identify ways to strengthen cooperation between the two institutions.

Library committee and sports committee of will arrange joint programme with for the students to

in order to enhance their knowledge.

The Memorandum shall remain in force for a period of FIVE years commencing from effective

date.

Both parties welcome the establishment of this Memorandum for cooperation and jointly agree to

the provision as set out above.

INSTITUTE OF THE PROPERTY OF T

Signed for the Muslim Institute

College

Secretary Nisar Ahmed
Hony General Secretary
The Muson Institute

Signed for the Maulana Azad

Principal Principal

Matelana Azad College

Kolkata

Witnessed by

Sa. Newmul

Sk. Nazrul Islam Hony.Asstt. General Secretary The Muslim Institute

Treasurer

The Neuslim Institute 21A, Haji Md. Mohsin Square Kolkata-700 016 Co-ordinator

Maulana Azad College Govt. of West Bengal &, R.A. Kidwai Road, Kol.-17

Associate Professor Maulana Azad College Kolkata



GOVERNMENT OF WEST BENGAL OFFICE OF THE PRINCIPAL Maulana Azad College 8, RAFI AHMED KIDWAI ROAD, TALTALA, KOLKATA 700013



Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com

Website: https://maulanaazadcollegekolkata.ac.in

Activities under MoU between Maulana Azad College, Kolkata 700013 and Muslim Institute, Kolkata 700 126

Start date of MoU: 16.06.2023

End date of MoU: Continuing

Duration: 5 years

Sl. No.	Name of activity	Starting date	Completion date	Hosted by	No. of participants
1.	Sharing of infrastructure and resources				
				Muslim	
	Library	19/06/23	Continuing	Institute	25
	Gymnasium	10/08/2023	Continuing	Muslim institute	62

Nisar Ahmed Hony General Secretary The Musson Institute Principal Maulana Azad College

Principal Maulana Azad College Kolkata Govt. of West Bengal



GOVERNMENT OF WEST BENGAL OFFICE OF THE PRINCIPAL

Maulana Azad College



Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata.ac.in



Report on the activities under MoU between Maulana Azad College Kolkata and Muslim Institute, Kolkata for joint organization of seminars/workshops and sharing of infrastructural facilities

- > DATE of SIGNING THE MOU: 16.06.2023
- > OBJECTIVE/ PURPOSE:

Arrangement of special lectures by faculty/Expertise to share their expertise Participation in seminars, symposium, and other types of academic discussions Student visit to library and gymnasium

Joint sharing of infrastructural facilities such as seminar auditorium.

- > TARGET AUDIENCE/ PARTICIPANTS: Students and faculty members of both Institutes
- ➤ VENUE: Muslim Institute and Maulana Azad college

EXPECTED OUTCOME:

Fostering of academic excellence through mutual collaboration and providing access to student resources including



Nisar Ahmed
Hony General Secretary
The Muson Institute





GOVERNMENT OF WEST BENGAL OFFICE OF THE PRINCIPAL

Maulana Azad College



Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata.ac.in



Yearwise report of Activity

1. Name of the Activity- Sharing of infrastructure and resources

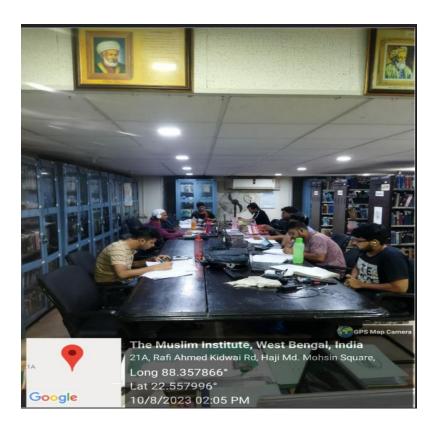
Use of the library of Muslim Institute by students of Maulana Azad College

Students have been using the library of the Institute to access the treasure trove of documents and informations of Indian literature and language.

Date of Initiation of activity: 19.06.2023

Number of students who participated – 25

Representative pictures





Nisar Ahmed
Hony General Secretary
The Musson Institute





GOVERNMENT OF WEST BENGAL OFFICE OF THE PRINCIPAL

Maulana Azad College



Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata.ac.in







Nisar Ahmed
Hony General Secretary
The Muson Institute



Principal Maulana Azad College Kolkata Govt. of West Bengal



GOVERNMENT OF WEST BENGAL OFFICE OF THE PRINCIPAL

Maulana Azad College



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1. Name of the Activity- Sharing of infrastructure and resources

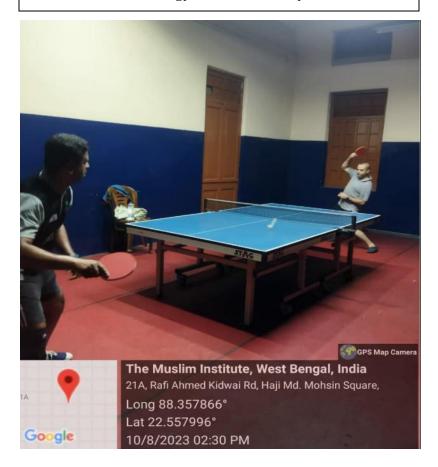
Use of the Gymnasium of Muslim Institute by students of Maulana Azad College

Students have been using the well-equipped Gymnasium of the Institute for staying fit and strong

Date of Initiation of activity: 10.08.2023

Number of students who participated -62

Representative picture of students playing Table tennis at the gymnasium facility





Nisar Ahmed
Hony General Secretary
The Musen Institute





GOVERNMENT OF WEST BENGAL OFFICE OF THE PRINCIPAL

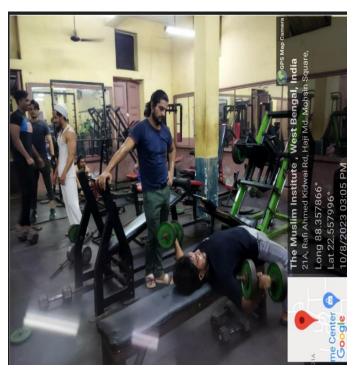
Maulana Azad College



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Representative pictures of students using the gymnasium facility







