



P. N. DAS COLLEGE

Santinagar, Palta, P.O.: Bengal Enamel, North 24 Parganas, Pin - 743122 (W.B.)
Phone : (033) 2592 1327, Fax : (033) 2592 1326, e-mail : pndc.principal11@gmail.com
Website : www.pndascollege.in

NAAC ACCREDITED - 2016

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III) COLLABORATIVE QUALITY INITIATIVES WITH OTHER INSTITUTIONS

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19/6/23

Principal
P.N. Das College
Palta, Bengal Enamel, N. 24 Prga



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LIST OF FUNCTIONAL MOUs

Sl. No.	Name of the MoU / linkage	Year of signing MoU / linkage	Purpose of the MoU/Linkage (internship, on-the-job training, project work, student / faculty exchange and collaborative research)	Duration of MoU / linkage
1	MoU with Dr B.R. Ambedkar Satabarshiki Mahavidyalaya	11-02-2020	FACULTY EXCHANGE FOR DELIVERING VIRTUAL LECTURES	10 YEARS
2	MoU with Gobardanga Hindu College	24-10-2019	FACULTY EXCHANGE FOR DELIVERING VIRTUAL LECTURES	5 YEARS
3	MoU with Bijoy Krishna Girls' College Howrah	05-01-2021	TO PROMOTE AND ENHANCE ACADEMIC INTEREST AND COLLABORATIVE RESEARCH	3 YEARS
4	MoU with Hulladek Recycling Pvt. Ltd.	30-08-2022	E-WASTE MANAGEMENT	3 YEARS
5	MoU with Dinabandhu Mahavidyalaya	26-04-2022	ACADEMIC AND ADMINISTRATIVE ENRICHMENT	3 YEARS
6	MoU with Sree Chaitanya Mahavidyalaya	26-04-2022	ACADEMIC AND ADMINISTRATIVE ENRICHMENT	3 YEARS
7	MoU with Gurudas Mahavidyalaya	13-08-2019	FACULTY EXCHANGE AND COLLABORATIVE RESEARCH	5 YEARS
8	MoU with New Alipore College	14-03-2022	FACULTY EXCHANGE AND COLLABORATIVE RESEARCH	5 YEARS
9	MoU with Naba Barrackpur Prafulla Chandra Mahavidyalaya	14-07-2021	JOINT TEACHING AND RESEARCH	5 YEARS
10	MoU with Hiranyagarbhaya Vedic and Yogic Institute	01-06-2022	YOGA THERAPEUTIC REHABILITATION PROGRAMME	3 YEARS
11	MoU with West Bengal Nanbudo Association Karate-Do School	07-08-2021	SELF DEFENCE PROGRAMME FOR WOMEN	3 YEARS
12	MoU with Rishi Bankim Chandra College for Women	18-01-2020	JOINT TEACHING AND RESEARCH	5 YEARS
13	MoU with Muralidhar Girls' College	05-01-2021	FACULTY EXCHANGE FOR DELIVERING VIRTUAL	3 YEARS

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			LECTURES	
14	MoU with Hiralal Mazumdar Memorial College for Women	07-06-2022	MULTIDISCIPLINARY SKILL AND VALUE ADDED EDUCATION	3 YEARS
15	Mou with Mahadevananda Mahavidyalaya	11-03-2020	INITIATIVES IN ICT-BASED PEDAGOGY	5 YEARS
16	MoU with Vijaygarh Jyotish Ray College	01-06-2020	JOINT TEACHING AND RESEARCH	1 YEAR
17	MoU with Barasat College	07-04-2022	FACULTY EXCHANGE AND COLLABORATIVE RESEARCH	3 YEARS
18	MoU with Malda College	08-12-2019	FACULTY EXCHANGE AND INITIATIVES IN ICT-BASED PEDAGOGY	7 YEARS
19	MoU with Uluberia College	17-01-2022	FACULTY EXCHANGE AND COLLABORATIVE RESEARCH	5 YEARS
20	MoU with K. K. Das College	15-02-2023	FACULTY EXCHANGE AND COLLABORATIVE RESEARCH	5 YEARS
21	MoU with Gour Mohan Sachin Mandal Mahavidyalaya	09-07-2021	FACULTY EXCHANGE AND INNOVATIONS IN ICT-BASED PEDAGOGY	2 YEARS
22	MoU with Paschim Banga Bigyan Mancha	02-07-2020	ENVIRONMENTAL AWARENESS	5 YEARS
23	MoU with Right Brains Technology	26-09-2019	WEB DESIGN AND EXCEL TRAINING PROGRAM	5 YEARS
24	MoU with Basirhat College	02-11-2021	JOINT TEACHING AND RESEARCH	5 YEARS
25	MoU with Global EHS Consultant	30-04-2022	PRACTICAL TRAINING FOR HAZARD SAFETY	3 YEARS

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ACADEMIC LINKAGES

Name of the MoU / linkage	Year of signing MoU / linkage	Purpose of the MoU/Linkage (internship, on-the-job training, project work, student / faculty exchange and collaborative research)
Academic Linkage between Smt. Bonny Samanta, Assistant Professor, Department of Education, P.N. Das College and Smt. Rimpa Saha, Assistant Professor, Dewan Abdul Gani College, Dakshin Dinajpur, West Bengal, India.	2021	Research-related Activities
Academic Linkage between Smt. Bonny Samanta, Assistant Professor, Department of Education, P.N. Das College and Shri Rahul Nath, Research Scholar, Jadavpur University, Kolkata, West Bengal, India	2021	Research-related Activities
Academic Linkage between Smt. Priya Biswas, Assistant Professor, Department of Economics, P.N. Das College and Dr. Debaprasad Sarkar, Associate Professor & Head, Department of Economics, Barrackpore Rashtraguru Surendranath College, Barrackpore, Kolkata, West Bengal, India.	2020	Research-related Activities


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Academic Linkage between Smt. Priya Biswas, Assistant Professor, Department of Economics, P.N. Das College and Sanchita Roy, Research Scholar, Vidyasagar University, Midnapur, West Bengal & Faculty, Barrackpore Rashtraguru Surendranath College, Barrackpore, Kolkata, West Bengal, India	2020	Research-related Activities
Academic Linkage between Smt. Debaroti Das, MAPPT, P.N. Das College and Dr. S.P. Sinharay, Ex-Member, CGWB, MoJS, DoWR, RD&GR, GOI.	2017	Research-related Activities
Academic Linkage between Smt. Debaroti Das, MAPPT, P.N. Das College and Sandhya Bhaduri, Ex-Deputy Director, NATMO, DS&T, GOI	2017	Research-related Activities
Academic Linkage between Shri Bablu Biswas, Department of Mathematics, P.N. Das College and Shri D.K. Ganguly, Department of Pure Mathematics, University of Calcutta, Kolkata, India.	2017	Research-related Activities
Academic Linkage between Shri Bablu Biswas, Department of Mathematics, P.N. Das College and Shri Alauddin Dafadar, Department of Mathematics, Bhatler College, Dantan, Paschim Medinipur, West Bengal, India	2017	Research-related Activities
Academic Linkage between Chandan Sarkar, PhD Research Scholar, Department of Geography, Visva-Bharati, Shantiniketan, West Bengal, India & Assistant Professor, Department of Geography, P.N. Das College and Uma Sankar Malik, Professor, Department of Geography,	2017	Research-related Activities


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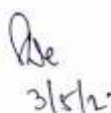
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Visva-Bharati, Shantiniketan, West Bengal, India.		
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ACTIVITIES UNDER MOU Teacher exchange Programme

Dept. of Physical Education,
P.N.Das College

Santinagar, Palta, Kolkata- 743122,
West Bengal, India,

With

DR. B. R. AMBEDKAR SATABARSHIKI MAHAVIDYALAYA
P.O: Helencha, P.S: Bagdah, West Bengal, India

Sl. No	Name of the Topic	Date/ No. of days	Teachers involved	Mode of Activity	No. of Participants
1	Heart structure and mechanism of blood circulation through heart (3 rd Semester)	21.09.2020	DR. AJIT DAS	Online	20
2	Effect of exercise on circulatory system, Blood Pressure, Athletic Heart and Bradycardia (3 rd Semester)	22.09.2020	DR. AJIT DAS	Online	24
3	Respiratory organs and mechanism of respiration (3 rd Semester)	28.09.2020	DR. AJIT DAS	Online	16
4	Vital capacity, oxygen debt and second wind (3 rd Semester)	29.09.2020	DR. AJIT DAS	Online	04

Signature of the Principal

Dr. B. R. Ambekar Satabarshiki Mahavidyalaya

DR. CHITTARANJAN DAS
Dr. B.R.A.S Mahavidyalaya
Helencha, North 24 Parganas

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ACTIVITIES UNDER MOU

P.N.Das College
Santinagar, Palta, Kolkata- 743122,
West Bengal, India,
With

DR. B. R. AMBEDKAR SATABARSHIKI MAHAVIDYALAYA
P.O: Helencha, P.S: Bagdah, West Bengal, India

Sl. No	Name of the Programme/ Topic	Date/ No. of days	Resource Persons/Teachers involved	Mode of Activity	No. of Participants
1	Seminar on IPR	20.7.2019	Dr (CA) Satyajit Dhar, Professor, University of Kalyani, Dr. Agnidipta Tarafder, Asst. Professor, West Bengal National University of Juridical Sciences Sri Sujoy Sarkar, Dy. Controller of Patents & designs, Patent office, Kolkata	Offline Venue: P.N. Das College	45 teachers and students
2	Programme on Gandhi Global Solar Yatra	02.10.2019	Prof. Suman Ranjan Bandyopadhyaya Prof. Sanjib Dhar Dr. Bablu Biswas Prof Bonny Samanta	Offline Venue: P.N. Das College	50 Students from P.N. Das College and Dr. B.R. Ambedkar Satabarshiki Mahavidyalaya
3	Webinar on IPR/RTI/RTP	18.5.2020	Dr. Agnidipta Tarafder, Asst. Professor, West Bengal National University of Juridical Sciences	Online	86 college teachers from different colleges of the state
4	One day Seminar on Preparation for Accreditation	30.8.2022	Dr. Chittaranjan Das, Dr. B. R. Ambedkar Satabarshiki Mahavidyalaya	Offline: P.N.Das College	30 staff members

Signature of the Principal

Dr. B. R. Ambedkar Satabarshiki Mahavidyalaya

DR. CHITTARANJAN DAS
Dr. B.R.A.S Mahavidyalaya
Helencha, North 24 Parganas

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ACTIVITIES UNDER MOU
Teacher exchange Programme
Dept. of English,
P.N.Das College
Santinagar, Palta, Kolkata- 743122,
West Bengal, India,
With
Gobardanga Hindu College,
P.O: Khantura, 24 Parganas(North)
West Bengal, India, Pin-743273

S1. No	Title of the Programme	Date/ No. of days	Convenor/ Teachers involved	Mode of Activity	No. of Participants
1	Post-colonial Literature David Malouf-Resolving days (Semester-6, CC 14)	05.04.2023	Kakali Sen Banerjee, Associate Professor P.N. Das College	Online	36
2	Post-colonial Literature David Malouf-Resolving days (Semester-6, CC 14)	13.04.2023	Kakali Sen Banerjee, Associate Professor P.N. Das College	Online	27

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Gobardanga Hindu College

Principal
Gobardanga Hindu College
Khantura, North 24-Pgs

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West Bengal, India,
With
Gobardanga Hindu College,
P.O: Khantura, 24 Parganas(North)
West Bengal, India, Pin-743273

S1. No	Title of the Programme	Date/ No. of days	Convenor/ Teachers involved	Mode of Activity	No. of Participants
1	Drama-Bertolt Brecht- The good woman of Szechuan	25.04.2022	Paromita Dutta, Associate Professor Gobardanga Hindu College	Online	23
2	Drama- Bertolt Brecht- The good woman of Szechuan	02.05.2022	Paromita Dutta, Associate Professor Gobardanga Hindu College	Online	23
3	Drama- Bertolt Brecht- The good woman of Szechuan	09.05.2022	Paromita Dutta, Gobardanga Hindu College Associate Professor	Online	23

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Gobardanga Hindu College
Khantura, North 24-Pgs

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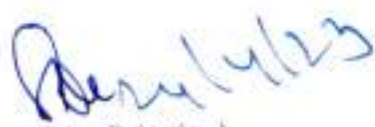
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P.N.Das College
Santinagar, Palta, Kolkata- 743122,
West Bengal, India,
With
Gobardanga Hindu College,
P.O: Khantura, 24 Parganas(North)
West Bengal, India, Pin-743273

S1. No	Title of the Programme	Date/ No. of days	Resource Persons/ Teachers involved	Mode of Activity	No. of Participants
1	One day Faculty Development Programme on ICT based Teaching-Learning in Gobardanga Hindu College (MOU)	26.04.2022	Dr. Ranjit Pandit, Asst. Professor, Dept. of Computer Sc, WBSU	Offline Venue: P.N. Das College	80 number of teachers
2	One day Faculty Development Programme on Website Designing and E-module Development	10.05.2022	Dr. Sharmila De Principal, P.N. Das College Dr. Bablu Biswas, Assistant Professor. Department of Math	Offline Venue: P.N. Das College	45 teaching & Non-teaching staff from various college
3	One day Workshop on Capacity Building for Non-Teaching Staff	14.06.2022	Atanu Giri Office Staff, P.N Das College	Offline Venue: Shree Chaitanya Mahavidyalaya	30 (Thirty) NTS


Signature of the Principal
Gobardanga Hindu College
Principal
Gobardanga Hindu College
Khantura, North 24-Pgs


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Teacher exchange Programme
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P.N.Das College
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West Bengal, India,
With
Gobardanga Hindu College,
P.O: Khantura, 24 Parganas(North)
West Bengal, India, Pin-743273

S1. No	Title of the Programme	Date/ No. of days	Teachers involved	Mode of Activity	No. of Participants
1	An Overview on Riemannian Integration (Semester-IV)	10.03.2023	Dr. Bablu Biswas, Assistant Professor	Offline Venue: Gobardanga Hindu College	12
2	Logic and sets (Semester-IV)	14.03.2023	Dr. Debjani Chakraborty, Assistant Professor	Online	10
3	Logic and sets (Semester-IV)	15.03.2023	Dr. Shakti Pada Barik, Associate Professor	Online	8

Signature of the Principal
Gobardanga Hindu College

Principal
Gobardanga Hindu College
Khantura, North 24-Pgs

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P.N.Das College

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P.N. Das College
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P.N.Das College

Santinagar, Palta, Kolkata- 743122,

West Bengal, India,

With

Bijoykrishna Girls' College

5/3, Mahatma Gandhi Road, Kadam Tala, Howrah, PIN-711101,

West Bengal, India

Sl. No	Name of the Programme	Date/ No. of days	Resource Persons involved	Mode of Activity	No. of Participants
1	Seminar on Cyber Security	13.01.2021	Mr. Sivamani Sangaranarayanan, Head, Network & Security Division, P.C. Solutions	Online	111 students & staff

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Bijoykrishna Girls' College

Signature of the Principal
P.N.Das College

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P.N.Das College

Santinagar, Palta, Kolkata- 743122,

West Bengal, India,

With

Hulladek Recycling Private Limited

4, D.L Khan Road, Kolkata, West Bengal, Pin-70025

Sl. No	Name of the Programme	Date/ No. of days	Resource Persons involved/Organisation	Activity	No. of Participants
1	E- Waste Management	19.08.2021	Hulladek Recycling Pvt. Ltd	E-Waste Collection	----
2	Awareness Campaign on E-waste Management	17.03.2022	Sri Sourab Shah, Resource Person , Hulladek Recycling Pvt. Ltd	Seminar on Awareness on E-waste Management organised by P.N Das College Auditorium	39
3	E- Waste Management	26.03.2022	Hulladek Recycling Pvt. Ltd	E-Waste Collection	----

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P.N. Das College

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West Bengal, India,
With
Dinabandhu Mahavidyalaya
Bangaon, PIN-743235,
West Bengal, India

S1 No	Name of the Programme	Date/ No. of days	Resource Persons involved	Mode of Activity	No. of Particip ants
1	Seminar on IPR	20.7.2019	Dr (CA) Satyajit Dhar, Professor, University of Kalyani. Dr. Agnidipta Tarafder, Asst. Professor, West Bengal National University of Juridical Sciences Sri Sujoy Sarkar, Dy. Controller of Patents & designs, Patent office, Kolkata	Offline Venue: P.N. Das College	45
2	State level Workshop on ICT	6.6.2020, 8.6.2020, 9.6.2020	Sri Debasish Barman Sri Suman Ranjan Bandyopadhyay Dr. Bablu Biswas Dr. Sudip Mukhapadhyay Sri Prasenjit Pramanik Dr. Suchismita Majumder	Online	185 College teachers and research scholars

Dr. Sujoyit Dhar
24/4/2023
Principal / Secretary
DINABANDHU MAHAVIDYALAYA
Bangaon, 24 Pgs(N)

Dr. Sujoyit Dhar
24/4/23
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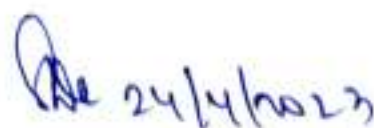
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3	One day Faculty Development Programme on ICT based Teaching-Learning in Gobardanga Hindu College (MOU)	26.4.2022	Dr. Ranjit Pandit, Asst. Professor, Dept. of Computer Sc. WBSU	Offline: Gobardanga Hindu College	80 number of teachers
4	One day Faculty Development Programme on Website Designing and E-module Development	10.5.2022	Dr. Sharmila De Principal, P.N. Das College Dr. Bablu Biswas, Assistant Professor, Department of Math	Offline Venue: P.N. Das College	45 teaching & Non-teaching staff from various college
5	One day Workshop on Capacity Building for Non-Teaching Staff	14.6.2022	Atanu Giri, Office Staff, P.N Das College	Offline: Venue: Sree Chaitanya Mahavidyalaya	30 (Thirty) NTS


24/4/2023

Signature of the Principal / Secretary
Dinabandhu Mahavidyalaya
Bongaon, 24 Pgs(N)


24/4/2023

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West Bengal, India,
With
Dinabandhu Mahavidyalaya
Bangaon, PIN-743235,
West Bengal, India

S1. No	Name of the Programme	Date/ No. of days	Teachers involved	Mode of Activity	No. of Participants
1	An Overview on Riemannian Integration (Semester-IV)	04.04.2023	Dr. Bablu Biswas, Assistant Professor	Online	12
2	Group Theory (Semester-IV Mathematics & Sem-II Commerce)	07.04.2023	Dr. Biswajit Ghosh, Principal, Dinabandhu Mahavidyalaya	Online	24
3	Riemannian Integration (Semester-IV)	14.04.2023	Dr. Bablu Biswas, Assistant Professor	Online	11

Signature of the Principal
Dinabandhu Mahavidyalaya

Principal / Secretary
DINABANDHU MAHAVIDYALAYA
Bangaon, 24 Pgs(N)

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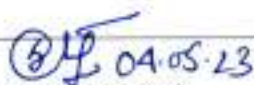
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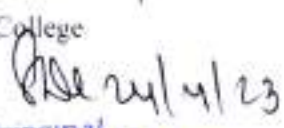
ACTIVITIES UNDER MOU
P.N.Das College
Santinagar, Palta, Kolkata- 743122,
West Bengal, India,
With
Sree Chaitanya Mahavidyalaya
Prafullanagar, Habra, PIN-743268,
West Bengal, India

Sl. No	Name of the Programme	Date/ No. of days	Resource Persons/Teachers involved	Mode of Activity	No. of Participants
1	One day Faculty Development Programme on ICT based Teaching-Learning in Gobardanga Hindu College (MOU)	26.04.2022	Dr. Ranjit Pandit, Asst. Professor, Dept. of Computer Sc, WBSU	Offline Venue: Gobardanga Hindu College	80 teachers
2	One day Faculty Development Programme on Website Designing and E-module Development	10.05.2022	Dr. Sharmila De Principal, P.N. Das College Dr. Bablu Biswas, Assistant Professor, Department of Mathematics	Offline Venue: P.N Das College	45 teaching & non-teaching staff from various college
3	One day Workshop on Capacity Building for Non-Teaching Staff	14.06.2022	Mr. Shibananda Mridha, Librarian, Sree Chaitanya Mahavidyalaya, Atanu Giri, Office Staff, P.N Das College Dr Pulakesh Sen, Coordinator, IQAC, Sree Chaitanya Mahavidyalaya	Offline Venue: Shree Chaitanya Mahavidyalaya	24 Non-teaching staff from Sree Chaitanya Mahavidyalaya, P. N. Das College, Gobordanga Hindu College and Dinabandhu Mahavidyalaya