Nisar Ahmed
Hony General Secretary
The Muson Institute





পশ্চিমৰুগ पश्चिम बंगाल WEST BENGAL

80AB 537574

MoU AGREEMENT

THE AGREEMENT IS MADE ON THIS

THE DATE OF

Mendana Azad College

West Bengal, India

Ahmed Kidwai Rd, Taltala, Kell

Or. Meitnyi Qey Kenjilal
Principal
VICTORIA INSTITUTION
(College)



Maulana Azad College Kolkata Govt. of West Bengal

MEMORANDUM

of

UNDERSTANDING

between



Victoria Institution (College), 78-B, Acharya Prafulla Chandra Road, Kolkata-700 009, West Bengal, India

AND



Maulana Azad College,

8, Rafi Ahmed Kidwai Rd, Taltala, Kolkata-700013,

West Bengal, India

Dr. Maitreyi Ray Kanjilal
Principal
VICTORIA INSTITUTION
(College)

Principal Maulana Azad College Kolkata Govt. of West Bengal

COLLABORATION AGREEMENT

This agreement is entered into by the Victoria Institution (College), 78-B Acharya Prafulla Chandra Road, Kolkata-700 009, West Bengal and Maulana Azad College,

8, Rafi Ahmed Kidwai Rd, Taltala, Kolkata, West Bengal 700013

- The purpose of this agreement is to develop academic and educational collaboration through faculty exchange, student exchange, seminar/webinar talks, and resource exchange including sharing of best practices for the holistic development of both the institutions.
- 2. This collaboration is a manifestation of the parties' intention to collaborate and is not a legally binding contract.
- Both organizations agree to conduct the following collaborative activities in academic areas of mutual interest, on the basis of equality and reciprocity keeping in view of the revised curriculum implementing NEP.

Both the institution mutually agrees to promote and develop cooperation with various activities listed below:

- Students of both institutions will have equal access to quality enhancement programs organised by the institutions, subject to the availability of resources.
- Exchange of students between the two institutions for academic/ extracurricular purposes.
- 3. Exchange of faculty members between the two institutions.
- Participation/ joint conducting add-on courses/ value added courses/ certificate programmes/ seminars/ workshops in both the institutions on the basis of mutual discussion.

Or. Maitreyi Ray Kanjilal
Principal
VICTORIA INSTITUTION

Principal
Maulana Azad College
Kolkata
Govt. of West Bengal

- 5. As long as this agreement is in force, the Heads of both the Institutions will appoint a faculty member to act as coordinator for the effective implementation of the activities of collaboration.
- 6. Both the parties agree that any dispute arising during the course of implementation of this collaboration will be sorted out with mutual discussion.
- 7. Strengthen understanding and appreciation between two institutions.
- 8. No financial transaction will be involved except the fees charged for add-on courses,in any collaborative activities.
- Special cases may be considered by the two Heads of the Institutions and IQAC Coordinators.
- 10. This agreement will remain in force for five (05) years from the date of signing unless it is terminated by either institution with a minimum of one month's notice to the other institution.

This collaboration agreement is entered or	the 19th	day of June 1	month
and2023 year.			

1.

2.

Principal, Pay Kaniilal Victoriam Mailffish (College) Principal VICTORIA INSTITUTION (College)

Witness:

1. Dr. Sumallya Kanushan
IQAC Coordinator
Victoria Institution (College)

2. Dor. Debjani Das (Ghosh) Moll Convener, GB Hember, 18AC Hember Principal Azad College
Maulana Azad College
Govt. of West Bengal

Witness

Co-ordinater IQAC

Maulana Azad College Govt. of West Bengal S. R.A. Kidwai Road, Kel. 12

Samble Road Sout



OFFICE OF THE PRINCIPAL

Maulana Azad College 8, RAFI AHMED KIDWAI ROAD, TALTALA, KOLKATA 700013



Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata.ac.in

Activities under MoU between Maulana Azad College, Kolkata 700013 and Victoria Institution (College), **Kolkata** 700009

Start date of MoU: 19.06.2023

End date of MoU: Continuing

Duration: 5 years

Sl.	Name of activity	Starting date	Completion	Hosted by	No. of
No.			date		participants
1.	Students' participation in	7.08.2023	11.08.2023	Maulana Azad	19 (5 from
	Add-on course			College	Victoria
					College and 14
	Hands on Training on				from Maulana
	"Hands-on training on				Azad College)
	biomedical techniques"				
	Invited lecture under	8.08.2023	8.08.2023	Victoria	60
	Faculty Exchange			College	
	Programme				
	Dr. Shampa Dutta Gupta,				
	Associate Professor,				
	Maulana Azad College				
	delivered a lecture on				
	Women's Empowerment in				
	the Orientation Programme				
	organized by Victoria				
	Institution (College) for the				
	B.A. Honours students of				
	Semester 1.				

Dr. Maitreyi Ray Kanjilal Principal VICTORIA INSTITUTION (College)

Principal

Victoria Institution

Principal Maulana Azad College Principal Maulana Azad College Kolkata Govt. of West Bengal

Principal

Maulana Azad College



OFFICE OF THE PRINCIPAL Maulana Azad College



Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata.ac.in



Report on the activities under MOU for Academic Collaboration between

Maulana Azad College Kolkata and Victoria College

A MoU has been signed with Victoria Institution (College) & Maulana Azad College on 19th June, 2023.

PURPOSE:

- To strengthen relationships, understanding and appreciation between two institutions
- To encourage teacher exchange and student exchange in regular academic courses and addon courses.

Activities under Memorandum of Understanding between Victoria Institution (College), Kolkata and Maulana Azad College, Kolkata

Year of report: 2022-23

Name of the Activity: Hands on training on biomedical techniques

1) **HANDS ON TRAINING ON BIOMEDICAL TECHNIQUES** as a part of the Addon course between Department of Zoology, Maulana Azad College and Dept. of Zoology, Victoria Institution. Students of Asutosh College also participated in the said programme.

Date of the event: 7th August, 2023 to 11th August, 2023

VENUE: Postgraduate Department of Zoology, Maulana Azad College

OBJECTIVE/ PURPOSE: To provide hands on training on biomedical techniques

SPEAKER/S / RESOURCE PERSON/S:

- 1. Prof. Subir C. Dasgupta
- 2. Dr. Dipak Kumar Som
- 3. Dr. Sushanta Roy Karmakar
- 4. Dr. Sujit Kumar Bhowal
- 5. Dr. Rajarshi Ghosh
- 6. Dr. Abhishek Mukherjee
- 7. Dr. Nabanita Ghosh







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TARGET AUDIENCE/ PARTICIPANTS: Students of Undergraduate and

Postgraduate Studies from all three institutions

BRIEF REPORT ABOUT THE EVENT/ PROGRAMME:

DAY 1: Welcome address by Prof. Subir Ch. Dasgupta, HOD, Department of Zoology, Maulana Azad College and Dr. Dipak K. Som, IQAC Co-Ordinator, Maulana Azad College followed by Hands on training on "Determination of Some Haematological Parameters" by Dr. Rajarshi Ghosh, Assistant Professor in Zoology (WBES), Department of Zoology, Maulana Azad College.

DAY 2: Hands on training on "Effect of pH on Enzyme Activity" by Dr. Abhishek Mukherjee, Assistant Professor in Zoology (WBES), Department of Zoology, Maulana Azad College.

DAY 3: Hands on training on "Mitotic Chromosome Preparation from Bone Marrow of Albino Rat (Rattus sp.)" by Dr. Susanta Roy Karmakar, Associate Professor in Zoology (WBES), Department of Zoology, Maulana Azad College.

Day 4: Hands on training on "Restriction endonuclease digestion and demonstration" by Dr. Sujit Kumar Bhowal, Associate Professor in Zoology (WBES), Department of Zoology, Maulana Azad College.

Day 5: Hands on training on "RNA isolation from animal tissue using Trizol reagent" by Dr. Nabanita Ghosh, Assistant Professor in Zoology (WBES), Department of Zoology, Maulana Azad College.

EXPECTED OUTCOME: Students have been entrained through this hands-on training so that they can perform these experiments themselves. The knowledge they have gathered in their theoretical classes were demonstrated in front of them for a better understanding.

Number of participants: Students- 24, Faculty members as resource persons-7







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PARTICIPANTS FROM VICTORIA COLLEGE, DEPARTMENT OF ZOOLOGY (SEM VI)

	Name	College Roll no	Gmail
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5	Debasmita Ghosh	1260	ghoshdebasmita2002@gmail.com

PARTICIPANTS FROM MAULANA AZAD COLLEGE, DEPT. OF ZOOLOGY (SEM VI)

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4	Asraful Gharami	asrafulgharami2@gmail.com
5	Sohana Sultana	sultanasohana520@gmail.com
6	Srijita Saha	sahasrijita2001@gmail.com
7	Abhisek Patra	abhisekpatra2001@gmail.com
8	Akansha Dutta	akanshadutta557@gmail.com







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10	Shramana Halder	shramanahalder1234@gmail.com
11	Sayak Mallick	sayakmallick0907@gmail.com
12	Taniya Islam	taniyaneha0000@gmail.com
13	Samraggi Chakraborty	mail2samraggichakraborty@gmail.com
14	Deepsikha Mitra	deepsikha.mitra.1996@gmail.com

PARTICIPANTS FROM ASUTOSH COLLEGE, DEPARTMENT OF ZOOLOGY, (SEM VI)

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		pradipkundu911@gmail.com
3	Poulomi Kundu	
	Sharmistha Chell	sharmisthachell9091@gmail.com
4		-
5	Shridipta Kar	shridipta13@gmail.com







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Copy of Departmental notice regarding the Add-on course

Post Graduate Department of Zoology Notice No Z/Gen/73 Dated: 05.6.2023 This is to notify that a DC meeting will be held on 9.6.23 at 12.15 pm in the departmental room to discuss the following agenda: 1. Workshop for the session 2022-2023 2. Matters arising All esteemed colleagues are requested to attend the meeting Department of Zoology Maulana Azad College HEAD P.G. Department of Zoology Principal | Maulana Azad College Maulana Azad College Govt. of West Bengal Covt. of West Bengal Kolkata -700013 Maulana Azad College, Kolkata



Principal Maulana Azad College

Principal Maulana Azad College Kolkata Govt. of West Bengal



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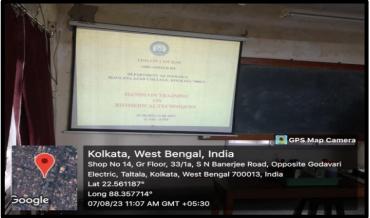
Photographs from the workshop

















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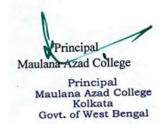






2. Invited lecture under faculty exchange programme







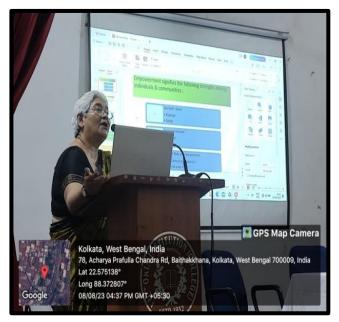
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Dr. Shampa Dutta Gupta, Associate Professor, Maulana Azad College delivered a lecture on Women's Empowerment on 8th August, 2023 in the Orientation Programme organized by Victoria Institution (College) for the B.A. Honours students of Semester 1. The newcomers were enlightened by the lecture very much.