Signature of the Principal
Sree Chaitanya Mahavidyalaya

Principal
Sree Chaitanya Mahavidyalaya
Habra-Prafullanagar, 24 Pgs. (N)

Signature of the Principal
P.N.Das College


Principal
P.N. Das College
Palta, Bengal Enamel, N. 24 Pgs



P. N. DAS COLLEGE

Santinagar, Palta, P.O.: Bengal Enamel, North 24 Parganas, Pin - 743122 (W.B.)
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Website : www.pndacollege.in

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ACTIVITIES UNDER MOU

P.N.Das College

Santinagar, Palta, Kolkata- 743122,
West Bengal, India,

With

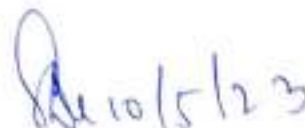
Sir Gurudas Mahavidyalaya

Murari Pukur, Ultadanga, Kolkata-700067, West Bengal, India

Sl. No	Name of the Programme	Date/ No. of days	Resource Persons involved	Mode of Activity	No. of Participants
1	State level Workshop on ICT	6.06.2020, 8.06.2020, 9.06.2020	Sri Debasish Barman Sri Suman Ranjan Bandyopadhyay Dr. Bablu Biswas Dr. Sudip Mukhopadhyay Sri Prasenjit Pramanik Dr. Suchismita Majumder	Online	185 College teachers and research scholars


Signature of the Principal
Sir Gurudas Mahavidyalaya

Principal
Sir Gurudas Mahavidyalaya
Kolkata-700067


Signature of the Principal
P.N.Das College
Principal
P.N. Das College
Palta, Bengal Enamel, N. 24 Pgs



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Santinagar, Palta, P.O.: Bengal Enamel, North 24 Parganas, Pin - 743122 (W.B.)
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Website : www.pndacollege.in

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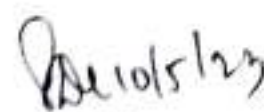
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Date

ACTIVITIES UNDER MoU
Teacher-Exchange Programme
Departments of English
P.N. Das College, Palta
&
Sir Gurudas Mahavidyalaya, Kolkata
2021-22 & 2022-23

Sl.	Topic	Date(s)	Teachers Involved	Mode of Activity	No. of Participants	Duration	Semester
1	Partition Literature: A Historical Overview	09.03.2022	Prof. Mritika Malakar, SACT-II P.N. Das College	Offline Venue: Sir Gurudas Mahavidyalaya	20	2 Hours	Sem 6
2	The Postcolonial Walcott	30.04.2022	Dr. Prasanta Ghoshal	Offline Venue: P.N. Das College	15	1 Hour	Sem 6
3	'A Far Cry from Africa': An Overview	05.05.2022	Dr. Prasanta Ghoshal	Offline Venue: P.N. Das College	16	1 Hour	Sem 6
4	Social & Intellectual Background of Romanticism with Special Reference to Blake	21.03.2023	Prof. Mritika Malakar, SACT-II P.N. Das College	Offline Venue: Sir Gurudas Mahavidyalaya	53	1 Hour	Sem 4
5	'Tonight I Can Write': An Introduction	21.03.2023	Prof. Mritika Malakar, SACT-II P.N. Das College	Offline Venue: Sir Gurudas Mahavidyalaya	39	1 Hour	Sem 6
6	'A Far Cry from Africa': An Overview	10.05.2023	Dr. Prasanta Ghoshal	Offline Venue: P.N. Das College	16	2 Hours	Sem 6


Sir Gurudas Mahavidyalaya
Kolkata-700067


Principal
P.N. Das College
Palta, Bengal Enamel, N. 24 Parg.



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Website : www.pndascollege.in

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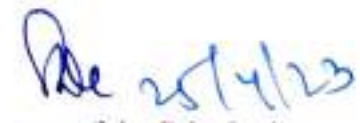
Date:

ACTIVITIES UNDER MOU
Teacher exchange Programme
Dept. of Philosophy,
P.N.Das College
Santinagar, Palta, Kolkata- 743122,
West Bengal, India,
With
New Alipore College,
New Alipore, Kolkata-700053
West Bengal, India

Sl. No	Name of the Topic	Date/ No. of days	Teachers involved	Mode of Activity	No. of Participants
1	Western Culture and Modern Thinker: Vivekananda	25.05.2022	Prof Dipa Chakraborty, Associate Professor P.N.Das College	Offline Venue: New Alipore College	25
2	Social Change: Marxist view and Gandhian view	22.06.2022	Prof Dipa Chakraborty, Associate Professor P.N.Das College	Offline Venue: New Alipore College	26


Signature of the Principal
New Alipore College
Principal
New Alipore College
Block-I, New Alipore
Kolkata - 700 053




Signature of the Principal
P.N.Das College
Principal
P.N. Das College
Palta, Bengal Enamel, N. 24 Pgs



P. N. DAS COLLEGE

Santinagar, Palta, P.O.: Bengal Enamel, North 24 Parganas, Pin - 743122 (W.B.)
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Website : www.pndascollege.in

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Date:

ACTIVITIES UNDER MOU
Teacher exchange Programme
Dept. of History,
P.N.Das College
Santinagar, Palta, Kolkata- 743122,
West Bengal, India,
With
New Alipore College,
New Alipore, Kolkata-700053
West Bengal, India

S1. No	Name of the Topic	Date/ No. of days	Teachers involved	Mode of Activity	No. of Participants
1	Religion and Culture in Medieval Europe	25.05.2022	Prof Sanjib Kumar Dhar, Associate Professor	Offline Venue: New Alipore College	35
2	Religion and Culture in Medieval Europe	22.06.2022	Prof Sanjib Kumar Dhar, Associate Professor	Offline Venue: New Alipore College	38


Signature of the Principal
New Alipore College
Principal
New Alipore College
Block-I, New Alipore
Kolkata - 700 053




Signature of the Principal
P.N.Das College
Principal
P.N. Das College
Palta, Bengal Enamel, N 24 Pgs



P. N. DAS COLLEGE

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Website : www.pndascollege.in

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Date:

ACTIVITIES UNDER MOU
Teacher exchange Programme
Dept. of Education,
P.N.Das College
Santinagar, Palta, Kolkata- 743122,
West Bengal, India,
With
New Alipore College,
New Alipore, Kolkata-700053
West Bengal, India

S1. No	Name of the Topic	Date/ No. of days	Teachers involved	Mode of Activity	No. of Participants
1	Education in India during Ancient & Mediaeval Period	07.04.2022	Prof. Kaushik Das, Prof Debosree Bhattacharya (Das) Prof .Sangita Saha	Offline Venue: P.N Das College	41
2	Education in India during Ancient & Mediaeval Period	13.05.2022	Prof Debosree Bhattacharya (Das) Prof .Sangita Saha	Offline Venue: P.N Das College	29

Signature of the Principal
New Alipore College

Principal
New Alipore College
Block-I, New Alipore
Kolkata - 700 053



Signature of the Principal
P.N.Das College

Principal
P.N. Das College
Palta, Bengal Enamel, N 24 Pgs



P. N. DAS COLLEGE

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Website : www.pndascollege.in

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Ref:

Date:

ACTIVITIES UNDER MOU

Central Library

P.N.Das College

Santinagar, Palta, Kolkata- 743122,

West Bengal, India,

With

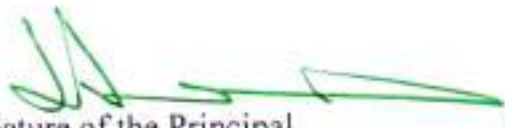
New Alipore College,

New Alipore, Kolkata-700053

West Bengal, India

Session: 2021-22

Sl. No	Name of the Activity	Date/ No. of days	Teachers/staff involved	Mode of Activity	No. of Participants
1	Mutual interactions and suggestions for the development of Libraries of both colleges	14.06.2022	Sri Soumya Kanta Sarkar	Offline (Venue: P.N. Das College)	41


Signature of the Principal
New Alipore College
Principal
New Alipore College
Block-I, New Alipore
Kolkata - 700 053




Signature of the Principal
P.N.Das College
Principal
P.N. Das College
Palta, Bengal Enamel, N. 24 Pgs



P. N. DAS COLLEGE

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Website : www.pndascollege.in

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Date

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ACTIVITIES UNDER MOU
P.N.Das College
Santinagar, Palta, Kolkata- 743122,
West Bengal, India,

In collaboration with
New Alipore College,
New Alipore, Kolkata-700053
West Bengal, India

Sl. No	Name of the Activity	Date/ No. of days	Mode of Activity	No. of Participants
1	Incubation Centre Exhibition and sale of art work, jewellery, cakes and chocolates by the students of P.N. Das College.	20.08.2022	Offline (Venue: P.N. Das College)	100 students, teaching and non-teaching staff of both the colleges participated in the programme

Signature of the Principal
New Alipore College

Principal
New Alipore College
Block-I, New Alipore
Kolkata - 700 053



Signature of the Principal
P.N.Das College

Principal
P.N. Das College
Palta, Bengal Enamel, N 24 Parg

25/4/2023



P. N. DAS COLLEGE

Santinagar, Palta, P.O.: Bengal Enamel, North 24 Parganas, Pin - 743122 (W.B.)
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Website : www.pndacollege.in

NAAC ACCREDITED - 2016

Ref:

Date

To

The Principal

New Allpore College

New Alipore, Kolkata

Sir,

This is to certify that Sri Soumya Kanta Sarkar, Library Clerk, New Alipore College visited the Central Library of P.N. Das College, Palta, today i.e. 14th June 2022 as part of an exchange program for mutual interaction and suggestions for the development of libraries of both the colleges.

Thank You

With kind regards

14/6/2022

Principal
P.N. Das College
Santinagar, Palta, P.O.: Bengal Enamel, North 24 Parganas, Pin - 743122 (W.B.)



P. N. DAS COLLEGE

Santinagar, Palta, P.O.: Bengal Enamel, North 24 Parganas, Pin - 743122 (W.B.)
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Website : www.pndascollege.in

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Date:

ACTIVITIES UNDER MOU
Teacher exchange Programme
Dept. of Physical Education,
P.N.Das College
Santinagar, Palta, Kolkata- 743122,
West Bengal, India,
With
Naba Barrackpur Prafulla Chandra Mahavidyalaya,
P.O: New Barrackpore, Dist: 24 Pgs(N), Kolkata-700131
West Bengal, India

Sl. No	Name of the Topic	Date/ No. of days	Teachers involved	Mode of activity	No. of Participants
1	Procedure of drawing tournament fixture (2 nd Semester)	21.04.2022	DR. AJIT DAS	Offline Venue: Naba Barrackpur Prafulla Chandra Mahavidyalaya	20
2	Safety Education at Home, College, Play-ground and Streets (4 th Semester)	21.04.2022	DR. AJIT DAS	Do	12
3	Motivation – Meaning, definition, type and importance of Motivation in Physical Education and Sports (6 th Semester)	21.04.2022	DR. AJIT DAS	Do	15
4	Method of organizing Annual Athletic Meet (2 nd Semester)	28.04.2022	DR. AJIT DAS	Do	17
5	Postural deformities – causes and corrective exercise of Kyphosis, Lordosis, Scoliosis and Knock Knees (4 th Semester)	28.04.2022	DR. AJIT DAS	Do	19
6	Stress - Meaning, definition and types of Stress. Causes of Stress. Effect of Stress on Sports Performance (6 th Semester)	28.04.2022	DR. AJIT DAS	Do	18
7	Method of calculation of standard Athletic Track and Field marking (2 nd Semester)	05.05.2022	DR. AJIT DAS	Do	22
8	Concept of test, measurement & evaluation and Criteria of good test (4 th Semester)	05.05.2022	DR. AJIT DAS	Do	20
9	Management of Stress and Anxiety through physical activity and sports. (6 th Semester)	05.05.2022	DR. AJIT DAS	Do	16

Signed 08/05/2023
Principal
NABA BARRACKPUR PRAFULLA CHANDRA
MAHAVIDYALAYA
New Barrackpur

Signature of the Principal
Naba Barrackpur Prafulla Chandra College

Signed 24/4/2023
Principal
P.N.Das College
Palta, Bengal Enamel, N 24 Pgs

Signature of the Principal
P.N.Das College



P. N. DAS COLLEGE

Santinagar, Palta, P.O.: Bengal Enamel, North 24 Parganas, Pin - 743122 (W.B.)
Phone : (033) 2592 1327, Fax : (033) 2592 1328, e-mail : pndc.principal11@gmail.com
Website : www.pndascollege.in

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Date

ACTIVITIES UNDER MOU

P.N.Das College

Santinagar, Palta, Kolkata- 743122,

West Bengal, India,

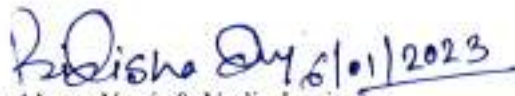
With

Hiranyagarbhaya Yogic & Vedic Institute (HYVI)

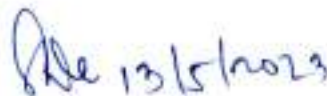
Jadavpur, Kolkata-700032

West Bengal

S1. No	Name of the Programme	Date/ No. of days	Resource Person involved	Mode of Activity	No. of Participants
1	Awareness Programme and celebration of International Day of Yoga	21.06.2022	Bidisha Dey, District Coordinator, North 24 parganas, HYVI	Online	54 Teaching, Non teaching Staff and students of the College


Hiranyagarbhaya Yogic & Vedic Institute

BIDISHA DEY
Yoga National Champion, Yoga Post Graduate
Kalyani University, Yoga Dist. Judge
Volunteer Ayush (Govt. Of India)
Physical Therapist


Signature of the Principal

P.N.Das College

Principal
P.N. Das College
Palta, Bengal Enamel, N. 24 Pgs



P. N. DAS COLLEGE

Santinagar, Palta, P.O.: Bengal Enamel, North 24 Parganas, Pin - 743122 (W.B.)
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 Website : www.pndacollege.in

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Date: _____

ACTIVITIES UNDER MOU

P.N.Das College

Santinagar, Palta, Kolkata- 743122,

West Bengal, India,

With

West Bengal Nambudo Association -Karatye-Do School

Rahara Saradapally, Kolkata-700118

West Bengal, India

S1. No	Name of the Programme	Date/ No. of days	Resource Persons Involved	Mode of Activity	No. of Participants
1	Workshop on Self-Defence	06.03. 2020	Shihan Anil Kumar Ram President and Chief Examiner, USKA, West Bengal	Offline Venue: P.N Das College	16 teachers and 60 students
2	Celebration of International Women's Day	08.03. 2022	Prof. Kakali Sen Banerjee Associate Professor, Convenor, Women Cell Dr. Madhuchhanda Lahiri Co-ordinator, IQAC Dr. Bablu Biswas Member, IQAC Shihan Anil Kumar Ram Karate Coach Sujit De Karate Coach	Offline Venue: P.N Das College	61 Students

Anil K. Ram
General Secretary

West Bengal Nambudo Association

Signature of the General Secretary
West Bengal Nambudo Association

P. N. Das
13/5/23

Signature of the Principal
P.N.Das College

Principal
P.N. Das College
Palta, Bengal Enamel, N. 24 Pgs



P. N. DAS COLLEGE

Santinagar, Palta, P.O.: Bengal Enamel, North 24 Parganas, Pin - 743122 (W.B.)
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Website : www.pndascollege.in

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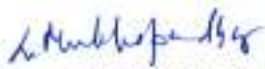
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ACTIVITIES UNDER MOU

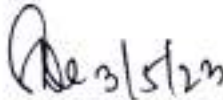
P.N.Das College
Santinagar, Palta, Kolkata- 743122,
West Bengal, India,
With

Rishi Bankim Chandra College for Women
Naihati, North 24 Parganas,
West Bengal-743165, India

Sl. No	Name of the Programme	Date/ No. of days	Resource Persons/Teachers involved	Mode of Activity	No. of Participants
1	One Day State Level Online Webinar on "COVID 19 impact on the Teaching Learning process"	22.05.2020	Dr. Ajit Mondal, Assistant Professor, Department of Education, West Bengal State University	Online	80 teachers of different colleges


Signature of the Principal
Rishi Bankim Chandra College for Women
03/05/2023

Principal
B.C. College For Women
Naihati, North 24 Parganas


Signature of the Principal
P.N.Das College

Principal
P.N. Das College
Palta, Bengal Enamel, N. 24 Pgs



P. N. DAS COLLEGE

Santinagar, Palta, P.O.: Bengal Enamel, North 24 Parganas, Pin - 743122 (W.B.)
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Website : www.pndascollege.in

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Date:

ACTIVITIES UNDER MOU
P.N.Das College
Santinagar, Palta, Kolkata- 743122,
West Bengal, India,
With
MURALIDHAR GIRLS' COLLEGE
14,Gariahat Road,Golpark, Kolkata-700029, India

Sl. No	Name of the Programme	Date/ No. of days	Resource Persons involved	Mode of Activity	No. of Participants
1	Seminar on Cyber Security	13.01. 2021	Mr. Sivamani Sangaranarayanan, Head, Network & Security Division, P.C.Solutions	Online	111 students & staff
2	One-day Seminar on Preparing for Assessment and Accreditation under Revised Guidelines	12.05. 2021	Dr Manas Baidya, Principal, Malda College Prof Anamika Roy, Asst Prof, English, Malda College	Online	107 students & staff

Kinjalini Biswas

Signature of the Principal
Muralidhar Girls' College
Principal
Muralidhar Girls' College

24/4/23

Signature of the Principal
P.N.Das College
Principal
P.N. Das College
Palta, Bengal Enamel, N. 24 Pgs



Hiralal Mazumdar Memorial College For Women

DAKSHINESWAR • KOLKATA - 700 035

Re- Accredited by NAAC with B++ GRADE

E-MAIL : hmmcw35@gmail.com / WEBSITE : www.hmmcollege.ac.in

Ref.No.....

Date: 29.12.2022



TO WHOM IT MAY CONCERN

As a part of the collaborative endeavour of three colleges, namely Hiralal Mazumdar Memorial College for Women, P.N. Das College and New Alipore College, a three days' Staff Development Programme was organized from 27.12.2022 to 29.12.2022 on Data Management and SSR preparation for NAAC.

The staff members of three colleges, IQAC coordinators, NAAC coordinators, senior faculties of three colleges and some eminent experts were present on those days.

Principals of the three colleges greeted all the staff and dignitaries. The participants were interactive, fruitfully shared knowledge and experience and gave positive feedback.

They expressed their willingness to attend such workshops in the near future for further enrichment.

Dr. Soma Ghosh
Principal
H.M.M College for Women
Principal
Hiralal Mazumdar Memorial College
For Women
Dakshineswar, Kolkata - 700 035

Dr. Prof. Sharmila De
Principal
P.N.Das College

Principal
P.N. Das College
Santinagar, Palta
24 Pgs (N), Pin- 743122

29.12.2022

Dr. Jaydeep Sarangi
Principal
New Alipore College
Dr. Jaydeep Sarangi
Principal
New Alipore College
Kolkata-700053



P. N. DAS COLLEGE

Santinagar, Palta, P.O.: Bengal Enamel, North 24 Parganas, Pin - 743122 (W.B.)
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Website : www.pndacollege.in

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Ref:

Date

ACTIVITIES UNDER MOU

Teacher exchange Programme

Dept. of Economics,

P.N.Das College

Santinagar, Palta, Kolkata- 743122,

West Bengal, India,

With

Hiralal Mazumdar Memorial College for Women,

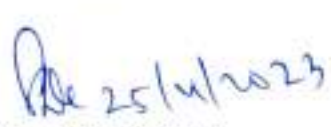
Dakshineswar, Kolkata-700035

West Bengal, India

Sl. No	Title of the Programme	Date/ No. of days	Teachers involved	Mode of activity	No. of Participants
1	Simple Keynesian Model	02.04.2022	PRIYA BISWAS	Offline Venue: Hiralal Mazumdar College	50
2	Credit Creation of Commercial Bank	04.04.2022	DR. SONALI MUKHERJEE	Offline Venue: P.N Das College	20
3	Commercial Bank	09.04.2022	PRIYA BISWAS	Offline Venue: Hiralal Mazumdar College	45
4	Inflationary Gap	11.04.2022	DR. SONALI MUKHERJEE	Offline Venue: P.N Das College	22


Signature of the Principal
Hiralal Mazumdar Memorial College
for Women

Principal
Hiralal Mazumdar Memorial College
for Women
Dakshineswar, Kolkata-700 035


Signature of the Principal
P.N.Das College

Principal
P.N. Das College
Palta, Bengal Enamel, W.B.