GOVERNMENT OF WEST BENGAL OFFICE OF THE PRINCIPAL Maulana Azad College



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Photograph of MoU signing









Govt. of West Bengal



পশ্চিমবংগ पश्चिम बंगाल WEST BENGAL

33AA 697806

Memorandum of Understanding for Academic Co-operation Between Maulana Azad College, Kolkata And

Government College of Art and Craft, Calcutta (Kolkata)

Principal, Maulana Azad College, Kolkata and Principal, Government College of Art and Craft, Calcutta (hereinafter referred to as "Sides") noting the importance of mutual collaborative endeavors to foster student and faculty research, as well as to practice and promote social outreach initiatives agree for **Academic cooperation** in relevant and interdisciplinary subjects of both Institutes in accordance with terms and conditions set forth in the following paragraphs.

Paragrah 1

Objectives

- 1. This Memorandum of Understanding (hereinafter referred to as the "MoU") intends to set out the general modalities for initiating an **Academic Collaboration** which is intended to benefit the students and faculty members of both Institutions in their pursuit for achieving academic excellence. Mutual collaboration will be implemented in the following academic activities
- a) Joint organization of Seminars and conferences
- b) Joint Initiation of Social Outreach programmes.



2) This

S 8 3 6 3 . W JUST

G.C. SAHA

(Govt.) LICENSED STAMP VENDOR

11A, Mirza Galib Street, Kol-87

Sue Date Sign



2) This MoU will be carried out within the framework of the respective regulations and guidelines set forth by the two Institutions/the affiliating body of the Institutions.

Paragraph 2

Objective and scope of co-operation

Al. The two Institutes organize from time-to-time seminars/webinars/conferences/e-conferences/workshops/e-workshops to disseminate Knowledge as well as to promote and foster academic ambience.

A2. The two Institutes will mutually apply for funding to organize these events and the programmes will be held only after consent from both institutions regarding finalization of funding, duration and schedule of such events.

BI. Both Institutes will also make endeavors time to time to organize Social Outreach Programmes which will involve arrangement of Art studios visits by History students/Art History students of both Colleges, dissemination of knowledge in Art history/History to the society through models and lectures as well as other activities as will be deemed to be fit by both Institutions. Selected students will be groomed by the faculty members for conduction of these activities.

Paragraph 3

Arrangement of Funding and Implementation

- 1. Sides may jointly decide upon the cost of running the programme under the budget heads when and where funding will be available:
- a) T.A.. to the participating faculties
- b) Transportation and tiffin allowance to the participating students
- c) Other incidental charges including refreshments in case of seminars/social outreach initiatives. Accordingly the expenses associated with the programme may be decided and application may be made to the competent funding agencies.
- 2. Sides may place the modalities, duration and associated cost of the course to their respective competent authorities for approval. The programme may be implemented only after such sanction is obtained.
- 3. All cooperative activities under this MoU will be subject to the availability of funds to the Sides.
- 4. Remuneration /TA of 'Resource Persons' as and when necessary in accordance to the nature of the programme.

Paragrah -4

Amendment

This MoU may be amended by mutual written consent of both Institutes as and according to any emergent need.



Paragraph 5

Effect and Termination

This MoU will remain in effect from the date of signature of competent authorities from both Sides for an initial period of three (3) years and will be extended for successive periods of one

(1) year, unless either side notifies the other side, in writing, of its intention to terminate this Mol at least three (3) months before the expiry date of the relevant period. In the event of prior termination of this MoU, all ongoing programmes and/or activities will be implemented as planned unless otherwise agreed between the Sides.

This MOU has been signed with concurrence of the Governing Body of Maulana Azad College and as per provision of the Government College of Art and Craft. Calcutta.

Signed by and On Behalf of

Principal

Signature and delivered by the

22/07/2124. llege of Art and Craft, Calcutta

Signature and delivered by the Maulana Azad College. Kolkata

Principal Maulana Azad Colleg. Kolkata

Signed by and On Behalf of Principal

RINCIPAL

Coordinator, IQAC Signature and delivered by the Government College of Art and Craft, Calcutta

Witnessed by: 1

Coordinator, IQAC Signature and delivered by the Maulana Azad College. Kolkata Co-ordinator

IQAC Maulana Azad College Govt. of West Bengal o, R.A. Kidwai Road, Kol.-13

1.

Associate Professor Maulana Azad College Kolkata

22/1/2024

Witnessed by: 2.



GOVERNMENT OF WEST BENGAL OFFICE OF THE PRINCIPAL

Maulana Azad College 8, RAFI AHMED KIDWAI ROAD, TALTALA, KOLKATA 700013



Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata.ac.in

Activities under MoU between Maulana Azad College, Kolkata 700013 and

Government College of Art and Craft, Kolkata 700016

Start date of MoU: 22.01.2024

End date of MoU: Continuing

Duration: 3 years

Sl. No.	Name of activity	Starting date	Completion date	Hosted by	No. of participants
1.	Faculty Exchange programme Mrs. Swati Chakraborty,	4.07.2024	4.07.2024	Government College of Art and Craft	100 from Government College of Art and Craft.
	Associate Professor, Dept. of Bengali, Maulana Azad College took classes of Sem II AECC 2.1, MIL-Bengali	05.07.2024	05.07.2024		
2.	Faculty Exchange Programme Mrs. Pritha Chakrabarty, Associate Professor, Dept. of English, Maulana Azad College took classes of Sem II AECC 2.1, Alternative English	04.07.2024	04.07.2024	Government College of Art and Craft	25 from Government College of Art and Craft.
		05.07.2024	05.07.2024		

Principal Maulana Azad College Principal Maulana Azad College Kolkata

Govt. of West Bengal



GOVERNMENT OF WEST BENGAL

OFFICE OF THE PRINCIPAL

Maulana Azad College



8, RAFI AHMED KIDWAI ROAD, KOLKATA 700013, INDIA

Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata.ac.in

Report on the activities under MOU for Academic Collaboration between Maulana Azad College Kolkata and Government College of Art and Craft, Calcutta (Kolkata).

➤ Date of Signing the MOU: 22.01.2024

➤ Objective:

Initiate an academic Collaboration between departments of Maulana Azad College and Government College of Art and Craft which would benefit the students and faculty members of both the institutions in their pursuit of academic excellence.

Target Participants: Students and faculty members of both Institutions.

➤ Venue: Maulana Azad College and Government College of Art and Craft

> Expected Outcome:

Students and faculty members of both Institutions will be benefited in terms of their academic pursuit in several areas by organizing joint Seminar/Workshop/Conference, Student exchange programme, Faculty exchange programme, Social outreach programmes etc.

> Report of activity carried out under MoU

Name of the activity: Faculty Exchange Programme

Date: 4.07.2024 and 5.07.2024

Venue: Government College of Art and Craft

Details of the activity:

As attached



Principal Maulana Azad College

Principal
Maulana Azad College
Kolkata
Govt. of West Bengal



GOVERNMENT OF WEST BENGAL

OFFICE OF THE PRINCIPAL

Maulana Azad College



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Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata.ac.in

Date	Department and College	Semester	Course Code	Teachers Involved	Affiliating College	Number of students
04.07.2024 and 5.07.2024	Department of Bengali, Government College of Art and Craft	П	AEC 2.1 (Bengali under MIL)	Mrs. Swati Chakraborty, Associate Professor	Dept. of Bengali, Maulana Azad College	100
04.07.2024 and 05.07.2024	Department of Bengali, Government College of Art and Craft	II	AEC 2.1 (Alternative English)	Mrs. Pritha Chakraborty, Associate Professor	Dept. of English, Maulana Azad College	25

Certificates from Principal, Government College of Art and Craft to Mrs. Swati Chakraborty and Mrs. Pritha Chakrobarty



Govt. of West Bengal
Office of the Principal, Govt. College of Art & Craft, Calcutta.
28,Jawaharlal Nehru Road, Kolkata-700 016.
Phone no: 2252-2186, 2252-0329 and 2252-2479(Fax)
Email ID: principaldutta@gmail.com.
Office Memo No.: 0228/A7/2-6 Date: 15.07.2024

Trom.
The Principal,
Govt. College of Art & Craft. Calcutta.
28, Jawharlal Nehru Road
Kolkata 700016.

Associate Professor. Moulana Azad College 8, Rafi Ahmed Kidwai Road, Taltala, Kolkata 700013.

Dear Ms. Swati Chakraborty

This is to acknowledge my sincere gratitude for having given this institution the necessary support in accordance to the MoU between your esteemed institution & ours; in fulfilling the requirements of the AEC 2.1 Course (Alternative English/MIL) for 100 (Hundred) of our students opting for Bengali in the 2nd Semester by taking Offline as well as Online classes for the required number of contact hors as mentioned in our CSR.

In anticipation of further such cooperation's between our institutions & thanking you again for your valuable time and dedication; warm regards.

Yours sincerely

15 07 2024

Principal. Govt. College of Art & Craft, Calcutta



Govt. of West Bengal Office of the Principal, Govt. College of Art & Craft, Calcutta 28 Jawaharlal Nehrn Road, Kolkata- 700 016. Phone no: 2252-2186, 2252-0329 and 2252-2479(Fax)

Email ID: principaldutta@gmail.com.
Office Memo No.: 0229/A7/2-6

Date: 15.07.2024

The Principal, Govt. College of Art & Craft. Calcutta. 28, Jawharlal Nehru Road Kolkata 700016. To: Ms. Pritha Chakraborty. Assistant Professor. Moulana Azad College. 8, Rafi Ahmed Kidwai Road, Taltala, Kolkata 700013.

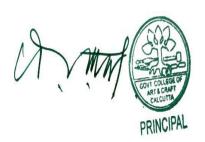
Dear Ms. Pritha Chakraborty,

This is to acknowledge my sincere gratitude for having given this institution the necessary support in accordance to the MoU between your esteemed institution & ours; in fulfilling the requirements of the AEC 2.1 Course (Alternative English/MIL) for 25 (Twenty Five) of our students opting for English in the 2nd Semester by taking Offline as well as Online classes for the required number of contact hors as mentioned in our CSR.

In anticipation of further such cooperation's between our institutions & thanking you again for your valuable time and dedication; warm regards.

Yours sincerely

Govt. College of Art & Craft, Calcutta



Principal Maulana Azad College

> Principal Maulana Azad College Kolkata Govt. of West Bengal



GOVERNMENT OF WEST BENGAL

OFFICE OF THE PRINCIPAL

Maulana Azad College



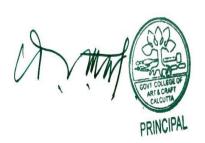
Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com Website: https://maulanaazadcollegekolkata.ac.in



Geotagged photographs of the class







Principal Maulana Azad College

Principal
Maulana Azad College
Kolkata
Govt. of West Bengal



পশ্চিমকুল पश्चिम बंगाल WEST BENGAL

32AA 409560

Memorandum of Understanding for Academic Co-operation Between Maulana Azad College, Kolkata And

Jagadis Bose National Science Talent Search, Kolkata

Principal, Maulana Azad College, 8, Rafi Ahmed Kidwai Road, Kolkata-700013 and Director, Jagadis Bose National Science Talent Search, 1300 Rajdanga Main Road, Kolkata-700107 (hereinafter referred to as "Sides") noting the importance of mutual collaborative endeavors to foster student and faculty research, student exchange programmes as well as to practice and promote social outreach initiatives agree for Academic co-operation in relevant and interdisciplinary areas of both Institutes In accordance with terms and conditions set forth in the following paragraphs.