P. N. DAS COLLEGE

Santinagar, Palta, P.O.: Bengal Enamel, North 24 Parganas, Pin - 743122 (W.B.)
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Website : www.pndascollege.in

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Date

ACTIVITIES UNDER MOU Teacher exchange Programme

Dept. of Mathematics,
P.N.Das College
Santinagar, Palta, Kolkata- 743122,
West Bengal, India,
With

Hiralal Mazumdar Memorial College for Women,
Dakshineswar, Kolkata-700035
West Bengal, India

S1. No	Title of the Programme	Date/ No. of days	Teachers involved	Mode of activity	No. of Participants
1	Lagrange's Theorem (Semester-IV)	22.06.2022	Dr. Lipika Mullick, Associate Professor	Offline Venue: P.N. Das College	4
2	The theory of Complex Methods (Semester-IV)	22.06.2022	Dr. Lipika Mullick, Associate Professor	Offline Venue: P.N. Das College	4
3	Duality Theory (Semester-VI)	30.06.2022	Dr. Lipika Mullick, Associate Professor	Offline Venue: P.N. Das College	4
4	Sequence Functions (Semester-II)	20.10.2022	Dr. Bablu Biswas, Assistant Professor	Offline Venue: Hiralal Mazumdar College	7

Signature of the Principal
Hiralal Mazumdar Memorial College
for Women

Principal
Hiralal Mazumdar Memorial College
For Women
Dakshineswar, Kolkata-700 035

Signature of the Principal
P.N.Das College

P. N. DAS COLLEGE

Santinagar, Palta, P.O.: Bengal Enamel, North 24 Parganas, Pin - 743122 (W.B.)
Phone : (033) 2592 1327, Fax : (033) 2592 1326, e-mail : pndc.principal11@gmail.com
Website : www.pndascollege.in

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MOU Activities

Teacher Exchange Programme

Dept. of Chemistry

P.N.Das College

Santinagar, Palta, Kolkata- 743122

West Bengal, India

with

Hiralal Mazumdar Memorial College for Women

Dakshineswar, Kolkata-700035

West Bengal, India

Sl. No.	Topic	Date/No. of days	Teachers involved	Mode	No. of Participants/ Sem
1.	VSEPR and Hybridization. Chemical Analysis (Two classes)	14.6.2022	Partha pratim Bhattacharya	Offline Venue: Hiralal Mazumdar Memorial College for Women	02 (SEM-II)/05(SEM IV)
2.	MO and LCAO Environmental chemistry (Two classes)	16.06.202	Partha pratim Bhattacharya	Do	02(SEM II)/05(SEM IV)
3.	Study of p-block elements. Phase equilibria (Two classes)	24.06.2022	Partha pratim Bhattacharya	DO	03(SEM II)/05(SEM IV)
4.	Study of p-block elements and phase equilibria (Two classes)	25.06.2022	Partha pratim Bhattacharya	Do	03(SEM II)/05(SEM IV)
5.	Kinetic theory of gases and EMF (Two classes)	27.06.2022	Partha pratim Bhattacharya	Do	SEM-III(03)/SEM IV(05)
7.	Kinetic theory of gases and chemical kinetics (Two classes)	09.07.2022	Dr.Amrita Banerjee	Do	SEM III(03)

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ACTIVITIES UNDER MOU
P.N.Das College
Santinagar, Palta, Kolkata- 743122,
West Bengal, India,
With

Hiralal Mazumdar Memorial College for Women,
Dakshineswar, Kolkata-700035
West Bengal, India

Sl. No	Title of the Programme	Date/ No. of days	Resource persons involved	Mode of activity	No. of Participants
1	Data Management and SSR preparation for NAAC	27.12.2022 to 29.12.2022	Dr. Soma Ghosh, Principal, Hiralal Mazumdar Memorial College for Women Dr. Pradipta Mukherjee, NAAC Coordinator, Hiralal Mazumdar Memorial College for Women. Dr. Sharmila De, Principal, P.N. Das College. Dr. Jaydeep Sarangi, Principal, New Alipore College	Offline Venue: Hiralal Mazumdar Memorial College for Women	45 NTS from three colleges participated in the administrative training program
2	National Level 7-Day Faculty Development Programme On "Preparedness For The Revised Accreditation Framework, 2022-2023"	19.09.2022 to 26.09.2022	B. S. Ponmudiraj, NAAC Advisor Dr. T.K. Ghara, State Nodal Officer, AISHE Dr. Samrat Bhattacharya, IQAC Coordinator, Scottish Church College Dr. Varbi Roy, Member IQAC, Scottish Church College Dr. Apurba Ratan Ghosh, Professor, The University of Burdwan Dr. Tilak Chatterjee, Principal, Bankim Sardar College Dr. Ruma Bhattacharya, Principal, Bijoy Krishna Girls' College, Howrah Dr. Amit De, Principal, Prabhat Kumar College, Contai Dr. Manas Baidya, Principal, Malda College, Maldah Dr. Shukla Hazra, Principal, East Calcutta Girls' College, Lake Town Dr. Sankarashish Mukherjee, WBSU	Offline Venue: 19th Sept.- 24th Sept. 2022 Asanna Bhawan, New Town and 26th Sept. 2022: Hiralal Mazumdar Memorial College for Women, Dakshineswar	140 teaching staff including Principals, Teachers and Librarians of different colleges of West Bengal

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Hiralal Mazumdar Memorial College

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ACTIVITIES UNDER MOU

P.N.Das College

Santinagar, Palta, Kolkata- 743122,

West Bengal, India,

With

Mahadevananda Mahavidyalaya

S.N.Banerjee Road, Moniramopore, Kolkata-700120, West Bengal, India

Sl. No	Name of the Programme	Date/ No. of days	Resource Persons involved	Mode of Activity	No. of Participants
1	Seminar on IPR	20.7.2019	Dr (CA) Satyajit Dhar, Professor, University of Kalyani, Dr. Agnidipta Tarafder, Asst. Professor, West Bengal National University of Juridical Sciences Sri Sujoy Sarkar, Dy. Controller of Patents & designs, Patent office, Kolkata	Offline Venue: P.N. Das College	45
2	Webinar on IPR/RTI/RTP	18.5.2020	Dr. Agnidipta Tarafder, Asst. Professor, West Bengal National University of Juridical Sciences	Online	86 college teachers from different colleges of the state

Kale 24.4.23

Signature of the Principal
Mahadevananda Mahavidyalaya
Teacher-in-Charge
Mahadevananda Mahavidyalaya
Moniramopore, Barrackpore
North 24-Parganas

Principals 24/4/2023

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P.N.Das College
Principal
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**ACTIVITIES UNDER MoU
Teacher-Exchange Programme
Departments of English
P.N. Das College, Palta**

**&
Mahadevananda Mahavidyalaya, Monirampur
2021-22 & 2022-23**

Sl.	Topic	Date(s)	Teachers Involved	Mode of Activity	No. of Participants	Duration	Semester
1	Marquez: An Introduction	05.03.2022	Prof. Sravasti Chattopadhyay, Associate Professor, Mahadevananda Mahavidyalaya	Offline, Venue: P.N. Das College	14	2 Hours	Sem 6
2	Partition Literature Perspectives & Themes	07.03.2022	Prof. Subrata Biswas, Assistant Professor, Mahadevananda Mahavidyalaya	Offline, Venue: P.N. Das College	16	2 Hours	Sem 5
3	Tennyson's and Dante's Ulysses	12.03.2022	Prof. Suman Ranjan Bandyopadhyay, Assistant Professor, P.N. Das College	Offline, Venue: Mahadevananda Mahavidyalaya	18	2 Hours	Sem 4
4	Kubla Khan: An Overview	14.03.2022	Prof. Kakoli Sen Banerjee, Associate Professor, P.N. Das College	Offline, Venue: Mahadevananda Mahavidyalaya	19	2 Hours	Sem 4
5	The Theatre of the Absurd	02.04.2022	Prof. Suman Ranjan Bandyopadhyay, Assistant Professor, P.N. Das College	Offline, Venue: Mahadevananda Mahavidyalaya	20	2 Hours	Sem 5
6	Decolonisation and Globalisation in Literature: Social & Intellectual Background	18.04.2022	Prof. Kakoli Sen Banerjee, Associate Professor, P.N. Das College	Offline, Venue: Mahadevananda Mahavidyalaya	18	2 Hours	Sem 5
7	The Love Song of Alfred Prufrock: A Dramatic or an Interior Monologue?	24.01.2023	Prof. Suman Ranjan Bandyopadhyay, Assistant Professor, P.N. Das College	Online	25	2 Hours	Sem 5
8	Musee Des Beaux Arts: An Introduction	27.01.2023	Prof. Sravasti Chattopadhyay, Associate Professor, Mahadevananda Mahavidyalaya	Online	14	2 Hours	Sem 6

Teacher-in-Charge
Mahadevananda Mahavidyalaya
Monirampur, Barrackpore
North 24-Parganas

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Website : www.pndacollege.in

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ACTIVITIES UNDER MOU
P.N.Das College
Santinagar, Palta, Kolkata- 743122,
West Bengal, India,
With
Vijaygarh Jyotish Ray College
Vijoygarh, Jadavpur, Kolkata-700032
West Bengal, India

S1. No	Name of the Programme	Date/ No. of days	Resource Persons involved	Mode of Activity	No. of Participants
1	National Webinar on " Women Empowerment"	27.6.2020	Dr. Samapti Guha, Professor and Chair, Centre for Social Entrepreneurship School of Management and Labour Studies, Tata Institute of Social Sciences, Mumbai. And Advocate Nayan Chand Bihani, Advocate, Calcutta High Court	Online	195 teaching faculties from different colleges across state & the Country

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Signature of the Principal
Vijaygarh Jyotish Ray College

Principal
Vijaygarh Jyotish Ray College
Kolkata-700 032

25/4/2023

Signature of the Principal
P.N.Das College

Principal
P.N. Das College
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Date

ACTIVITIES UNDER MOU Teacher Exchange Programme Department of Geography

P.N.Das College
Santinagar, Palta, Kolkata- 743122,
West Bengal, India,
With
Barasat College
1, Kalyani Road, Barasat, North 24 Parganas,
West Bengal-700126, India

Sl. No	Name of the Topic	Date/ No. of days	Teachers involved	Mode of Activity	No. of Participants
1	Plate Tectonics theory process and landforms (Semester-I)	13.06. 2022	Dr. Chandan Sarkar, Assistant Professor in Geography, P.N Das College	Offline Venue: Barasat College	25 Students
2	Greenhouse effect & its importance of Ozon layer (Semester-III)	13.06. 2022	Dr. Chandan Sarkar, Assistant Professor in Geography, P.N Das College	Offline Venue: Barasat College	20 Students
3	Climatic Classification after Koppen (Semester-III)	21.06. 2022	Dr. Paramita Banerjee, Assistant Professor in Geography, Barasat College	Offline Venue: P.N.Das College	22 Students
4	Models on Landscape evaluation according to W.M Davis	21.06. 2022	Dr. Paramita Banerjee, Assistant Professor in Geography, Barasat College	Offline Venue: P.N.Das College	18 Students

Dr. Paramita Banerjee
12/04/23
Signature of the Principal
Barasat College



Dr. Chandan Sarkar
13/5/23
Signature of the Principal
P.N.Das College

Principal
P.N. Das College
Palta, Bengal Enamel, N. 24 Pgs



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ACTIVITIES UNDER MOU
P.N.Das College
Santinagar, Palta, Kolkata- 743122,
West Bengal, India,
With
Malda College
Rabindra Avenue, Rathbari, Malda, PIN-732101,
West Bengal, India

Sl. No	Name of the Programme	Date/ No. of days	Resource Persons/Teachers involved	Mode of Activity	No. of Participants
1	One-day Seminar on Preparing for Assessment and Accreditation under Revised Guidelines	12.05.2021	Dr Manas Baidya, Principal, Malda College Prof Anamika Roy, Asst Prof, English, Malda College	Online	107 students & staff

Signature of the Principal
Malda College



Principal
Malda College, Malda

Signature of the Principal

P.N.Das College

Principal

P.N. Das College
Palta, Bengal Enamel, N. 24 Parg.



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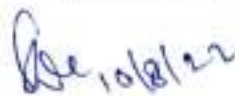
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Date

**ACTIVITIES UNDER MOU
Teacher Exchange Programme
Department of Mathematics
P.N.Das College
Santinagar, Palta, Kolkata- 743122,
West Bengal, India,
With
Uluberia College
Uluberia, Howrah, West Bengal, India**

Sl. No	Name of the Topic	Date/ No. of days	Teachers involved	Mode of Activity	No. of Participants
2	Simplex Theory (Semester-VI)	22.03.2022	Dr. Anup Kumar Singha Assistant Professor Uluberia College	Online	5
2	Partial Derivatives (Semester-II)	07.04.2022	Dr. Anup Kumar Singha Assistant Professor Uluberia College	Online	7
3	Sequence Functions (Semester-II)	14.04.2022	Dr. Bablu Biswas, Assistant Professor P.N Das College	Online	15


Signature of the Principal
Uluberia College
Principal
ULUBERIA COLLEGE
Uluberia, Howrah


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P.N.Das College
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P.N. Das College
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Santinagar, Palta, P.O.: Bengal Enameli, North 24 Parganas, Pin - 743122 (W.B.)
Phone : (033) 2592 1327, Fax : (033) 2592 1328, e-mail : pndc.principal11@gmail.com
Website : www.pndascollege.in

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ACTIVITIES UNDER MOU Teacher Exchange Programme Department of Geography

P.N.Das College
Santinagar, Palta, Kolkata- 743122,
West Bengal, India,
With

Gour Mohan Sachin Mandal Mahavidyalaya
Bireswarpur, South 24 Parganas, West Bengal-743336, India

Sl. No	Name of the Topic	Date/ No. of days	Teachers involved	Mode of Activity	No. of Participants
1	Concept and Classification of Hazard and Disaster (Semester-VI Hons)	14.05.2022	Dr. Chandan Sarkar, Assistant Professor in Geography, P.N Das College	Online	29
2	Regional Planning-Types, Principles and Objectives (Semester-IV Hons)	14.05.2022	Dr. Chandan Sarkar, Assistant Professor in Geography, P.N Das College	Online	32
3	Concept of Time and Space in Geography (Semester-VI Hons)	20.05.2022	Dr. Mousumi Bandyopadhyay Associate Professor Gour Mohan Sachin Mandal Mahavidyalaya	Online	15
4	Regional Disparity of India (Semester-IV Hons)	20.05.2022	Dr. Mousumi Bandyopadhyay Associate Professor Gour Mohan Sachin Mandal Mahavidyalaya	Online	22

Signature of the Principal
Gour Mohan Sachin Mandal Mahavidyalaya

Principal
G.M.S.M. Mahavidyalaya
Vill. & P.O.-Bireswarpur
Dist. - 24 Pargs (S), W.B.

Signature of the Principal
P.N.Das College

Principal
P.N. Das College
Palta, Bengal Enameli, N. 24 Pgs.



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ACTIVITIES UNDER MOU

Teacher Exchange Programme

Department of History

P.N.Das College

Santinagar, Palta, Kolkata- 743122,

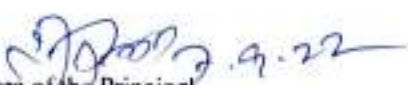
West Bengal, India,

With

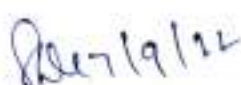
Gour Mohan Sachin Mandal Mahavidyalaya

Bireswarpur, South 24 Parganas, West Bengal-743336, India

Sl. No	Name of the Topic	Date/ No. of days	Teachers involved	Mode of Activity	No. of Participants
1	Gandhi's Rise to Power	02.05.2022	Sri Goutam Biswas, Assistant Professor in History, P.N Das College	Online	55
3	Subhas Bose and INA	02.05.2022	Smt. Ranjini Guha Associate Professor Gour Mohan Sachin Mandal Mahavidyalaya	Online	30


Signature of the Principal
Gour Mohan Sachin Mandal Mahavidyalaya

Principal
G.M.S.M. Mahavidyalaya
Vill. & P.O.-Bireswarpur
Dist. - 24 Pargs (S), W.B


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P.N.Das College

Principal
P.N. Das College
Palta, Bengal Enamel, N. 24 P.



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ACTIVITIES UNDER MOU
P.N.Das College
Santinagar, Palta, Kolkata- 743122,
West Bengal, India,
With
Paschim Banga Bigyan Mancha(PBBM)
Pritha Dasgupta Bhawan, Banamalipur, Barasat, North 24 Parganas
West Bengal, Pin-700126

Sl. No	Name of the Programme	Date/ No. of days	Resource Persons involved	Mode of Activity	No. of Participants
1	One- day Seminar on Science and Pandemic on College Foundation Day	20.08. 2020	Sri Saurav Chakrabarty Assistant Secretary, Paschibanga Bigyan Mancha	Online	190
2	Programme on National Science Day	03.03. 2022	Sri Satyajit Bandyopadhyay Member, State Committee, Paschim banga Bigyan Mancha	Offline Venue: P.N Das College	88 students and 6 staff members
3	Seminar on National Science Day on "Physics Research in Kolkata before independence"	28.02. 2023	Dr. Goutam Gangopadhyay Professor, Dept. of Physics, University of Calcutta and State Committee member PBBM	Offline Venue: P.N Das College	60 students and 10 staff members

Basu Basu 10/5/23

Signature of the President
North 24 Parganas District Committee
Paschim Banga Bigyan Mancha

President

Paschim Banga Vigyan Mancha
North 24 Parganas District Committee

De 10/5/23

Signature of the Principal
P.N.Das College

Principal
P.N. Das College
Palta, Bengal Enamel, N. 24 Pgs



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ACTIVITIES UNDER MOU
P.N.Das College
Santinagar, Palta, Kolkata- 743122,
West Bengal, India,
With
Right Brains Technology
Sanghoti Abasan(Ground Floor), Garia Main Road
P.S: Narendrapur,Kolkata-700084
West Bengal, India

Sl. No	Name of the Programme	Date/ No. of days	Resource Persons involved	No. of Participants
1	On the job training on "Web Designing" to the teaching and non teaching staff of the P.N. Das College	11.05.2022	Rajib Mukherjee	16 teachers and 9 Non-Teaching staff
2	On the job training on "Advance Excel" to the teaching and non Teaching staff of the College	18.05.2022	Rajib Mukherjee	18 teachers and 8 Non-Teaching staff


Rajib Mukherjee

Proprietor
Right Brains Technology


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Principal
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Palta, Bengal Enamel, N. 24 Pgs



BASIRHAT COLLEGE

ESTD.-1947

BASIRHAT, NORTH 24 PARGANAS, PIN-743412

Phone: 03217-228505, e-mail: info@basirhatcollege.org, website: www.basirhatcollege.org

Ref. No.

Date 20.06.2022

TO WHOM IT MAY CONCERN

This is to certify that the following activities have been conducted as per the MOU signed between P.N. Das College and Basirhat College on 2nd November, 2021.

Sl. No	Name of the Topic	Date/ No. of days	Teachers involved	Department	No. of Participants	Mode of Activity
1	Inversion of Temperature (Semester-III Hons)	10.01.2022	Dr. Chandan Sarkar, Assistant Professor in Geography, P.N Das College	Geography	30	Online
2	Soil Profile (Semester-V Hons)	10.01.2022	Dr. Chandan Sarkar, Assistant Professor in Geography, P.N Das College	Geography	32	Online
3	Contribution of Kavi Kalidas to the Sanskrit Literature (Semester - III)	11.01.2022	Sri Santanu Kumar Singha, SACT, P.N Das College	Sanskrit	35	Online


20.06.2022

Signature of the Principal

Basirhat College

Principal
BASIRHAT COLLEGE
Basirhat, North 24 Parga


20/6/22

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Date	Name of Teacher	Department	Topic taught	Course/ Year/ Semester	Duration
29.11.2021	Paramita Mallick	Physics	Thermodynamic Potentials: Internal Energy, Enthalpy, Helmholtz Free Energy, Gibb's Energy. Their definitions, Properties and Applications	3 rd Semester	2 hours
20.12.2021	Paramita Mallick	Physics	Surface Films and Variation of Surface Tension with Temperature	3 rd Semester	2 hours
1.12.2021	Dr. Aditi Matilal	Geography	Research Methodology in Geography: An introduction	5 th Semester	2 hours
15.12.2021	Dr. Aditi Matilal	Geography	Defining the research problem: Necessity and techniques	5 th Semester	2 hours

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Basirhat College

Principal
BASIRHAT COLLEGE
Basirhat, North 24 Parganas

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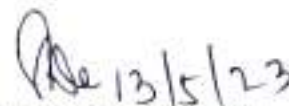
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West Bengal, India,
With
Global EHS Consultant
38/F, Vivekananda Road(2nd), Barrackpore, Kolkata-700123
West Bengal, India

Sl. No	Name of the Programme	Date/ No. of days	Resource Persons involved	Mode of Activity	No. of Participants
1	One-day Seminar on "Environmental Audit in Higher Educational Institutions: Framework and Implementations"	29.08. 2019	Dr Tanmoy Rudra Environmental Scientist and Director, Scientific and Environmental Research Institute, Kolkata Dr Susanta Podder Plant EHS Head, Pepsico India Holdings Pvt Ltd. Howrah	Offline Venue: P.N Das College	38 Faculty members from various Colleges
2	Seminar on Environmental Awareness	30.11. 2022	Dr. Susanta Podder Adjunct Associate Professor, Lincoln University College, Malaysia	Offline Venue: P.N Das College	20 Faculty members and 30 students from the college


Signature of the Founder & Managing Partner
Global EHS Consultant


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Principal
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Linkage for Research Activities

1. Bonny Samanta

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Challenges Faced By Women In Higher Education In India

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Abstract

Education is one of the significant instruments for overall development of any society. India has the third largest higher education system in the world, next to United States and China. The main governing body at the tertiary level is the University Grants Commission. There are approximately 364 universities (includes State, Deemed to be University, Central Private University) approximately 19000 colleges spread across the country. India is a developing country and continuing to develop in the field of education. There are many challenges or problems in Indian higher education system, and also have lot of opportunities to deal with this problems and make education much better. An important task of higher education is to develop human resource. Education plays an important role in empowering women. Higher education encourages and empowers women to play vital role in social development as well as country. In case of higher education, women are facing personal and social problems which inhibit the progress of women in higher education. Great numbers of girls especially in rural areas drop-out before they reach higher education. Before understanding their potentials some burdens are imposed on them and as a result, drop-out rate increases. Women's empowerment can be strengthened through higher education. Higher education enables qualified women to become an ideal in society and motivates them to become a role model for other women. This paper highlights the problems in higher education faced by women in India and some suggestions to overcome these problems.