Paragraph 1

Objectives

- 1. This Memorandum of Understanding (hereinafter referred to as the "MoU") intends to set out the general modalities for initiating an Academic and Social outreach Collaboration, primarily to foster science education amongst school students as well as to benefit the faculty members of both Institutions, in terms of higher academic pursuits. Mutual collaboration will be implemented in the following academic activities
- A) Joint organization of workshops, hands-on-training programmes, seminars, model competitions and other activities for school students.
- B) Submission of Collaborative Research Project proposals to various funding agencies
- C) Joint initiation of Social Outreach programme
- 2. This MoU will be carried out within the framework of the respective regulations and guidelines set forth by the two Institutions/the affiliating body of the Institutions.

Maulan Azad College Kolkata Govt. of West Bengal

1300, Rajdanga Main Ro Kanba, Kolkata- 70010

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academic excellence A2. Under these programmes, selected students will participate in lab-visits, various workshops and trainings (involving laboratory work as well as on-field excursions) under the guidance of faculty members of the host Institution and these will preferably be carried out at time periods as agreed upon by both Institutions from case-to-case

A3. The number of students participating in the programme will also be decided upon jointly according to infrastructure.

A4: Other activities including Scientific Model Demonstration Competition, extempore competitions, debates and quizzes will also be arranged time to time both for school as well as college students.

A5. The host Institute will reserve the right to decide acceptance of students under this programme depending on the recommendation issued from Institute/University as well as their academic performance.

A6. The students have to arrange their own transportation and accommodation including the cost involved therein as well as bear any incidental charges including food, clothing, medical care etc.

A7. Certificates will be awarded jointly by the two Institutions to students upon successful completion of the programme.

B1. Faculty members of the two Institutions will submit Collaborative Research Proposal to various funding agencies.

B2. The pilot studies corresponding to the proposals will be carried out in the laboratory of both the Institutes according to the available infrastructure as per need.

C1.Both Institutes will also make endeavors time to time to organize Social Outreach Programmes which will involve arrangement of scientific awareness programmes in local underprivileged areas as well as rural underdeveloped areas, dissemination of scientific knowledge to the society through models and scientific lectures as well as other activities as will be deemed to be fit by both Institutions

C2. The cost for organization of these events will be decided jointly by the two Sides and accordingly either the funding bodies will be approached or both Institutions will bear the cost equally from their internal resources as will be decided by the concerned competent authorities.

Paragraph 3

Dispute Settlement

The Sides will consult together upon request of either side regarding any emergent dispute or debate relating to the terms of this MoU and will endeavor jointly in a spirit of co-operation and mutual trust to resolve the difficulties or misunderstandings involved therein.



Science Talent Search

agadis Bose National

Paragraph 4

Amendment

This MoU may be amended by mutual written consent of both Institutes as and according to any emergent need.

Paragraph 5

Effect and Termination

This MoU will remain in effect from the date of signature of competent authorities from both Sides for an initial period of three (3) years and will be extended for successive periods of one (1) year, unless either side notifies the other side, in writing, of its intention to terminate this MoU at least one (1) month before the expiry date of the relevant period. In the event of prior termination of this MoU, all ongoing programmes and/or activities will be implemented as planned unless otherwise agreed between the Sides.

This MOU has been signed with concurrence of the Governing Body of Maulana Azad College and Jagadis Bose National Science Talent Search, Kolkata.

Signed by and On Behalf of

Co-Ordina

Scientific Officer Jagadis Bose National Science Talent Seatth KAR

Talent Search SCIEN' Noikata-700107 Jegadis Bose Nati 300, Raidar

Maulana Azad College Principal Govt. of WB, Kolkatalana Azad College Kolkata

Govt. of West Bengal

Director Jagadis Bose National Science

Director Kolkata Jagadis Bose National Science Talent Search

4300, Rajdanga Main Road Kasba, Kolkata- 700107 29 9 23

Witnessed by:

Dr. Subir Chandra Dasgup Professor & Head (W.B.S.E.S. Department of Zoology

Maulana Azad College Govt. of West Bengal

2. Student Advisor, JBNSTS

Dr. Smarajit Manna Student Adviser and Nodal Officer Vidyasagar Science Olympiad Jagadis Bose National Science Talent Search 1300, Rajdanga Main Road Kolkata-700 107



Bioresource Technology Reports

Volume 26, June 2024, 101830

Degradation and molecular docking of Curli to scout aggregation complexion

Nisha Bhat a , Tirthankar Roy a , Shritoma Sengupta b , Maitree Bhattacharyya $^c \ \ \boxtimes \$, Samudra Prosad Banik d , Pijush Basak $^c \ \ \boxtimes \$

- ^a Department of Microbiology, St. Xavier's College (Autonomous), Kolkata 700016, West Bengal, India
- ^b Dept. of Biochemistry, University of Calcutta, Kolkata 700019, West Bengal, India
- ^c Jagadis Bose National Talent Search, Kolkata 700107, West Bengal, India
- ^d Department of Microbiology, Maulana Azad College, Kolkata 700013, West Bengal, India

Received 31 December 2023, Revised 20 March 2024, Accepted 23 March 2024, Available online 26 March 2024, Version of Record 26 March 2024.

What do these dates mean?