Key words: Higher Education, development, empowerment, problems

Introduction

"There is no chance of the welfare of the world unless the condition of women is improved. It is not possible for a bird to fly on one wing"... Swami Vivekananda

Education is required in every aspect of human life. Over time, the speed of communication has increased, and with it technological developments and innovations, people and society have been

being to cope with this rapid societal development. Today's education has evolved beyond mere traditional methods and is moving towards the digital and e-learning. These techniques in essence require to adapt to self-learning. Higher education in contemporary times forms and re-forms required the students to self-learning among students. The changing world is a constant topic of interest, especially in education to higher education. The role of higher education is immensely complex and vital in today's world. College and university research is being influenced by the current situation. Education is the new and multi potential instrument of social change. Each and every sector of social development depends on human resources whose efficiency depends on the overall robustness of the education system.

The Indian higher education system is the third largest in the world, just only to that of the United States and China. According to the report of All India Survey Higher Education 2016-17, there were 164 universities, 6000 colleges and 11850 standalone institutions for AISEE (2016-17) and according to All India Survey of Higher Education 2017-18 there are 503 universities, 1 State Universities, 6000 colleges and 11850 standalone institutions for AISEE (2017-18) in India. The India governing body at university level is University Grants Commission (UGC), which sets the standard for higher education, advises the government, and helps coordinate educational service and relation between the Centre and the State.

As per AISEE 2016-17, more of the colleges run only undergraduate level programme, only 2.8% of colleges run Ph.D. level programme and 36.7% of colleges run post graduate level programme. 59.54% colleges are located in rural area and only 8.3% colleges are exclusively for girls and according to AISEE 2017-18, 36.7% of colleges run post graduate programmes and 7.8% of colleges run Ph.D. level programme. 60.6% colleges are located in rural area and 1.04% colleges are exclusively for girls.

India is the second most populated country in the world, it has substantial human resources. Its status of social-economic prosperity India promoting human resources act as a harbinger of progress. According to World Bank, India has the potential to become the human resource capital of the world. According to the gender statistics revealed by Census 2011, 52 percent of the population is male and nearly 48% female. The advancement of society is not possible by men alone, therefore the opportunities for women to come forward need to be enriched, only then will the society develop and prosper. Women are not only constitute valuable human capital of the country, but their development in education and socio-economic field also sets the pace of strong economical growth of the country. The development of every aspect of the society will remain a distant dream if it neglects women's education. Women have played a major role in developing ideas and working towards a better future for the world. They have a achieved special recognition in all areas acceptable and the field of education is no exception. The problem is that women's population is still considered to be the second largest crisis of the country.

Women empowerment can be strengthening through higher education. Higher education empowers qualified women to become an agent of society and empower them to become a role model for other young girls. It is a matter of great challenge to provide higher education to a girl in our country. In the past, girls were not allowed to study. Many obstacles in society stand in the way of progress. Over the years, the progress of women's education has substantially improved, but the barriers have not been completely eradicated. Although girls are now being enrolled in higher education but challenges hindering their progress still remain.

Objectives

The objectives of the paper are as follows:

- To discuss the present condition of literacy in higher education of women
- To identify the problems and challenges facing by women in higher education
- Finding solution to overcome of these challenges

Methodology

This study is qualitative in nature, where data have been collected from secondary sources like various published records, reports, books and websites etc. The primary requirement items have been taken from All India Survey on Higher Education (AISEE), 2016-17 and 2017-18. The population data have been taken from Census 2011. And other data are taken from A statistical analysis of child marriage in India (based on Census, 2011), Report of Teachers' Education Commission, UGC (Consolidated list of College and University).

Finding

According to the objective of the study findings are discuss below:

- To discuss the present condition of literacy in higher education of women

Table 1. Literacy Rate

Total Literacy Rate in terms of total population in India	Female in terms of total population of women
74.04%	67.48%

Source: Census 2011

Table 2. Enrollment in Higher Education (Academic year 2016-17 and 2017-18)

Undergraduate level			
Programme	Total Number of Enrolment (2016-17)	Female Enrolment (2016-17)	Total Number of Enrolment (2017-18)
Arts/B.A.	97.3 lakh	59%	95.26 lakh
Science (B.Sc.)	46.8 lakh	48%	46.19 lakh
B.Tech	31.7 lakh	25.3%	31.19 lakh
B.E. (Bachelor in Engineering)	35.1 lakh	28.9%	34.3 lakh
Commerce (B.Com)	39.8 lakh	47.5%	40.17 lakh
Medical	9.8 lakh	8 lakh	10.39 lakh
Management	5.6 lakh	22 lakh	5.87 lakh
Law	1.7 lakh	1.1 lakh	1.7 lakh

Source: AISEE (All India Survey on Higher Education) 2016-17, 2017-18

Post Graduate Level			
Programme	Total Number of Enrolment (2016-17)	Female Enrolment (2016-17)	Total Number of Enrolment (2017-18)
Agribusiness and allied course	30,303	31.1%	18,814
Commerce	4,47 lakh	65.1%	4.79 lakh
IT and Computer Science	2.76 lakh	48.3%	2.7 lakh
Foreign language	2,98,220 in English	62.9%	2,81,15,8 English

Indian language	2.76 lakh	2.39 lakh	2.38 lakh	2.37 lakh
Medical Science	2,33,229	65%	2,46,856	77.8%
Other Science	11,494	10.34%	Unknown	Unknown

Source: AISEE (All India Survey on Higher Education) 2016-17, 2017-18

Ph.D.			
Stream	Total Number of Enrolment (2016-17)	Female Enrolment (2016-17)	Total Number of Enrolment (2017-18)
Agribusiness and allied course	3,379	39.4%	5,812
Commerce	4,345	47.1%	4,483
Science	4,566 (Chemistry)	5.3%	7,525 (Chemistry)
	7,240	1,009	7,855 (Physics)
	2,327	1,427	7,834 (Mathematics)
Social Science (Economics)	1,414	1,118	2,380
	1,248 (Political Science)	747	4,733 (Political Science)
	1,417	747	4,733 (Economics)
IT and Computer	2,474	44.3%	2,711
Foreign Language	1,808 (English)	57.5%	3,110 (English)

Dr. P.N. Datta
P.N. Datta
Patla, Ranchi

Indian Language	15% in Tamil	70%	4% in Tamil Language	40.77%
	1.11% in Hindi	4.73%	7.77% in Hindi Language	1.11%
Engineering Technology	4.1% in Tamil	2.1%	4.1% in Tamil	1.1%
	1.11% in Hindi	4.73%	7.77% in Hindi	4.73%

Source: AICTE, All India Survey on Higher Education, 2014-15, 2017-18

6. To identify the problem and challenges facing by women in higher education

• Challenges:

Women are facing many challenges in higher education, such as gender disparity, conservative mindset, social harassment, lack of parental resources, poor economic condition, early marriage, burden of responsibility of household, lack of transportation, lack of women colleges and institutions in rural and other backward areas etc.

• Gender disparity:

Gender inequality in higher education is a persistent problem in the Indian society. The status of gender inequality in India is not even field like education, employment, opportunities, health, justice issues, social issues, economic issues etc. Inequality is more in higher education than in other economic inequalities. In the society, which is very conservative in terms of higher education, women are treated as inferior to men, resulting in inequalities in various ways contributing to their socio-economic and political inequalities (Khand and Sax, 2017). The female access to higher education is lower in India. The enrolment of men is higher than that of women. Over the past decades, gender disparity has declined at various levels of education in India, but it seems to be further [37]. A progressive change in social attitude can bring about positive changes in higher education.

• A conservative mindset towards the higher education of women

The present working women, they observed many changes and economic developments in different fields like economic, social, cultural, science, information, communication technology, etc. But unfortunately very little changes are seen in the conservative mindset of people. Although India is a developing society, women are still facing criticism of their wide appearance like style of dress. People with conservative mindset people cannot accept women's education in education. In the name of tradition impose the burden of population on women, and it affects their personality as well as physically. Subsequent to this impact and deeply affected by it, many girls are often forced to abandon their dreams of education and higher education [38].

• Lack of marriage

After marriage often women the end of education for girls. It is not always true that girls drop out of school or higher educational institutions because such educational institutions are not available or expensive. In those cases, there is lack of parental resources. Some parents are making the marriage in the first option for their daughter. Before completion of the stage of specific education, some girls are forced to marry, which is very painful for the parents and influence of community that belong to India. Unfortunately, there are quite a few parents of unmarried girls, may lack to educational institutions. As a result, as far as higher education is concerned, their girls to progress become increasingly difficult and challenging [9].

• Lack of transport facilities:

Women in rural, tribal, hilly and remote areas women in India face more problems in accessing educational institutions. Due to a very limited access to transport services, it is difficult for women to go far away to study. For the convenience of transport facilities, there are often forced to discontinue their study. In urban area it has become an obstacle to the education of many girls, the public transport facilities, overcrowded public transport, unclean public, growing number of accidents and fatalities etc. Educational institutions are not available nearby, travelling for a girl may become more obstacles.

• Several governments initiative offering higher education

It was adopted by the Ministry of Human Resource Development in the Lok Sabha in March 2018 that aims of annual government scheme to enhance higher educational institutions have increased 50% in the 2018-17 academic session from the 2015-16 academic session [39]. Provision of several government in colleges and other institutions of higher education is to attract more girls, even the much to be addressed aspects. The University Grants Commission initiated India's first gender equity, equality, efficiency, productivity and reduction of sexual harassment of women employees and students in higher educational institutions. September 2017. This regulation describes the organizations of higher educational institutions. This act is

discriminate against all gender-based violence perpetrated against employees and students of all levels, recognizing that primarily women employees and students, some male students and employees of the third gender are vulnerable to many forms of sexual harassment and harassment and exploitation [24].

Girls who are sexually harassed in higher education institutions, they do not want to attend the educational institutions due to fear of harassment, bullying and sometimes they leave their studies for the reason. Some form of behavior towards a girl disrupt her physical and mental state and abuse treatment and depression, which causes stress in her progress in education.

• Parental attitude towards girl's higher education

There is no parent who wishes to let their higher education. These parents who have arranged better education for their daughter. They understand the value of education, especially the progress of higher education for females in a society that has the combined traditional patriarchal values and traditions. Such parents are characterized by a more positive attitude towards education, as the other hand is rural and other remote areas people who are less educated, and have negative attitude towards women from adopting higher education. Educated parents do not discriminate between sons and daughters. They do not subordinate study in patriarchal values and socio-economic that considered women to be rights to men. On the contrary, they believe in gender equality which goes a long way in securing the future of the country.

• Burden of responsibility of household

Traditionally, it is expected that a man will bear the most of the responsibility in the family. The burden of household responsibility is imposed on girls especially in orthodox families pursuing higher education because an obstacle for girls - parents, if it is possible for women to pursue higher education, they have not. Little time for education after spending the needs of the family.

• Lack of girl's college especially in rural and tribal areas

The number of women's higher educational institutions is relatively low, because it is much less compared to those institutions which are required to promote and facilitate education among men. Therefore, there is more need particularly to promote more girls who are forced to stay outside to reach the educational institutions. But in other places, women are not given as much as men. They people are still not comfortable with the idea of co-education continuing and accepting the concept as socially determined and even have more socially determined. They think that corruption is found in school where both girls and boys are made together in the same institutions, or they do not agree to send their daughter in co-education institutions [10].

• Economic problem

A serious major issue in higher education is economic problem. Most of the people in India are poor, most of them belong to the middle class. They work hard to meet the basic needs of their families. Spending money to provide higher education to their children becomes a problem for them. Despite having a positive attitude towards higher education of their girl child, they are often helpless and unable to provide higher education to their daughters owing to financial constraints.

• Forced labor

Forced labor can be understood as work that is performed in voluntarily and under the threat of penalty. It refers to a situation where a person are forced to work through the use of violence or intimidation, or by some subtle means such as accumulated debt, retention of identity papers or threats of documentation to management authorities [21].

According to the ILO (International Labour Organization) Forced Labour Convention, 1930 (No. 29), there is compulsory labor if "all work or service which is exacted from a person under the threat of a penalty and for which the person has not offered himself in freely volunteered" [24].

Forced labor may be imposed on adults, children and women by such industries, to private enterprises or by individual persons. It is seen in all types of economic activity, such as handicraft, construction, agriculture, manufacturing, sexual exploitation, forced begging etc. and in many countries [30].

Some girls from poor families are often forced to participate in competitive labor. Sometimes they are unable to complete or continue their education and that to affect their work with education.

• Find out the solution to overcome the problems

In order to increase the number of enrollment of girl students, students and government have to be involved in higher educational institutions.

- Increase number of female students in co-education institutions (Changshu/Nadi, 2016);
- Increase number of colleges and universities, so that women can enroll in higher education and help them to complete their higher studies;
- Parents should be more aware of the participation in higher level study of their girl child;
- Provide counseling for parents, offer health services and help them from the economic stage of education (Changshu/Nadi, 2016);
- The transport facilities need to improve in rural and tribal areas (Changshu/Nadi, 2016);
- Promote movement must be to promote and encouraged for women to free with social and outside of their institutions;
- Introduce special scholarship for meritorious poor and economically disadvantaged to pursue higher education.

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Source: <http://www.irs.gov>

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But have been selected from various secondary sources for the present study. Information is taken from each article and tabulated.

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SOCIAL, ECONOMIC, EDUCATIONAL AND ENVIRONMENTAL IMPACT OF COVID-19 ISSUES AND CHALLENGES

SURVIVAL CHALLENGES OF THE ELDERLY PEOPLE DURING COVID-19 PANDEMIC: EVIDENCE FROM WEST BENGAL, INDIA

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Abstract

During the unprecedented COVID-19 pandemic a large proportion of elderly people, with comorbidities, have to be pay death toll and economic health might face a definite change by the modified pace of demographic transition. The present study systematically identifies the relative importance of factors related to survival of elderly people residing inside and outside old-age home, during COVID-19 lockdown. The Survival of elderly people are related to Modified Survival Index (SI) model using primary information on physical and mental attributes from 200 elderly respondents in North 24 Parganas (100 each residing inside and outside old-age home) through a structured phone call survey during COVID-19 pandemic. A comparative survival picture of elderly in West Bengal, India, has shown that due to COVID-19 pandemic protocol and lockdown the survival process of elderly has degraded and terribly worse for elderly residing inside old-age home. Along with the deterioration of physical quality, mental health quality of elderly has crumbled significantly due to social distancing protocol and COVID-19 pandemic lockdown. Effort made from NGOs and local govt. towards elderly is very inefficient and hence health inequality with comorbidities during pandemic has increased a lot. Among all subgroups, correlation between such economic condition has the highest importance for both the inside and outside old-age people. The standard of living of elderly during pandemic has suffered much by non-availability of required medical services and food security. Elderly, lived with family could engage with social gathering and different rehabilitation program in their daily new-normal life. Thus, mental health quality has eroded by prolonged loneliness combined with increased frustration due to social distancing protocol in old-age home is the greater cause. The survival challenge of elderly has become tougher compare to pre-pandemic situation mainly due to unavailability of healthcare, protected food and supplements, problem in receiving pension/beneficiary, social distancing protocol, better social associations with reliable social communities, due to deterioration and medicines supply, general and COVID-19 health check-up etc. under public control would make the survival process of elderly easy during the COVID-19 pandemic.

Keywords: Elderly people, Socioeconomic correlates, COVID-19 protocol, Survival challenges
AI Classification: H51, H2, H1, H4, H3

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Abstract

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Keywords: Elderly people; Socioeconomic conditions; U.S./Puerto Rican; Survival; Challenges

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[9]

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Linkage for Research Activities

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The image shows the front cover of the journal 'Indian Cartographer'. The cover is divided into two main vertical sections. The left section features a vertical strip of three images: a satellite map of a coastal area at the top, a black and white photograph of a ship at sea in the middle, and a stylized map of India at the bottom. The right section is white with black text and logos. At the top left is the logo of the Indian National Cartographic Association (INCA), which is a circular emblem with a map of India inside. To its right is a shield-shaped logo with a map of India. Below these logos, the title 'INDIAN CARTographer' is printed in a bold, sans-serif font. Underneath the title, the subtitle 'Journal of the Indian National Cartographic Association (INCA)' is written in a smaller font. Further down, the text 'GEOINFORMATICS FOR CARTO-DIVERSITY AND ITS MANAGEMENT' is displayed. Below this text is a black and white photograph of a large, modern, multi-story building with a glass facade. At the bottom of the right section, the volume and year information 'Volume 37, 2017' is printed. Below that, the address of the National Hydrographic Office is listed: 'NATIONAL HYDROGRAPHIC OFFICE, 101A, RAJIV GANDHI ROAD, POST BOX NO. 75, CHENNAI 600 001, INDIA'. At the very bottom, the text 'CHIEF EDITOR: Dr. B. Ramprasad' is printed.

[illegible]

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**GEOINFORMATICS FOR CARTO-DIVERSITY
AND ITS MANAGEMENT**

Chief Editor
Dr. BK Ramprasad

Associate Editors
Dr UK Singh
Mohammed Asifhaq



The views expressed by the Author(s) are their own and INCA does not necessarily endorse them in part or whole.

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SOME PROPERTIES OF A FUNCTION CONNECTING TO EXPONENT OF CONVERGENCE FOR DOUBLE SEQUENCES

D. K. GANGULY, B. BISWAS AND ALAUDDIN DAFADAR

Abstract. In this paper, we extend the notion of exponent of convergence for double sequences and study some properties of a function connecting with non-decreasing double sequences in a Fréchet metric space.

1. Introduction

Let $A = \{a_k\}_k$ be a non-decreasing sequence of positive real numbers with $\lim_{k \rightarrow \infty} a_k = \infty$. It is well known [1] that there exists a unique number $\lambda = \lambda(A) = \lambda(A) > 0$ such that $\sum_{k=1}^n a_k^{-\lambda} < \infty$ for each $n \in \mathbb{N}$ and $\sum_{k=1}^n a_k^{-\lambda} = \infty$ for each $n \in \mathbb{N}$.

The number $\lambda = \lambda(A)$ is called the exponent of convergence of the sequence A . It is represented by:

$$\lambda(A) = \inf \left\{ \sigma > 0 : \sum_{k=1}^{\infty} a_k^{-\sigma} < \infty \right\}.$$

It is also known [2] that

$$\lambda(A) = \limsup_{k \rightarrow \infty} \frac{\log k}{\log a_k}.$$

Several authors (see [3], [4], [5], [6]) devoted their studies on exponent of convergence from different points of view. In this context, Kopytko and Solov'ev [7] explored some interesting results on exponent of convergence of real sequences. They investigated the exponent of convergence of a real valued function defined on the set $\mathbb{N}$ of all real non-decreasing sequence $\{x_k\}_k$ of real numbers with the property $x_k > 0$ endowed with Fréchet metric defined by:

$$\rho(x, y) = \sum_{k=1}^{\infty} \frac{1}{2^k} \frac{|x_k - y_k|}{1 + |x_k - y_k|},$$

where $x = \{x_k\}_k$ and $y = \{y_k\}_k$ are any two elements of $\mathbb{N}$.