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Highlights

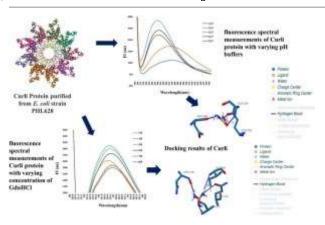
• E. coli PHL628 capable of producing an extracellular protein fibril Curli

- Intrinsic fluorescence variation of Curli due to effect of pH, Urea and GdnHCl
- Changing dynamics of Curli by UV-absorption, fluorescence anisotropic measurements
- Extrinsic fluorescence variation by ANS, representing time interval of denaturation
- <u>Molecular docking</u> revealed the interaction of Curli with Urea and GdnHCl.

Abstract

Curli, an extracellular protein fibril produced by certain gram-negative <u>enteric bacteria</u>, is responsible for neuro-degenerative diseases due to spontaneous misfolding of <u>soluble proteins</u>. This study investigates the effect of denaturing agents (Urea, <u>Guanidine</u> Hydrochloride) and varying pH (2–11) on the conformation of <u>Curli protein</u>, isolated from *E. coli* PHL628, due to changes in the external environment. The study focuses on the changing dynamics of the protein using intrinsic fluorescence property, UV-absorption, fluorescence anisotropic measurements, and extrinsic fluorescence property with the help of interaction with 1-anilinonaphthalene-8-sulphonate (ANS). The data showed that the <u>absorption maximum</u> (λ_{max}) of protein was altered in variation of denaturant concentration and buffer pH. <u>Molecular docking</u> results revealed the interaction of Curli with Urea and GdnHCl, by comparing structural changes. This study determines how denaturants and changes in the external environment cause <u>denaturation</u> or modification in the folded structure of <u>Curli protein</u> and provides insight into <u>binding sites</u> of Curli with denaturants.

Graphical abstract



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Introduction

Protein or peptide misfolding is considered to be the precursor for the generation of amyloid fibirls, which are involved in causing different neurodegenerative diseases such as Alzheimer's disease, Parkinson's disease (PD), Huntington's disease (Perov et al., 2019; Das et al., 2020; Stafshede, 2021). X-ray fiber diffraction detected that the amyloid fibrils are typically 7–13 nm in diameter and possess cross- β structure, in which β -strands are arranged in such a way that they are perpendicular to the fibril axis. Fibrillar morphology, cross- β structure, and characteristic tinctorial properties of a protein are widely considered to be the hallmarks of protein aggregation leading to amyloid formation (Stafshede, 2021). Subsequently, recent studies have shown the prevalence of functional amyloids in some bacteria and humans as well. These functional bacterial amyloids which are produced extracellularly, have distinct functional purposes in-vivo. The functional properties shown by these amyloids ranges from virulence during infection and anti-microbial resistance (AMR) property, acting as structural scaffolds in bacterial biofilms to storage of peptide hormones (Jackson and Hewitt, 2017; Franco et al., 2023; Richter-Dahlfors et al., 2023).

Curli from *E.coli* which serves potentially in biofilm formation, was the first functional amyloid to be discovered and well characterized (Chiti and Dobson, 2017). These extracellular protein fibers are also known to be produced by gram negative enteric bacteria including *Salmonella* species and Enterobacter species. Though curli plays key role in *E. coli* biofilms, yet the curliated cells are localized to air-colony interface of static liquid cultures (Dueholm et al., 2011). Studies showed that curli-producing *E. coli* when fed, promoted the increase in alpha synuclein aggregation (Perov et al., 2019). These amyloid fibrils are highly stable as are resistant to degradation by proteases as well as denaturation by detergents

such as SDS (sodium dodecyl sulphate). Hence it is subjected to harsh treatment with formic acid or hexafluoroisopropanol, which depolarizes and resolves the different subunits of Curli amyloid (Evans and Chapman, 2013). A very dedicated secretion pathway is responsible for the regulation and secretion of the curli fibers, known as the nucleation-precipitation mechanism or the type VIII secretion system. In *E. coli*, distinctly transcribing operons (csgBAC and csgDEFG) encodes seven curli-specific genes (csgA,csgB,csgC,csgD, csgE, csgF, csgG). The major and minor subunits, CsgA and CsgB respectively are encoded by csgBA operon, in the ratio 20:1 (Akbey and Andreasen, 2022). The proteins which are essential for the regulation and transportation of the CsgA and CsgB subunits to the cell surface are encoded by the csgDEFG operon. CsgA and CsgB subunits are homologs, sharing 50% sequence identity and consisting of imperfect repeats of amino acids (~20 amino acids). The major subunit, CsgA comprises of glutamine and asparagine residues, essential for amyloid formation. The fibrillation of CsgA, which is secreted as soluble unsaturated protein is nucleated by CsgB. CsgC acts as a negative regulator and plays the role of a chaperone to neutralize premature amyloidosis of curli subunits (Gerven et al., 2015).

Any structural changes in the conformation of a protein affects tryptophan, tyrosine residues which is reflected in the intrinsic fluorescence property. This property of a protein originates due to electronic transitions from aromatic amino acids (Tryptophan, Phenylalanine and Tyrosine) on exposure to primary energy source when the displaced electron reaches to excited state and again drops down to ground state (Millan et al., 2020; Rodrigues et al., 2023). The aromatic amino acid residues when excited at a particular wavelength undergo π - π * transitions releasing photons which emits fluorescence. The fluorescence emission maximum is observed to shift towards longer wavelength than that of excitation maximum ($\lambda_{em} > \lambda_{ex}$). This shift is known as Stokes Shift and occurs due to vibrational relaxation of the excited electrons to lowest energy level (Gehlen, 2020). An interesting phenomenon observed in protein fluorescence emission is the shifting of the emission maxima towards smaller wavelength or larger wavelength, when introduced to conformational changes which affects the nano-environment of the intrinsic fluorophore leading to alterations in intermolecular interactions (Lakowicz, 1999; Meech, 2009; Lischka et al., 2018; Rodrigues et al., 2023). If the emission maximum wavelength (λ_{em}) shifts to higher wavelength, redshift is observed and if the wavelength (λ_{em}) shifts towards smaller wavelength, a blueshift is observed (Lakowicz, 1999). Curli being a fibrous protein, several studies have shown that addition of water can affect the conformational stability of globular proteins whereas fibrous proteins remain intact. Urea, guanidine hydrochloride (GdnHCl) and other related compounds are known to act as denaturing agent, which also helps to determine Gibbs free energy change signifying protein stability (Biswas et al., 2018; Rodrigues et al., 2023). Studies have shown that the denaturation property of urea and