Mathematics subject classification: 26A27.

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Our aim in this paper is to extend the concept of exponent of convergence for double sequences of real numbers. During the last century, various problems concerning to the convergence and divergence of double sequences were treated by a number of mathematicians (see [8], [9], [10], [11], [12], [13]). Here first we give formalism for the exponent of convergence of double sequences which is analogous to the case of single sequences and then we prove some properties on exponent of convergence for the double sequences.

DEFINITION 1. [1] A double sequence $\{a_{mn}\}$ is said to be monotonically increasing (decreasing) if $a_{mn} \leq a_{pq}$ ($a_{mn} \geq a_{pq}$) holds if $(m, n) \leq (p, q)$, $m < p$ and $n \leq q$ under the partial ordering " $\leq$ " on the set $\mathbb{N} \times \mathbb{N}$, where $\mathbb{N}$ is the set of positive integers.

DEFINITION 2. [1] A double sequence $\{a_{mn}\}$ of real numbers is said converge to the number ξ if for each $\epsilon > 0$ there exists $(p, q) \in \mathbb{N} \times \mathbb{N}$ such that $|a_{mn} - \xi| < \epsilon$ for $(m, n) \geq (p, q)$ and it is written as $\lim_{m, n \rightarrow \infty} a_{mn} = \xi$.

DEFINITION 3. [1] A double series $\sum_{m, n=1}^{\infty} a_{mn}$ of real numbers is said to converge to ξ in Pringsheim's sense if $\lim_{m, n \rightarrow \infty} s_{mn} = \xi$ where $s_{mn} = \sum_{k=1}^m \sum_{l=1}^n a_{kl}$ is the partial sum of the double series.

Let $\mathbb{N}$ denote the set of real non-decreasing double sequences $\{x_{mn}\}$ with $x_{kl} > 0$, endowed with Fréchet metric defined by $\rho(x, y) = \sum_{k=1}^{\infty} \frac{1}{2^k} \frac{|x_{kl} - y_{kl}|}{1 + |x_{kl} - y_{kl}|}$, where $x = \{x_{kl}\}_{k, l \in \mathbb{N}}$.

It is clear that, the set $\mathbb{N}$ of all real double sequences with Fréchet metric is a complete metric space. The convergence in this space is taken as co-ordinate wise convergence in Pringsheim's sense.

In the following we establish some properties of the space $(\mathbb{N}, \rho)$.

THEOREM 1. If S_1 is the collection of all non-decreasing sequences $\{x_{mn}\}$ of real numbers diverging $m, n \rightarrow \infty$ with $x_{kl} > 1$ then the space (S_1, ρ) is not a complete metric space.

Proof. We consider a sequence $\{x^{(n)}\}_{n=1}^{\infty}$ of elements from S_1 , where $x^{(n)} = \{a_{mn}\}_{m, n \in \mathbb{N}}$ and

$$a_{mn} = \begin{cases} 1 + \frac{1}{n} & \text{when } (m, n) \in (1, 1) \\ m + n & \text{otherwise} \end{cases}$$

If $\{x^{(n)}\}_{n=1}^{\infty}$ converges to $x = \{a_{mn}\}$ then $a_{11} = 1$, since the space $\mathbb{N}$ with the point wise convergence. Clearly, $x \notin S_1$ and consequently (S_1, ρ) is not complete. $\square$

THEOREM 2. If T is the collection of all non-decreasing sequences $\{x_{mn}\}$ of real numbers satisfying $\lim_{m \rightarrow \infty} \lim_{n \rightarrow \infty} x_{mn} = 1$, then T is nowhere dense in $\mathcal{E}$.

Proof. Clearly, T is a closed subset of $\mathcal{E}$. It is sufficient to prove that the complement of T in $\mathcal{E}$ is dense in $\mathcal{E}$.

Let $\alpha = \{a_{mn}\} \in T$. We consider an open ball $B(\alpha, \delta)$, $\delta > 0$ with centre α and radius δ .

If $a_{mn} = 1$ then $\alpha \in T$ and $\{x_{mn}\} = \{1\}$, $B(\alpha, \delta) = \emptyset$ and the result is proved.

Let $a_{mn} < 1$. Since $\{a_{mn}\}$ is non-decreasing and diverges to 1, there exists positive integers k and l for which $1 - \delta$ is less than $a_{kl} < 1$.

For $\delta > 0$ we can choose a real number β , $0 < \beta$ such that $\frac{1}{2}(1 - \delta) < \beta$. Again for $\alpha \in T$ with $a_{kl} < 1 - \delta$ we have $\frac{1}{2}(1 - \delta) < \beta$.

We consider a sequence $\beta = \{\beta_{mn}\}$ such that

$$\beta_{mn} = \begin{cases} 1 - \beta, & \text{when } (m, n) \in (k, l) \\ a_{mn}, & \text{otherwise.} \end{cases}$$

Since $a_{kl} < 1 - \delta$, $\beta \in T$ and

$$\rho(\alpha, \beta) = \frac{1}{2} \left(\frac{1}{2} + \frac{1}{2} \frac{a_{kl} + 1}{1 + a_{kl}} \right) < \frac{1}{2} \left(\frac{1}{2} + \frac{1}{2} \frac{1 - \delta + 1}{1 + 1 - \delta} \right) < \frac{1}{2} \left(\frac{1}{2} + \frac{1}{2} \frac{2 - \delta}{2 - \delta} \right) < \frac{1}{2} (1 - \delta) < \beta.$$

Then, clearly $\beta \in B(\alpha, \delta)$ and thus $B(\alpha, \delta)$ does not lie in T . Therefore, T is nowhere dense in $\mathcal{E}$. $\square$

THEOREM 3. The set $\mathcal{E}(\mathcal{E}, \mathcal{E})$ is a complete metric space and has the cardinality of continuum.

Proof. To prove the theorem, we show that the set $\mathcal{E}$ is a perfect subset in $\mathcal{E}(\mathcal{E}, \mathcal{E})$. Let $\{x^{(i)}\}_{i=1}^{\infty}$ be any sequence in $\mathcal{E}$ where $x^{(i)} = \{x_{mn}^{(i)}\}$ and $i = 1, 2, 3, \dots$

If $x^{(i)} \rightarrow x^{(j)} = \{x_{mn}^{(j)}\}$ and then, $x \in \mathcal{E}$. It readily follows from the point-wise convergence in Fréchet sense for double sequence with respect to the Fréchet metric. Hence, $\mathcal{E}$ is closed.

We now show that the set $\mathcal{E}$ is dense in $\mathcal{E}$ and

We take any point $\alpha = \{a_{mn}\} \in \mathcal{E}$. We have to find a sequence $\{x^{(i)}\}_{i=1}^{\infty}$ from $\mathcal{E}$ such that $\lim_{i \rightarrow \infty} x^{(i)} = \alpha$.

We consider the sequence $\{x^{(i)}\}_{i=1}^{\infty}$ as follows:

$$x^{(i)} = \begin{cases} a_{mn}, & \text{for } (m, n) \in (i, i) \\ 1, & \text{otherwise.} \end{cases}$$

Proof. It is well known that the set of points of discontinuity of a function belonging to the Baire class one is a set of first category ([1]). As the function λ is really discontinuous on $\mathcal{E}$, it can not belong to Baire class one. $\square$

THEOREM 3. For each real number d , the set $A^d = \{x \in \mathcal{E} : \lambda(x) < d\}$ and $A_d = \{x \in \mathcal{E} : \lambda(x) > d\}$ belong to the third additive Borel class.

Proof. First we investigate for the set A^d .

If $d \leq 0$, then clearly $A^d = \emptyset$ (null set) and the above result is true.

Let $d > 0$. Then, we have $A^d = \{x \in \mathcal{E} : \lambda(x) < d\}$. So, there exists α such $0 < \alpha < d$ for which

$$A^d = \left\{ x \in \mathcal{E} : \sum_{n=1}^{\infty} \sum_{m=1}^{\infty} a_{mn}^{\alpha} < \alpha \right\} \\ = \bigcup_{k=1}^{\infty} \left\{ x \in \mathcal{E} : \sum_{n=1}^{\infty} \sum_{m=1}^{\infty} a_{mn}^{\alpha} < \frac{1}{k} \right\},$$

where k is the smallest positive integer for which $\alpha - d + \frac{1}{k} > 0$. For all $k \geq k_0$.

We let $M_k = \left\{ x \in \mathcal{E} : \sum_{n=1}^{\infty} \sum_{m=1}^{\infty} a_{mn}^{\alpha} < \frac{1}{k} \right\}$, where $\alpha = d - \frac{1}{k}$, $k = k_0, k_0 + 1, k_0 + 2, \dots$

Since $\sum_{n=1}^{\infty} \sum_{m=1}^{\infty} a_{mn}^{\alpha} < \frac{1}{k}$ for $\alpha = d - \frac{1}{k}$, $k = k_0, k_0 + 1, k_0 + 2, \dots$ due to Lebesgue's theorem for convergence of double series of real terms, for each positive integer k , there exists $(m, n) \in \mathbb{N} \times \mathbb{N}$ such that

$$\sum_{j=1}^m \sum_{i=1}^n a_{ji}^{\alpha} < \frac{1}{k}, \text{ for } k = 1, 2, 3, \dots$$

Then

$$M_k = \bigcap_{(i,j) \in \mathbb{N} \times \mathbb{N}} \bigcap_{(p,q) \in \mathbb{N} \times \mathbb{N}} \left\{ x \in \mathcal{E} : \sum_{n=1}^{\infty} \sum_{m=1}^{\infty} a_{mn}^{\alpha} < \frac{1}{k} \right\} \\ = \bigcap_{(i,j) \in \mathbb{N} \times \mathbb{N}} \bigcap_{(p,q) \in \mathbb{N} \times \mathbb{N}} M_{k_{ijpq}}$$

where $M_{k_{ijpq}} = \left\{ x \in \mathcal{E} : \sum_{n=1}^{\infty} \sum_{m=1}^{\infty} a_{mn}^{\alpha} < \frac{1}{k} \right\}$

For fixed $k \in \mathbb{N}$, p, q we prove that $M_{k_{ijpq}}$ is a closed set.

This follows immediately from point-wise convergence of double sequence in Fréchet sense.

We take a sequence $\{x^{(i)}\}_{i=1}^{\infty}$ in $M_{k_{ijpq}}$ where $x^{(i)} = \{x_{mn}^{(i)}\}$, $i = 1, 2, 3, \dots$ and $\lim_{i \rightarrow \infty} x^{(i)} = x$ where $x = \{x_{mn}\}$.

It is clear that $\lim_{i \rightarrow \infty} x^{(i)} = x$.

Since $\mathcal{E}$ is a perfect set in $\mathcal{E}(\mathcal{E}, \mathcal{E})$ and thus $\mathcal{E}$ has the character of compactness and consequently the space $(\mathcal{E}, \rho)$ is complete having character of compactness.

1. Exponent of convergence

Let $\alpha = \{a_{mn}\}$, $a_{mn} > 1$ be a non-decreasing double sequence of real numbers. If $\sigma < 1$ then the convergence of the series $\sum_{n=1}^{\infty} a_{nn}^{\sigma}$ implies the convergence of the series

$$\sum_{n=1}^{\infty} \sum_{m=1}^{\infty} a_{mn}^{\sigma}. \quad \text{This simple observation leads us to define the exponent of convergence}$$

$\lambda(\alpha)$ of the double sequence α as follows:

$$\lambda(\alpha) = \inf \left\{ \sigma > 0 : \sum_{n=1}^{\infty} \sum_{m=1}^{\infty} a_{mn}^{\sigma} < \infty \right\}.$$

Then λ is a function from $\mathcal{E}$ to $[0, \infty]$.

The following result gives an alternative form for calculation of the exponent of convergence of double sequences under certain assumptions and it can be verified easily.

RESULT 1. If $\{a_{mn}\}$, $a_{mn} > 1$ be a non-decreasing double sequence of real numbers, then the exponent of convergence of the double sequence $\{a_{mn}\}$ is equal to the number $\limsup_{m \rightarrow \infty} \frac{\log m}{\log m / a_{mm}}$.

We now mention some topological properties of the function λ .

THEOREM 4. For any non-negative real number d there exists some $\alpha > 2$ such that $\lambda(\alpha) < d$.

Proof. Case 1. Let $d = 0$. We choose $\alpha = \{a_{mn}\}$ where $a_{mn} = (nm)^{\alpha}$. Then

$$\lambda(\alpha) = \limsup_{m \rightarrow \infty} \frac{\log m}{\log m / a_{mm}} = \limsup_{m \rightarrow \infty} \frac{1}{\alpha} = 0.$$

Case 2. Let $d > 0$. Then, there exists a positive integer k such that $(k+1)d > 2$. For positive integers n and m , we choose $\alpha = \{a_{mn}\}$ where $a_{mn} = (m + n)(k + k^2)^d$. Then

$$\lambda(\alpha) = \limsup_{m \rightarrow \infty} \frac{\log m}{\log m / a_{mm}} = \limsup_{m \rightarrow \infty} \frac{\log m}{\log m / (m + m)(k + k^2)^d} = \frac{1}{d + 1} < d.$$

COROLLARY 1. The function $\lambda : \mathcal{E} \rightarrow [0, \infty]$ does not belong to Baire class one.

Then, $\lim_{n \rightarrow \infty} (a_{nn})^{1/n} = a_{nn}^{-1/n}$, for all $(n, j) \in \mathbb{N} \times \mathbb{N}$.

Hence, $\alpha \in M_{k_{ijpq}}$. Consequently, each of the sets $M_{k_{ijpq}}$ is closed.

So, it follows that $A^d = \left\{ x \in \mathcal{E} : \lambda(x) < d \right\} = \bigcap_{(i,j) \in \mathbb{N} \times \mathbb{N}} \bigcap_{(p,q) \in \mathbb{N} \times \mathbb{N}} M_{k_{ijpq}}$ is an $F_{\sigma\delta}$ set in $\mathcal{E}$ and therefore, A^d belongs to the third additive Borel class.

We now investigate the set A_d .

If $d = 0$, then $A_d = \mathcal{E}$ and the result is proved.

Let $d > 0$, then there exists a positive integer k such that

$$A_d = \left\{ x \in \mathcal{E} : \lambda(x) > d \right\} = \bigcup_{k=1}^{\infty} \left\{ x \in \mathcal{E} : \sum_{n=1}^{\infty} \sum_{m=1}^{\infty} a_{mn}^{\alpha} > \frac{1}{k} \right\}.$$

We let $L_k = \left\{ x \in \mathcal{E} : \sum_{n=1}^{\infty} \sum_{m=1}^{\infty} a_{mn}^{\alpha} > \frac{1}{k} \right\}$, where $\alpha = d + \frac{1}{k}$, $k = 1, 2, 3, \dots$

Then, for each $p \in \mathbb{N}$ there exists $q \in \mathbb{N}$ such that $\sum_{j=1}^m \sum_{i=1}^n a_{ji}^{\alpha} > p$, for all $(m, n) \in \mathbb{N} \times \mathbb{N}$.

We now express the set L_k as

$$L_k = \bigcup_{(i,j) \in \mathbb{N} \times \mathbb{N}} \bigcup_{(p,q) \in \mathbb{N} \times \mathbb{N}} \left\{ x \in \mathcal{E} : \sum_{n=1}^{\infty} \sum_{m=1}^{\infty} a_{mn}^{\alpha} > p \right\} = \bigcup_{(i,j) \in \mathbb{N} \times \mathbb{N}} \bigcup_{(p,q) \in \mathbb{N} \times \mathbb{N}} L_{k_{ijpq}}$$

where $L_{k_{ijpq}} = \left\{ x \in \mathcal{E} : \sum_{n=1}^{\infty} \sum_{m=1}^{\infty} a_{mn}^{\alpha} > p \right\}$.

Analogously as in the foregoing part of the proof, we can verify that each of the sets $L_{k_{ijpq}}$ is closed.

Hence, the set $A_d = \left\{ x \in \mathcal{E} : \lambda(x) > d \right\} = \bigcup_{(i,j) \in \mathbb{N} \times \mathbb{N}} \bigcup_{(p,q) \in \mathbb{N} \times \mathbb{N}} L_{k_{ijpq}}$ is an $F_{\sigma\delta}$ set and therefore A_d belongs to the third additive Borel class. $\square$

COROLLARY 2. The function $\lambda : \mathcal{E} \rightarrow [0, \infty]$ is a measurable function.

THEOREM 5. For every real number d , each set $A^d = \{x \in \mathcal{E} : \lambda(x) < d\}$ is of first category in $\mathcal{E}$.

Proof. By virtue of the above theorem, we can write

$$A^d = \bigcup_{(i,j) \in \mathbb{N} \times \mathbb{N}} \bigcup_{(p,q) \in \mathbb{N} \times \mathbb{N}} M_{k_{ijpq}} = \bigcup_{(i,j) \in \mathbb{N} \times \mathbb{N}} M_{k_{ij}}$$

where $M_{k_{ij}} = \bigcup_{(p,q) \in \mathbb{N} \times \mathbb{N}} M_{k_{ijpq}} = \left\{ x \in \mathcal{E} : \sum_{n=1}^{\infty} \sum_{m=1}^{\infty} a_{mn}^{\alpha} < \frac{1}{k} \right\}$.

We first prove that, each of the sets $M_{k_{ij}}$ is of first category in $\mathcal{E}$. For this it is sufficient to show that $M_{k_{ij}}$ is an F_{σ} set whose complement is dense in $\mathcal{E}$.

Linkage for Research Activities

1. Chandan Sarkar
2. Uma Sankar Malik

PROCESSES AND PATTERN OF URBANIZATION IN NORTH 24 PARGANAS DISTRICT, WEST BENGAL

Chandan Sarkar* and Uma Sankar Malik**

Urbanization is now a worldwide phenomenon. Urbanization, socio-economic development and industrialization are interlinked to each other. North 24 Parganas district is high urbanized district of west Bengal. The rate of urban growth and urbanization are rather very match with the support of infrastructure. Urbanization in terms of urban population, urban spacing, urban centers and infrastructural development are quite satisfactory with compare to west Bengal as well as India. This paper analyze an over view of urbanization in the district since the independence period. Firstly discuss urban growth in terms of population, area and urban center. Secondly also discuss about the all types of urban areas like out growth, census town, cantonment board, municipality etc. Thirdly discuss the level of urbanization in the district. Then the paper presents the main features of urbanization for last sixty years, mainly on the basis of census data, other secondary data and perception.

INTRODUCTION

Urbanization is a complex process of population concentration and concomitant impact on population structure, population composition, economic activities, social matrices and way of living of people in a new developed situation. The urbanization processes is very much dependent on the economy of the area or vice-versa. Under different situation different urban pattern are emerging out of multiplicity of urbanization processes. Urbanization is an index of transformation from traditional rural economies to modern industrial one. It is progressive concentration (Davis, 1965) of population in urban unit. Quantification of urbanization is very difficult. It is a long term process. Kingsley Davis has explained urbanization as process (Davis, 1962) of switch from spread out pattern of human settlement to one concentration in urban centers. It is finite process- a cycle through which a nation pass as they evolve from agrarian to industrial society (Davis and Golden, 1954). Urbanization level is an important concept that involves continuous change within the urban area itself in terms of urban growth, urbanization, urban problems and expansion of town boundaries. Urban growth occurs through natural increase coupled with migration from other areas. Urbanization is a process by which urban percent increases with concomitant socio-economic development. It is a manifestation of social ecological development and changes in the economic and political order of the nation itself. As a nucleus of economic and commercial hub, it is generally an area of high population density. In a Third World country like ours, the towns and cities are associated with deficient infrastructure, inadequate civic amenities and services, huge unemployment, random growth of slums, sprawls and squatters, vanishing urban greens, water logging, pollution and related health hazards, and so on.

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As a student of geography, the current researcher intends to explore urban growth and urbanization in order to find a gateway to the development through smart growth and green urbanization. There is still enough scope for urban development by setting up new urban centers and rebuilding the older ones with new eco-friendly technologies.

Geographers use term urbanization more commonly to a process of transformation. Lampard suggests that a distinction should be made between the three aspects of the process of urbanization, i.e., behavioral, structure and demographic aspects of urbanization process. Keeping in view the various aspects of urbanization, Riesman depicts urbanization as a process of change, when a society is transformed from an agrarian economy and small homogeneous society to an industrial economy and large heterogeneous mass. Or in other words urbanization is a territorial response to structural changes in the economy. Now day the city has been increasingly chosen as the spatial unit where the adequacy of political institution, performance of government agencies and effectiveness of programmes to combat social problems, to solve the environmental problems and to promote economic development has to be tested. Therefore, the level of urbanization is often equates level of development in

general. To formulate and to modify urban policies and programmes it is necessary to collect information on urban conditions and trends. Only then we can convert this information to knowledge for formulating and modifying urban policies and programmes. Therefore it has become essential to investigate the level of urbanization of North 24 Parganas. The present study is concerned with the historical aspect of the district's urbanization, its trend through time since independence and its present level of urbanization. Therefore the pattern of urbanization has become essential to measure the level of urbanization of North 24 Pgs. The present study has been analyzed the trend and patter of urbanization of the North 24 Pgs. District.

OBJECTIVES

The study aims highlighting the urban growth and development in North 24 Parganas district with following objectives.

- i) To study the basis of urbanization of the study area and the urban processes.
- ii) To study the pattern and trend of urban growth and urbanization the study area during post independence.
- iii) To study the problems of urbanization.
- iv) To study the level of urbanization in the district.

DATA BASE AND METHODOLOGY

The present study is based on the secondary data, has been collected from district census hand book, district statistical hand book and municipality in the district. This paper has been analyzed with both quantitative and qualitative techniques. First step has been analyzed the growth pattern of urban population, urban space, urban centre and urban size class distribution. Secondly analyzed level of urbanization in the district. Finally use Microsoft Office Excel 2007 for analysis the quantitative data and present analysis result by different graph.

STUDY AREA

The district North 24 Parganas forms the south-eastern part of the West Bengal and lies between 22°11'06" N to 23°15'02" N latitude and 88°20'E to 89°05' E longitude (figure-1). The district is bordered by the districts of Nadia in north, South 24 Parganas and Kolkata in the south, Howrah and Hooghly in the west, Bangladesh forms the eastern border of the North 24 Parganas. Barasat is the district headquarters. North 24 Parganas is the most populous district having 10009781 populations (Census of India, 2011) and also the tenth largest district in the state by area (4094.0 sq. km). It has five subdivisions, 22 community Development blocks, 27 municipalities and a total of 107 (Municipality 27 + Cantonment Board 01 + Census Town 78 + Industrial Township 01) urban centers. Total urban population of the district is 5732162 and 57.27% urban population. The density of population (2445persons/ sq.km.) is much higher than the state average of 1029 population per sq.km, and it ranks third in terms of population density.


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2011	623.91	24.81	1732162	9187.5	18.17	111	101.82	$(1732162 - 20) \div (100 - 1)$
								27 Municipalities $(1732162 - 20) \div (100 - 1)$
								101-4)

Source: Computed by authors from different Census Reports, 1951-2011

During the past 60 years 1951-2011 urban area increased from 331.58 sq.km to 623.91 sq.km and number of urban centres also increased from 36 (1951) to 111 (2011). But in 2001 the urban centres decreased by -21.42%. The number of urban centres was 70 in 1991 and 55 in 2001. As some census towns have been merged to nearby municipality and some urban outgrowths also merged with municipality and then converted to census towns. This reduction of urban centres occurred due to declassification and reclassification of towns. The urban population density was 2862.8 sq.km in 1951 and 9187 sq.km in 2011. During from 1951 to 1971 the district had at high level of urbanization; between 1971-2001 level of urbanization was slow but steady. The increase of urban population in percentage, number of urban centres, urban rural ratio, urban population density, and percentage of increase urban centres all show a certain degree of urbanization in every census year (1951-2011) Table-1.

DEGREE OF URBANIZATION

The degree of urbanization is defined as relative number of people who live in urban areas. Percentage of Urban population ($U/P \times 100$), percent rural ($R/P \times 100$) and urban rural ratio ($U/R \times 100$) are used to measure degree of urbanization. The ratio U/P has lower limit 0 and upper limit is 1. $U/P = 0$ means 100% rural population, $U/P = 1$ means 100% urban population.

TABLE-2 DEGREE OF URBANIZATION IN NORTH 24 PARGANAS DISTRICT, 1951-2011

Census Year	Rural Population	Urban Population	Percentage of Rural Population	Percentage of Urban Population	Urban Rural Ratio in Percentage
1951	1286927	949243	57.55	42.45	73.76
1961	1730490	1464267	54.10	45.83	84.85
1971	2133483	2066266	50.10	49.19	99.58
1981	2710771	2821366	49.00	5.99	104.08
1991	3539629	3730300	48.69	51.31	105.39
2001	4083339	4850947	45.70	54.30	118.80
2011	4277619	5732162	42.73	57.27	134.00

Source: Computed by authors from different Census Reports, 1951-2011

From above table-2 it is clear that percentage of urban population has increased from 42.45% in 1951 to 57.27% in 2011. Whereas percentage of rural population has shown the gradual decrease from 57.55% in 1951 to 42.73% in 2011. The urban rural ratio for the district in 2011 turnout to be 134, meaning that against every 100 ruralites there are 134 urbanities. This ratio gradually increase from 73% (1951) to 134% (2011). All these indices focused the high degree of urbanization of the district. In other hands urban rural ratio in West Bengal is 47% and in India is only 45%. These features indicate high pace of urbanization of the district compare to state and nation. This high urban growth is attributed mainly by large scale migration from rural areas and international migration from Bangladesh. Hooghly industrial belt and near of Kolkata metropolitan area are also responsible for the high level of urbanization of this district.

The significant fact is that though there is constant increase in rural population from 1951 to 2011 in the district but the percentage share of rural population have shown a constant decrease (Table 2). At the same time, there is constant increase in percentage share of urban population to total population of the district from 1951 to 2011 (Table-2).

DECADAL URBAN POPULATION GROWTH

The decadal growth rate is the growth rate of population by preceding decade. These may be positive or negative value. The Table-3 show the population decade of 1951-61 decade, the rate of growth of rural population (34.47

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percent) was much lower than the urban population (54.26 percent). This figures is witnessed the highest rate of urban growth, compared to the next several decades. Because the decadal growth rate of urban, rural and total population gradually decreased from 1951 to 2011. But the decadal growth of urban population is greater than that rural and total population in every census year. In the decade of 2001-2011, the growth rate of urban population (18.17 %) is higher than rural population (4.76%) and total population (12.04%). This means the district gradually reached saturated condition in case of rural, urban and total population. So, the district represents as a most important populated district of the state as well as nation.

TABLE-3 DECADAL GROWTH OF POPULATION IN PERCENTAGE, NORTH 24 PARGANAS DISTRICT (1951-2011)

Census Year	Rural Population	Urban Population	Total Population
1951-1961	14.43	54.26	42.87
1961-1971	13.31	41.11	31.47
1971-1981	27.03	36.54	31.71
1981-1991	30.58	32.22	31.41
1991-2001	15.36	30.04	22.89
2001-2011	4.76	18.17	12.04

Source: Computed by authors from different Census Reports, 1951-2011

From decadal growth rate in urban population of North 24 Parganas district went on declining consistently over the census decades, so the level of urbanization went on increasing. The decadal growth rate was 55% in 1951 and 18% in 2011. This means the district gradually reached to saturated condition in urban population. But the decadal growth rate of urban population in West Bengal and India has been oscillating in nature from decade to decade (Table-4). This represent the urban population density is high in the district, compare to state and nation. From this point of view to control the urban population load of the district, the urban areas have to need increase in surroundings of suburban areas and need to plan for existing urban areas.

TABLE-4 DECADAL URBAN POPULATION GROWTH IN NORTH 24 PARGANAS DISTRICT, WEST BENGAL AND INDIA (1951-2011)

Census Year	North 24 Parganas District	West Bengal	India
1951-61	54.26	35.97	26.41
1961-71	44.11	28.41	38.23
1971-81	36.54	31.73	46.14
1981-91	32.22	29.49	36.19
1991-2001	30.04	19.88	31.39
2001-2011	18.17	29.72	32.15

Source: Computed by authors from different Census Reports, 1951-2011

LEVEL OF URBANIZATION

The level of urbanization gradually increases from 1951 to 2011 in the district as well as state and nation. But the level urbanization in the district is double times compare to state and nation in every census years. The above Table-5 shows the total urban population in the district is 57% in 2011. On the other hand level of urbanization in West Bengal and India as a whole only 31.87% and 31.16% in 2011 census. This high level of urbanization of the district can be attributing to growth of Kolkata metropolitan and industrial belt of the district and other urban services and opportunity.

TABLE-5 LEVEL OF URBANISATION IN NORTH 24 PARGANAS, WEST BENGAL AND INDIA (1951-2011)

Census Year	North 24 Parganas District	West Bengal	India
1951	42.45	23.88	17.29
1961	45.83	24.45	17.97
1971	49.20	24.75	18.24
1981	51	26.47	23.34

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1991	51.31	27.48	25.72
2001	54.3	27.97	27.78
2011	57.27	31.87	31.16

Source: Computed by authors from different Census Reports, 1951-2011

URBAN POPULATION AND TOWNS SIZE DISTRIBUTION

Urban size class in North 24 Parganas district is a major component for urbanization. Actually, the urbanization is a function and processes of urban population size. Urban population in India is graded into six classes by census according to their respective population.

TABLE-6 CLASS WISE PERCENTAGE OF TOWN IN NORTH 24 PARGANAS DISTRICT, 1951-2011

Census Year	1951	1961	1971	1981	1991	2001	2011
Class-I Town	2.78	10.00	12.50	17.39	27.12	43.75	20.56
Class-II Town	16.67	20.00	27.50	23.91	11.86	4.17	2.80
Class-III Town	19.44	25.00	35.00	23.91	18.64	8.33	4.67
Class-IV Town	27.78	20.00	5.00	19.57	20.34	14.58	20.56
Class-V Town	2.78	2.50	15.00	13.04	18.64	27.08	46.73
Class-VI Town	30.56	22.50	5.00	2.17	3.39	2.08	4.67
Total	100	100	100	100	100	100	100

Source: Computed by authors from different Census Reports, 1951-2011

The urban class wise number of percentage of urban centres is important to measure level of urbanization. In 1991-2001 number of class -I towns were highest (43.75%). But in 2001-2011 a huge number (new CT= 58) of census towns have been formed. These all census towns are class -V category. It can be expected that these census towns will be merged to the near able higher class-I, II and III towns. So number of class -I, II, and III towns will be increased in future. So the urban agglomeration will continue in future.

TABLE- 7 URBAN CLASS WISE PERCENTAGE OF POPULATION IN NORTH 24 PARGANAS, 1951-2011

Census Year	1951	1961	1971	1981	1991	2001	2011
Class-I Town	14.21	33.61	40.33	45.20	71.93	86.60	79.07
Class-II Town	42.07	35.75	35.20	35.26	11.87	3.36	2.83
Class-III Town	25.86	20.15	21.12	12.93	9.52	3.06	3.46
Class-IV Town	15.35	8.16	0.58	4.43	4.27	2.02	4.71
Class-V Town	0.69	0.55	2.33	1.89	2.24	4.87	9.63
Class-VI Town	1.82	1.78	0.43	0.29	0.18	0.09	0.31
Total	100	100	100	100	100	100	100

Source: Computed by authors from different Census Reports, 1951-2011


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The pattern of urbanization in India by continuous concentration of population and activities in large cities (Kundu, 1983) and concentration of population in medium and small towns (Kundu, 1994) either fluctuated or decline. In 1951 the class-I town was 14%, in 2001 this was 86% and in 2011 this was 79%. According to 2011 census the percentage of population gradually decrease, with decreasing the size-class of towns. The percentage share of urban population is high of Class-I towns from 1971-2011. At the same time urban population gradually decreased toward class II, III, IV, V & VI towns (Table-5.9). This is largely due to the fact that the towns are lower categories having grown in size and entered the next higher category (Kundu, 1994). A new territorial unit named as outgrowth has also been included within the urban category.

From Table-7 that the class-I towns dominate district's, in the term of their share of urban population from 1971-2011. In 1971, the share of population in class-I towns was 40.33 Percent which has gradually increase 86 percent in 2001 and 79 percent in 2011. But the feature was different before 1971, and then the class-II towns

were dominated districts in urban scene. In 1951 the population share of class-II towns were 42.07 percent and in 1961 was 35.75 percent, both were high population share towns. The share of urban population in class II, III, IV, and VI towns gradually decrease in every census year but share of urban population in class - V towns gradually increase due to formation of new Census Towns (CT) in every census year. The features represent the tendency of concentration of population is in large urban centres in the district in 1971-2011. This type of population distribution certainly reflect the over urbanized in class-I towns and others class (II-VI) towns are low urbanized towns. So the balance of urbanization has been need for urban development in the district.

TABLE-8 GROWTH RATE OF URBAN AREA AND URBAN POPULATION OF URBAN LOCAL BODIES AND CENSUS TOWNS IN NORTH 24 PARGANAS DISTRICT (1951-2011)

Census Year	Number of Urban Local Bodies	Population of Urban Local Bodies	Area of Urban Local Bodies in sq km	Number of Census Town	Population of Census Towns	Area of Census Town in sq km	Number of Urban Out Growth	Total Number of Urban Centres
1951	23	905427	287.13	13	43816	44.45	0	36
1961	26	1377174	312.35	14	87093	51.57	0	40
1971	26	1909047	302.9	14	157219	51.57	0	40
1981	27	2535493	332.35	19	285873	71.68	13	59
1991	27	3242414	346.55	32	487886	89.04	11	70
2001	28	4656718	467.1	20	194229	32.8	7	55
2011	29	5001716	451.43	78	730446	172.48	4	111

Source: Computed by authors from different Census Reports, 1951-2011

Census Towns are first recognized by the census of India in 1971. The census towns are administered by gram panchayat, but their physical character is like an urban areas. After independence of India influx of huge refugees from neighboring country, industrialization, improvement of civic amenities and other pull factor of urban centres which lead to rapid growth of Census Towns. As a result number of Census Towns increased from 13 in 1951 to 78 in 2011. Populations of census towns are gradually increasing from 4.62 percent in 1951 to 12.74 percent in 2011, out of total urban population of the district. So the role of Census Towns for urbanization is very much important in the district. The balanced urbanization and urban growth may be achieved by promoting and acknowledging Census Towns near the larger urban centres and the population pressure will be reduced to near larger urban centres.

TABLE-9 URBANIZATION LEVEL IN NORTH 24 PARGANAS DISTRICT (2011)

Name of the Subdivision	Number of census town	Name of the urban local bodies (27 Municipality + 01 Cantonment board + 01 industrial township)	Remarks (Level of urbanization)
Bodhanagar	N/A	1. Bodhanagar (M) 2. Naldighata Industrial Township (ITS)	Very High
Barrackpore	24	1. Kancharipara (M+OG) 2. Hafesabad (M) 3. Naldiati (M) 4. Bhatpara (M + OG) 5. Garulia (M) 6. North Barrackpore (M) 7. Barrackpore (M) 8. Tangra (M) 9. Khordah (M) 10. Parshadi (M) 11. New Barrackpore (M) 12. Kankarhati (M) 13. Baranagar (M) 14. North DumDum (M) 15. Dum Dum (M) 16. South DumDum (M) 17. Barrackpore Cantonment (CB)	High
Barasat	34	1. Gobardanga (M) 2. Habra (M) 3. Ashokenagar Kalyanagar (M) 4. Rajarhat Gopalpur (M) 5. Madhyanagar (M) 6. Barasat (M)	Moderate
Itanagar	7	1. Itanagar (M)	Low
Baishali	11	1. Badaria (M) 2. Toki (M) 3. Basrahat (M)	Very Low

Source: Computed by authors Census, 2011

After computing the composite Z-score, we are able to detect the compact of all the indicators for level of urbanization. These indicators are urban Households, Town Population, Sex Ratio, Literacy Rate, Slum population, Population Density, Road density, Sanitation facilities, Electricity facilities, Health condition,

Education status and banking facilities. Bidhannagar and Barrackpur subdivision show high level of urbanization due to nearness of Kolkata metropolitan and Hugli River industrial belt. Barasat is the district headquarters and nearness of Kolkata is present satisfactory explanation for moderate level of urbanization. Other two subdivision namely Bangaon and Basirhat show low level of urbanization for strong rural activity base.

CONCLUSION

The district have rapid rate of urbanization since independence both as a result of rural urban migration and after partition of India, the huge migration from Bangladesh. The urbanization concentrations are western part of district due to industrial belt, well transport system, other service sector and after all availability of non agro based economic activities. The rate of urbanization slowly spread towards eastern part of the district, due to agro base economic activities.

The district is near able of KMDA, so Bidhannagar and Barrackpure subdivision are very near to KMDA and symbolize as high urbanized area, within the district as well as the state. High level of urbanization promote economic diversification and low level of urbanization promote concentration of one economy activities, likely low level of urbanized area are agro based one economic activities and high level of urbanized area are diversified economic activities.

It is clearly that North 24 District experienced a high level of urbanization since independence. Due to emergence of a large number of new census town, rural urban migration, unauthorized migration from Bangladesh, Hugli River Industrial Belt, civic amenities, infrastructural development and other service facility. But there is present spatial disparity in urbanization level. The Bidhannagar subdivision which contains Bidhannagar municipality and Nabadiganta Industrial Town is fully urbanized area. Barrackpure subdivision which contains 24 Census Towns and 17 municipalities (a linear urban agglomeration of Kolkata) is high urbanized area. Barasat sub-division which contains 34 Census Towns and 6 Urban Local Bodies is moderate high urbanized area. This high urbanized zone lead to deterioration quality of urban environment and increase the concentration of civic amenities, infrastructural development and economic development. Therefore urbanization process should be continue by a uniform and balanced way all over the district. The low urbanized area i.e. Bangaon and Basirhat subdivision have to need more civic amenities, uplift infrastructure development, social awareness and take to need proper government policy for further urbanization like i) Balanced urban regional planning ii) Development of urban economy, iii) Integrated of Rural Urban Economy emphasis on agro base industry, iv) Increase of public amenities and infrastructural development, V) To established green urbanization and spacing for play ground, VII) Available of cultural entertainment facility in urban areas and so on. How the Govt. and other NGO faces this more challenge remains to be seen.