GdnHCl is due to their ability to disrupt hydrogen bonds and hydrophobic interactions between as well as within the protein molecules destroying the tertiary structure, and might also destroy secondary structure when used at higher concentration. In some case the denatured proteins are found to get back to their native structure when denaturing chaotropic agents are removed (Basak et al., 2015; Guckeisen et al., 2021). It is interestingly noted that compared to urea, GdnHCl is more likely to manipulate the hydrophobic and hydrophilic interaction among the surface residues, making the protein more soluble (Basak et al., 2015). Structural heterogeneity and interchanging dynamics of the unfolded protein chain due to denaturation, requires a detailed description about the structures and dynamics of the folded and functional protein as well as unfolded forms. Intrinsic molecular fluorescence methods are ideally used for the study of denatured structures as it helps in independent analysis of fluorescence intensities from the intrinsic molecules (tyrosine, tryptophan) from different unfolded conformations (Bennion and Daggett, 2003). Studying the action of pH and denaturing agents on a protein structure is very crucial to understand the complex relationship between protein structure, function and the surrounding environment. Changes in pH influences protein folding to a larger extent and can influence protein folding and misfolding which can lead to neurodegenerative diseases. Moreover, the stability of protein is often pH-dependent due to hydrogen bonding, electrostatic interactions and hydrogen bonding, resulting into denaturation or protein folding.

The predication of predominant binding site(s) of a ligand with a protein gives a detailed information about how a protein interacts with a ligand. CB-Dock is a web server for cavity detection. This protein-ligand docking method performs blind docking on the entire protein surface to find the energetically favourable binding between the protein and ligand. Docking method to predicts specific binding sites of a given protein and calculates the centres and sizes and performs docking using the popular docking program Autodock Vina. This method enhances the docking accuracy and has a success rate of $\sim 70\%$ (Liu et al., 2020).

In this study we have studied the dynamics and conformational changes of the protein with changes in environment by altering pH and addition of denaturants such as Urea and GdnHCl. Urea and GdnHCl being the most commonly used denaturants due to their efficiency to break hydrogen bonds as well as hydrophobic interactions were used to study protein unfolding and stability. Studies were carried out with the help of steady-state fluorescence, anisotropic measurements and UV absorption measurement and the variations in their fluorescence were examined with respect to different concentrations and time interval. Further, to compare the sites of interaction of Urea and GdnHCl molecular docking was performed with the help of CB-Dock.

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Section snippets

Chemicals

Yeast extract-Casamino acid (YESCA) broth and Kanamycin used for the growth of *E. coli* PHL628 was purchased from Himedia, India and Sigma-Aldrich, USA respectively. Urea and GdnHCl were obtained from MERCK, India and SRL, India respectively. 8-anilinonaphthalene-1-sulfonic acid (ANS) was purchased from Sigma, USA and Bovine Serum Albumin (BSA) and Bradford reagent used in Bradford method was obtained from TM Media, India and Himedia, India respectively. ...

Purification of curli protein

E. coli PHL628 was grown in YESCA broth ...

Measurements of the steady-state with respect to pH and denaturing agents

Fluorescence intensities were measured to assess the changes in protein conformation for both varying pH and denaturing agents, by exciting samples at 295 nm and measuring emission spectra from 300 nm–500 nm. The change of pH showed a significant shift in emission peak from acidic to basic condition. Observed fluorescence data indicates maximum fluorescence intensity at pH6 with emission maxima at 348 nm. From pH3 (λ_{em} 377.2 nm) to pH6 (λ_{em} - 347.2 nm), wavelength shift (blue shift) of 30 nm ...

Conclusions

Denaturing agents and varying pH are known to have adverse effects on the size and conformation of native protein. This study showed the effect of pH and denaturing agents like Urea and GdnHCl on Curli protein, where the intrinsic fluorescence intensity of the

protein increases or decreases with respect to addition of the denaturing agents and changes in buffer pH. Fluorescence intensity as well as the absorption spectra was observed to be maximum at acidic pH along with shift (blueshift) in ...

Funding

The authors declare that this research did not receive any funds, specific grants, or other support from funding agencies in the public, commercial or non-profit sectors during the preparation of this manuscript. ...

Compliance with ethical standards

This article does not contain any studies with human participants performed by any of the authors. ...

CRediT authorship contribution statement

Nisha Bhat: Writing – original draft, Validation, Investigation, Data curation. **Tirthankar Roy:** Writing – review & editing, Investigation, Data curation. **Shritoma Sengupta:** Writing – review & editing, Validation, Formal analysis, Data curation. **Maitree Bhattacharyya:**Supervision, Resources, Project administration, Conceptualization. **Samudra Prosad Banik:**Visualization, Validation, Resources, Conceptualization. **Pijush Basak:** Writing – review & editing, Supervision, Project administration, Data ...

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper. ...

Acknowledgement

Authors like to acknowledge Department of Biotechnology (Rosalind Franklin Biotechnology Laboratory), Jagadis Bose National Science Talent Search, Kolkata, West Bengal for helping in conducting all the experiments. Authors also like to acknowledge Department of Science and Technology and Biotechnology, Government of West Bengal, India for the instrumental and laboratory facilities for entire experiment. I acknowledge Prof. Anthony Hay, Cornell University, USA for kindly donating *E. coli* PHL628 ...

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