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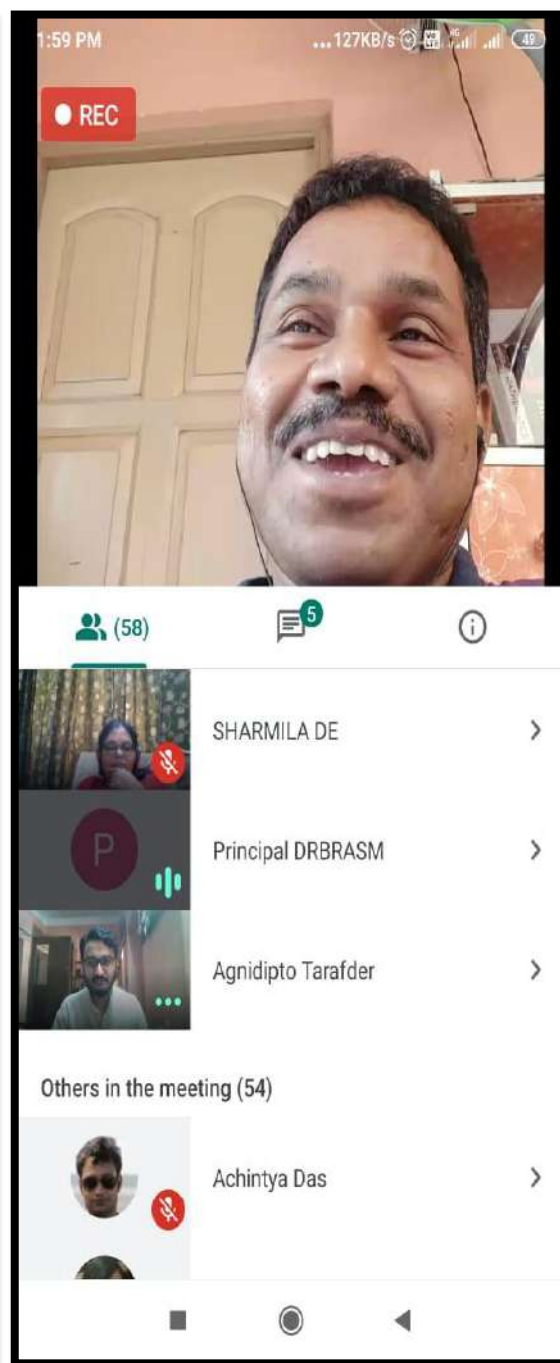
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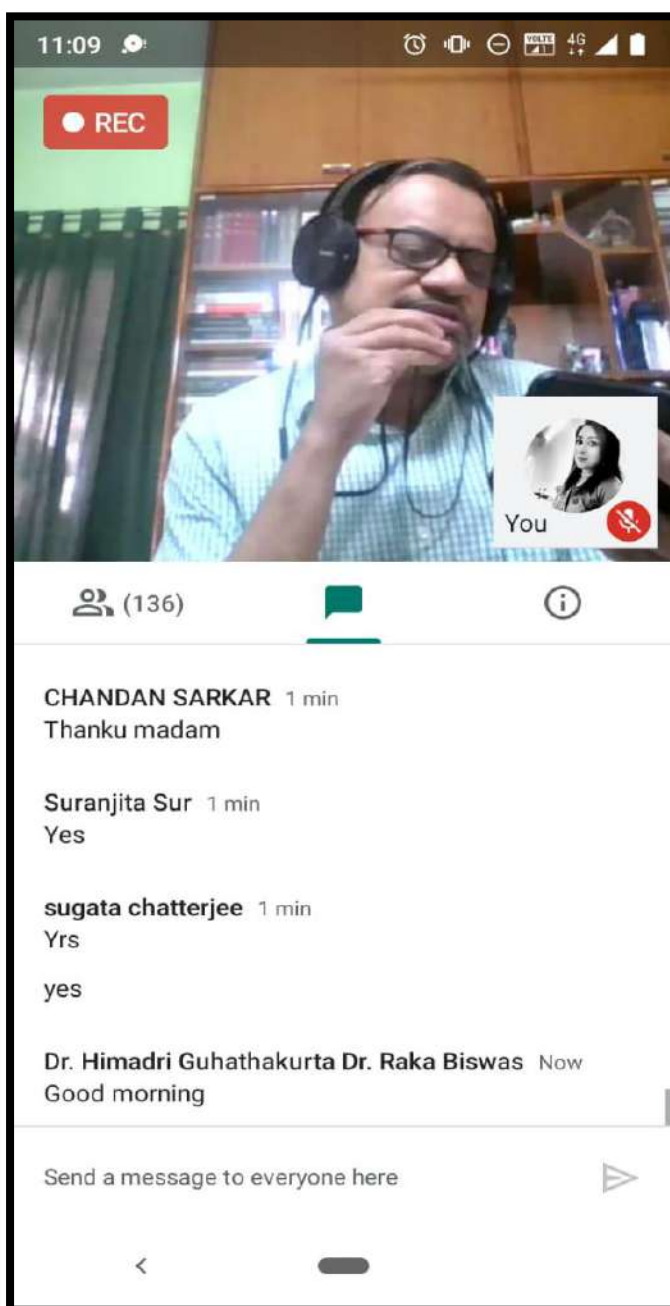
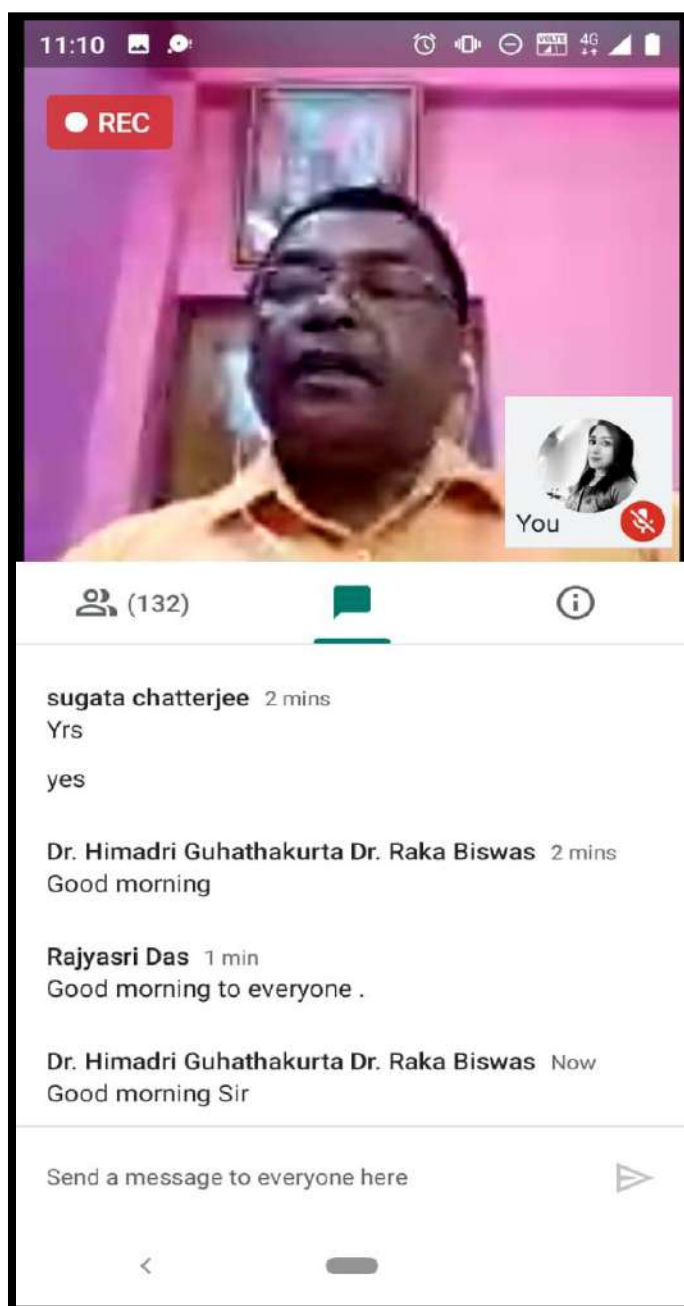
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Santinagar, Palta, P.O.: Bengal Enamel, North 24 Parganas, Pin - 743122 (W.B.)
Phone : (033) 2592 1327, Fax : (033) 2592 1327, e-mail : pndc.principal11@gmail.com
Website : www.pndascollege.in

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Date

Three Day Online Workshop
On
The Innovative Use of Information and Communication Technology
in Teaching-Learning and Research
organised by

P.N. Das College, Palta
in collaboration with
Sir Gurudas Mahavidyalaya, Kolkata
&
Dinabandhu Mahavidyalaya, Bongaon

(Date: 6th, 8th and 9th June, 2020)

Time: 11.00 AM to 3.00 PM

:Programme:

DAY -I

10.45 AM-11.00 AM
11.00 AM-11.15 AM

- **Entry through link**
- **Welcome address by**
Dr. Sharmila De
Principal, P. N. Das College
- **Introductory speech**
Dr. Biswajit Ghosh
Principal, Dinabandhu Mahavidyalaya, Bongaon

11.15 AM- 12.15 PM

- **Keynote Address**
Dr. Manishankar Roy
Principal, Sir Gurudas Mahavidyalaya, Kolkata
- **Technical Session I**
Speaker: Prof. Suman Ranjan Bandyopadhyay
Assistant Professor, P.N. Das College
Topic: *Using Web-based Applications and Platforms for effective Teaching-Learning and Evaluation*

12.15 PM-1.15 PM

- **Technical Session II**
Speaker: Dr. Bablu Biswas
Assistant Professor, P.N. Das College
Topic: *Approach for Implementing and Integrating ICT in HEIs' using Some Easily Accessible Applications*

1.15 PM-1.45 PM

- **Break**

1.45 PM – 3.00 PM

- **Interactive Session and Workshop**

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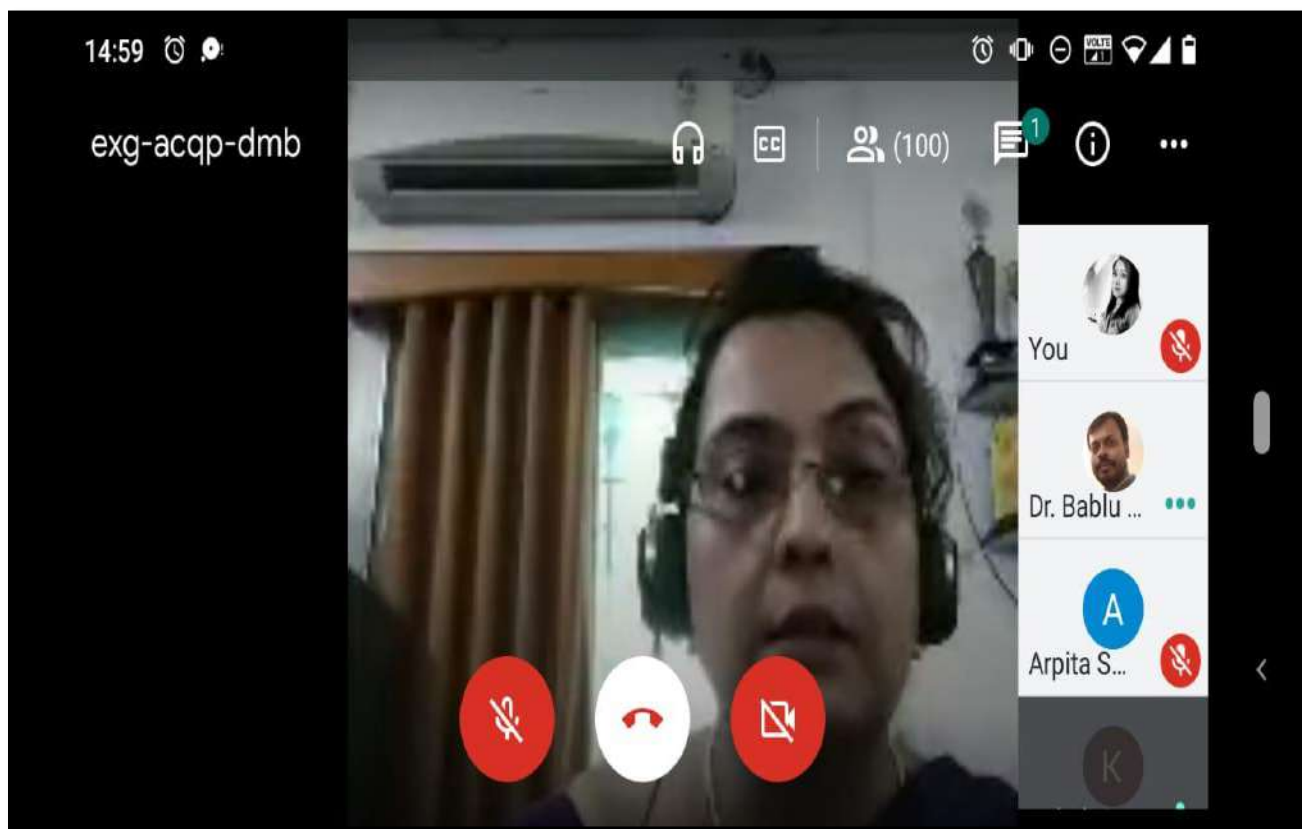
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Link of the Activity Report: [https://pndacollege.in/pdf/college-act/42.%20State%20level%20Workshop%20on%20the%20Innovative%20use%20of%20ICT%20in%20T-L%20and%20Research 6th,%208th,%209th%20June%202020.pdf](https://pndacollege.in/pdf/college-act/42.%20State%20level%20Workshop%20on%20the%20Innovative%20use%20of%20ICT%20in%20T-L%20and%20Research%206th,%208th,%209th%20June%202020.pdf)

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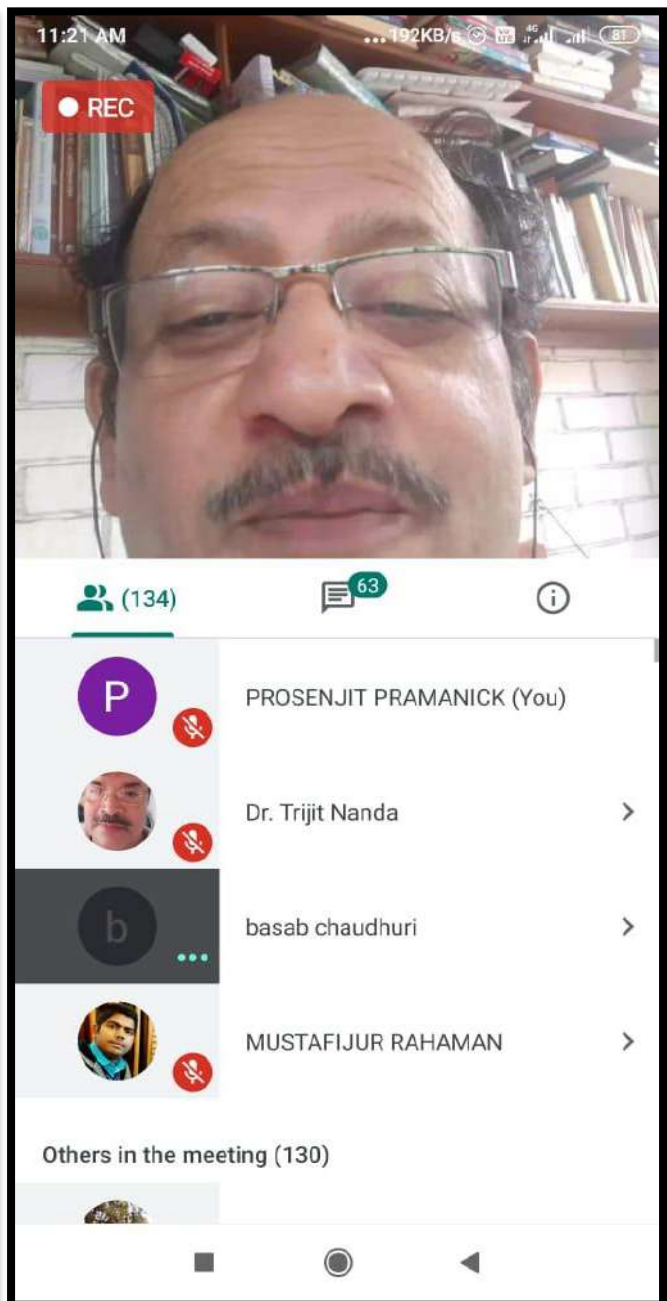
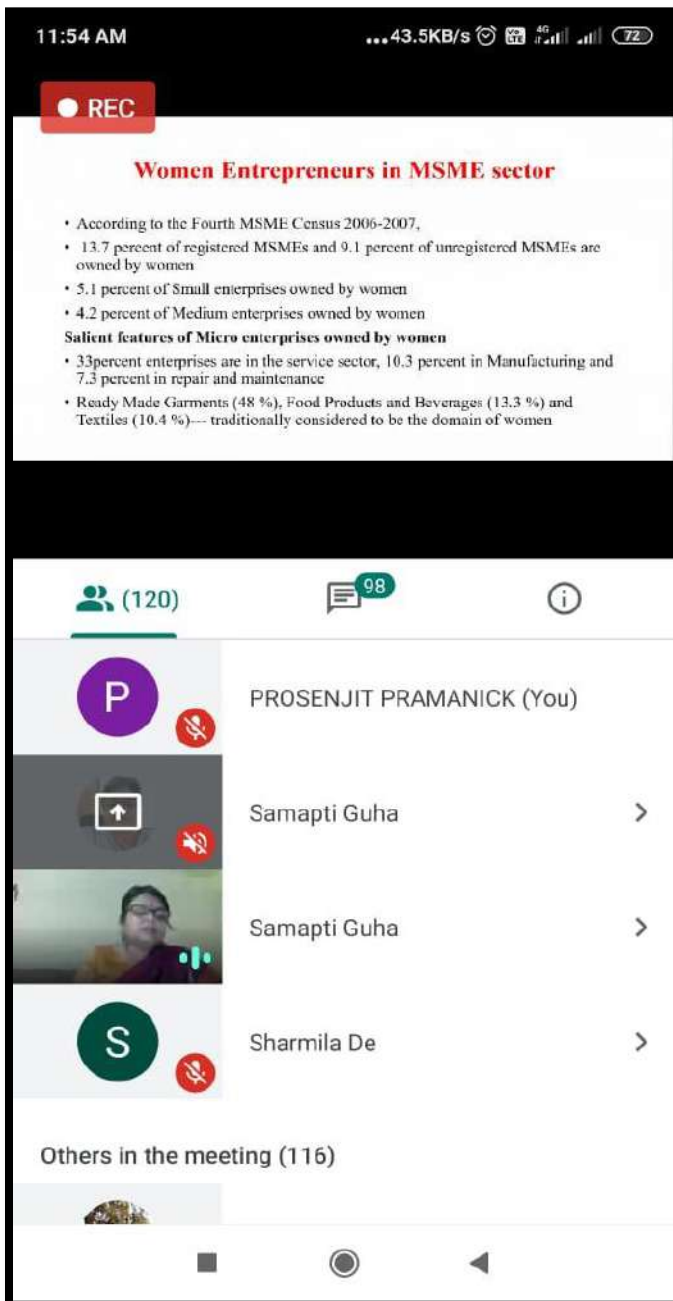
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5. One-day National Webinar on Women Empowerment

Date: 27.06.2020



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Santinagar, Palta, P.O.: Bengal Enamel, North 24 Parganas, Pin - 743122 (W.B.)
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ONE DAY NATIONAL LEVEL WEBINAR
on
WOMEN EMPOWERMENT IN INDIA

ORGANIZED BY
IQAC, P.N. DAS COLLEGE
IN COLLABORATION WITH
IQAC, VIJAYGARH JYOTISH RAY COLLEGE

27th June 2020
10.45 a.m. - 2.00 p.m.

Chief Guest
Prof. Basab Chaudhuri
Hon'ble Vice-Chancellor
West Bengal State University

Resource Persons

Nayan Chand Bihani
Advocate
Calcutta High Court
"Constitutional & Legal Provisions for Women in India"

Dr. Samapti Guha
Professor
Centre for Social Entrepreneurship
School of Management & Labour Studies
Tata Institute of Social Sciences
Mumbai
"The Impact of Covid 19 Pandemic on Women Entrepreneurs"

CLICK HERE TO REGISTER

CONTACT
Email: iqac2017pndc@gmail.com Phone: 94332 64133 / 9830192899

10:56 AM ...74.9KB/s

One Day National Level Webinar
on
Women Empowerment in India
organized by
IQAC, P.N. Das College, Palta
in collaboration with
IQAC, Vijaygarh Jyotish Ray College, Kolkata
Will start from 11.00 a.m.

(103) 32

PROSENJIT PRAMANICK (You)

Dr. Bablu Biswas

nayanbihani bihani

Madhuchhanda Lahiri

Others in the meeting (99)

Link of the Activity Report: https://pndacollege.in/pdf/college-act/45.%20National%20Webinar%20on%20Women%20Empowerment_27.06.2020.pdf


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6. One day Webinar on Science and Pandemic

Date: 20.08.2020



SCIENCE & PANDEMICS

One-Day Webinar

20th August 2020 ||| 11.00 a.m. to 1.00 p.m.

Highlights • Science in History • Science and Superstition • Science and Pandemics • Covid and Us • Looking Forward	Speaker  Sourav Chakrabarti Assistant Secretary Paschimanga Bigyan Mancha
Registration https://forms.gle/jEgEK44oZ7Pm5oU78 Registration Closes on 19 th August 2020, 12.00 noon	In collaboration with IOAC P.N. Das College
Organized by Departments of Mathematics, Physics & Chemistry P.N. Das College	Webinar Platform Google Meet

P.N. DAS COLLEGE
Santinagar, Palta, North 24 Parganas

P.N. DAS COLLEGE
Santinagar, Palta, North 24 Parganas

One-Day Webinar

20th August 2020 ||| 11.00 a.m. to 1.00 p.m.

SCIENCE & PANDEMICS

Speaker



Sourav Chakrabarti
Assistant Secretary
Paschimanga Bigyan Mancha

PLEASE JOIN AT 10.40 A.M.


Principal
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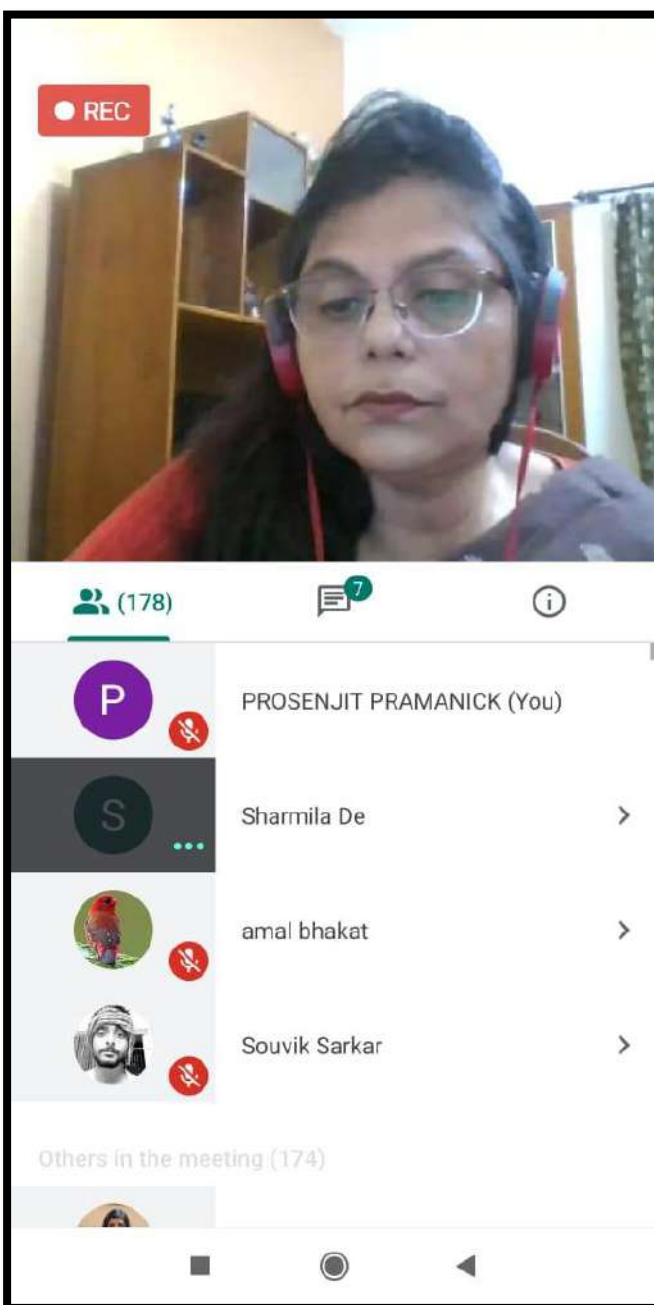
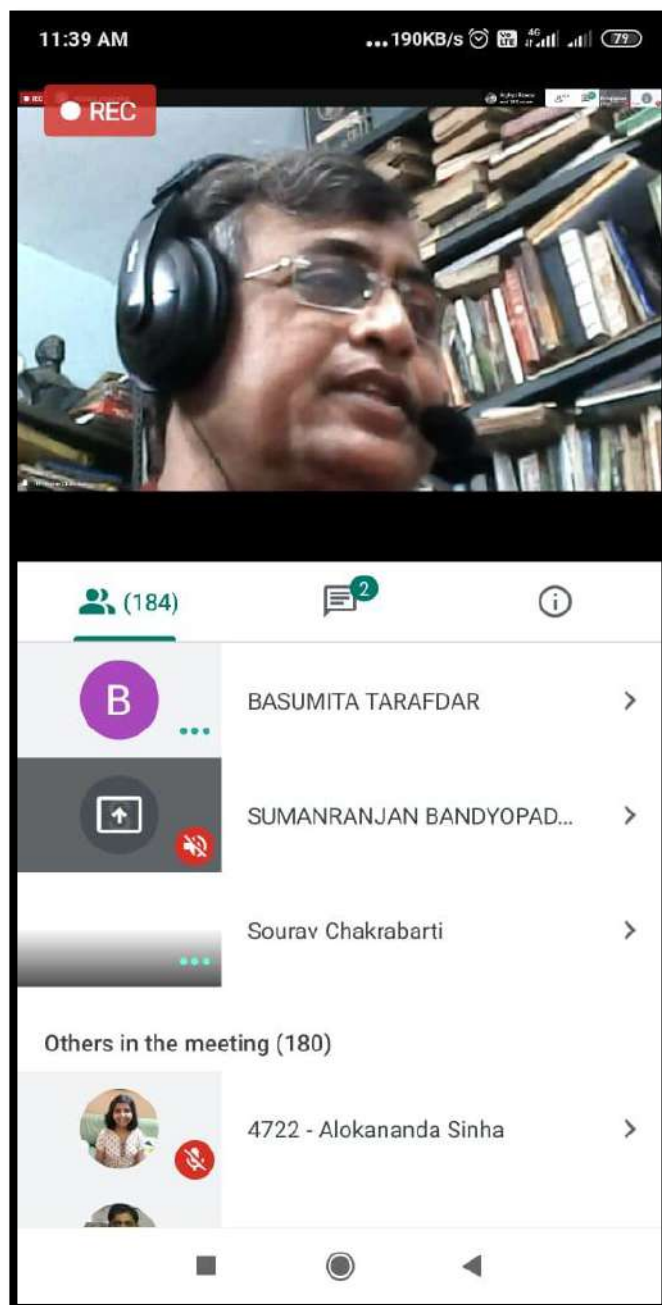
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Link of the Activity Report: <https://pndacollege.in/pdf/act/2020-21/Webinar%20on%20Science%20and%20Pandemics%20on%20College%20Foundation%20Day%2020.08.2022.pdf>


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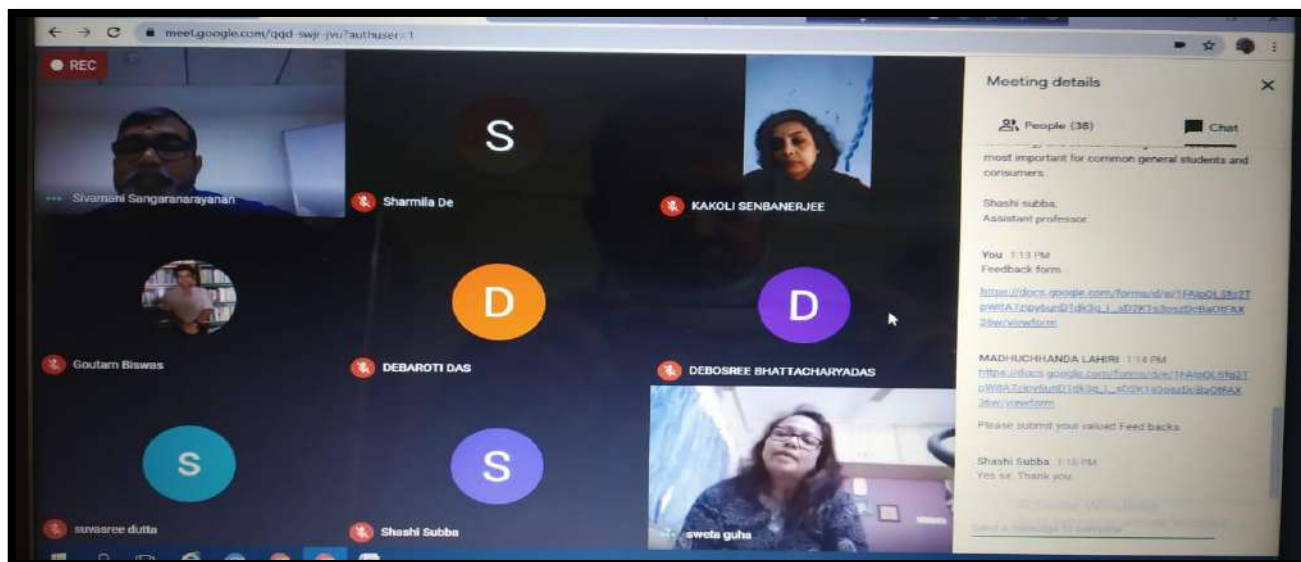
7. One-day Seminar on Cyber Security

Date: 13.01.2021

P.N. DAS COLLEGE
One-Day State Level Webinar
On
CYBER SECURITY
Organized by
IQAC, P.N. DAS COLLEGE
In collaboration with
IQAC, BIJOY KRISHNA GIRLS' COLLEGE
&
IQAC, MURALIDHAR GIRLS' COLLEGE

PROGRAMME

10.45 AM – 11.00 AM :	Entry through link
11.00 AM – 11.05 AM :	Welcome address by <i>Dr. Sharmila De</i> <i>Principal, P.N. Das College</i>
11.05 AM – 11.10 AM:	Speech by <i>Dr. Ruma Bhattacharyya</i> <i>Principal, Bijoy Krishna Girls' College</i>
11.10 AM – 11.15 AM:	Speech by <i>Dr. Kinjalkini Biswas</i> <i>Principal, Muralidhar Girls' College</i>
11.15 AM – 11.20 AM :	Introducing Resource Person Mr. Sivamani Sangaranarayanan By <i>Kakoli Sen Banerjee</i> <i>NAAC Coordinator, P.N. Das College</i>
11.20 AM – 12.30 PM :	Technical Session <i>Mr. Sivamani Sangaranarayanan</i> <i>Head, Network and Security Division</i> <i>PC Solutions</i>
12.30 PM – 12.55 PM :	Interactive Session
12.55 PM – 1.00 PM :	Vote of Thanks




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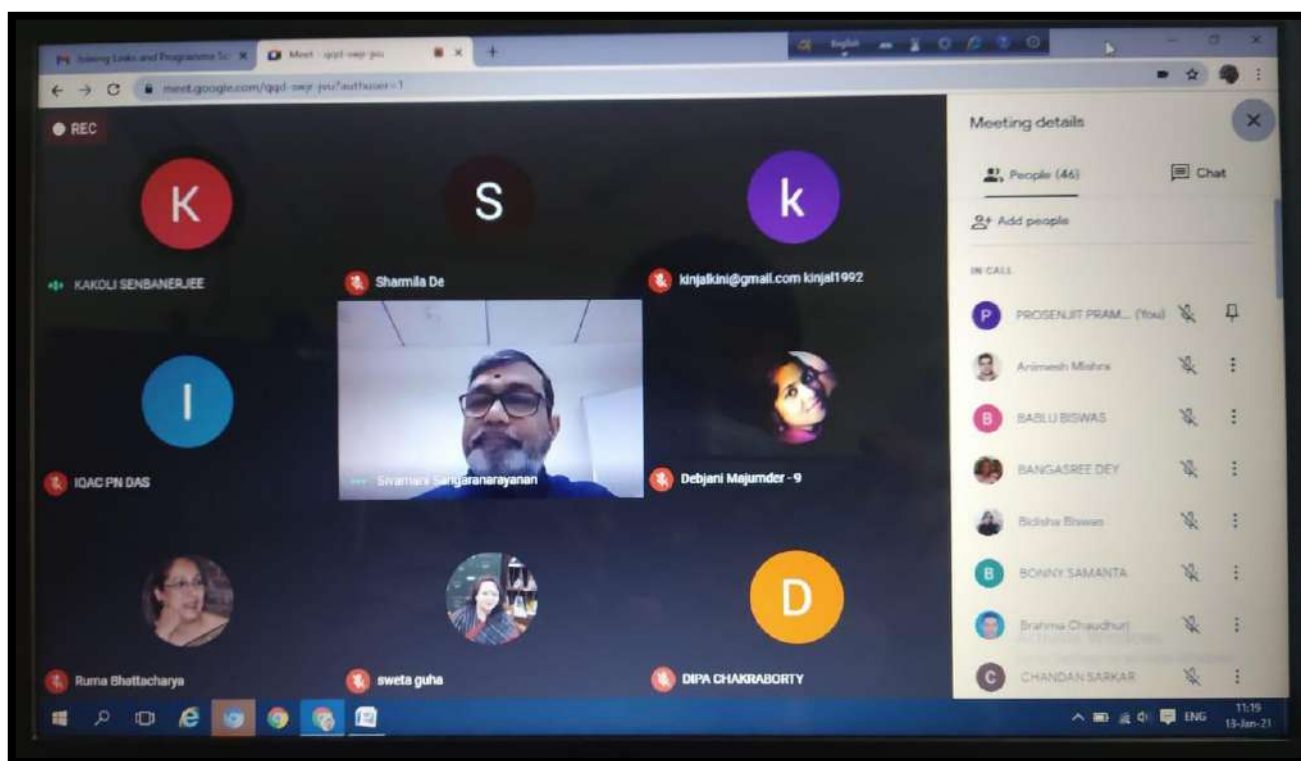
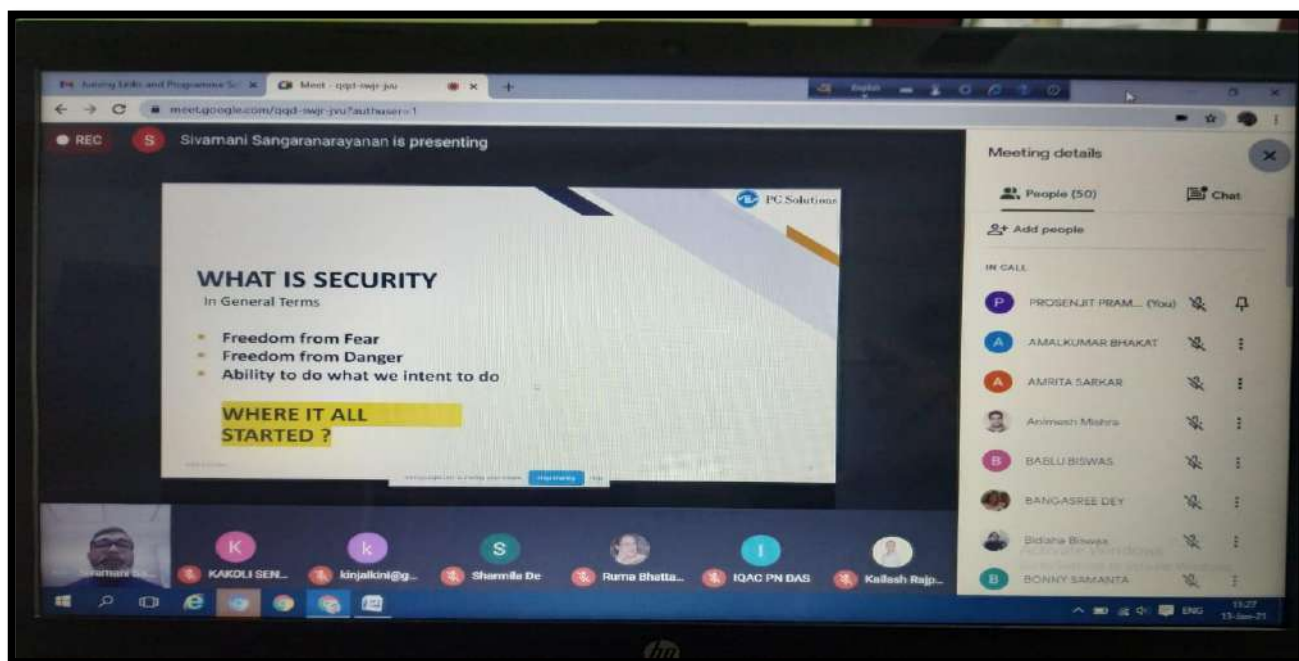
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Link of the Activity Report: https://pndacollege.in/pdf/act/2020-21/One-day%20Seminar%20on%20Cyber%20Security_13.01.2020.pdf

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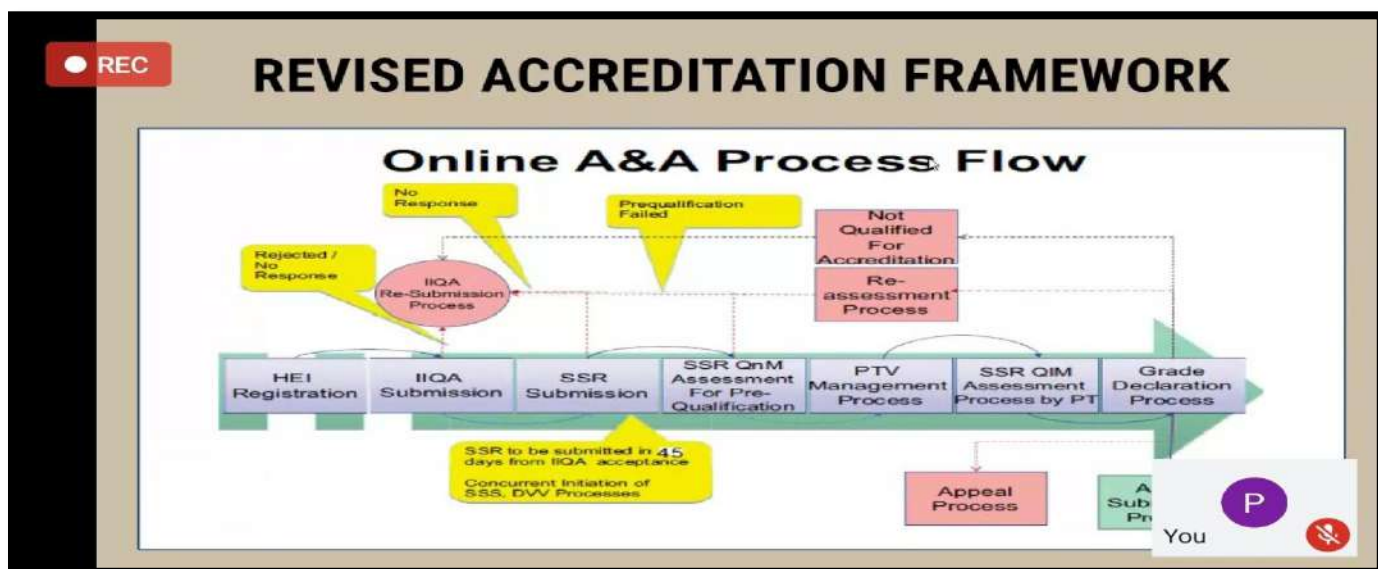
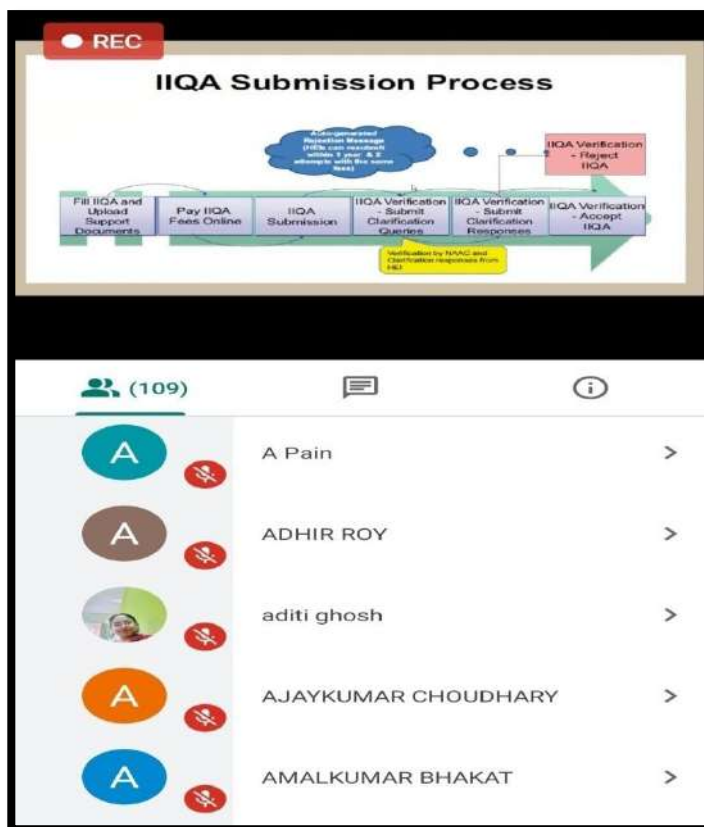
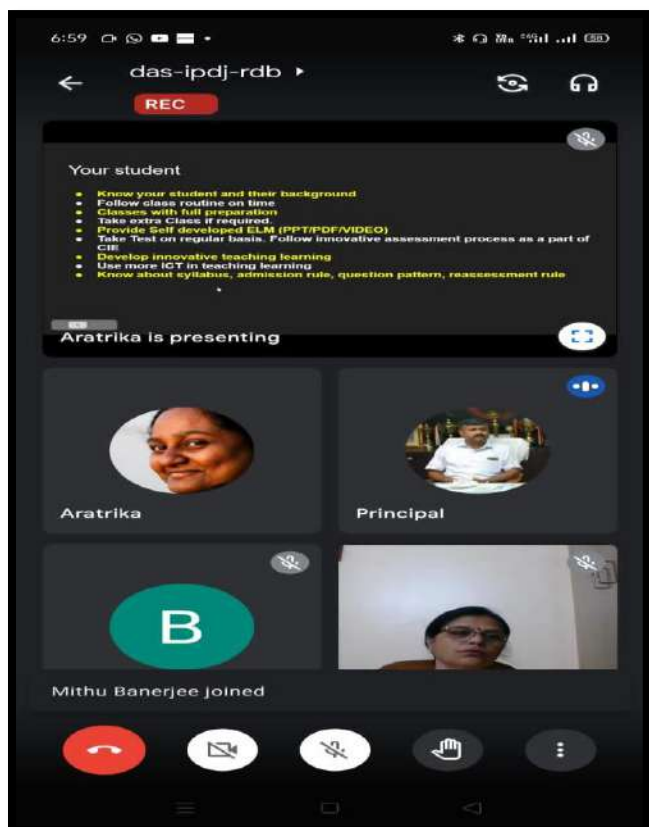
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8. One-day Seminar on Preparing for Assessment and Accreditation under Revised Accreditation Framework

Date: 12.05.2021



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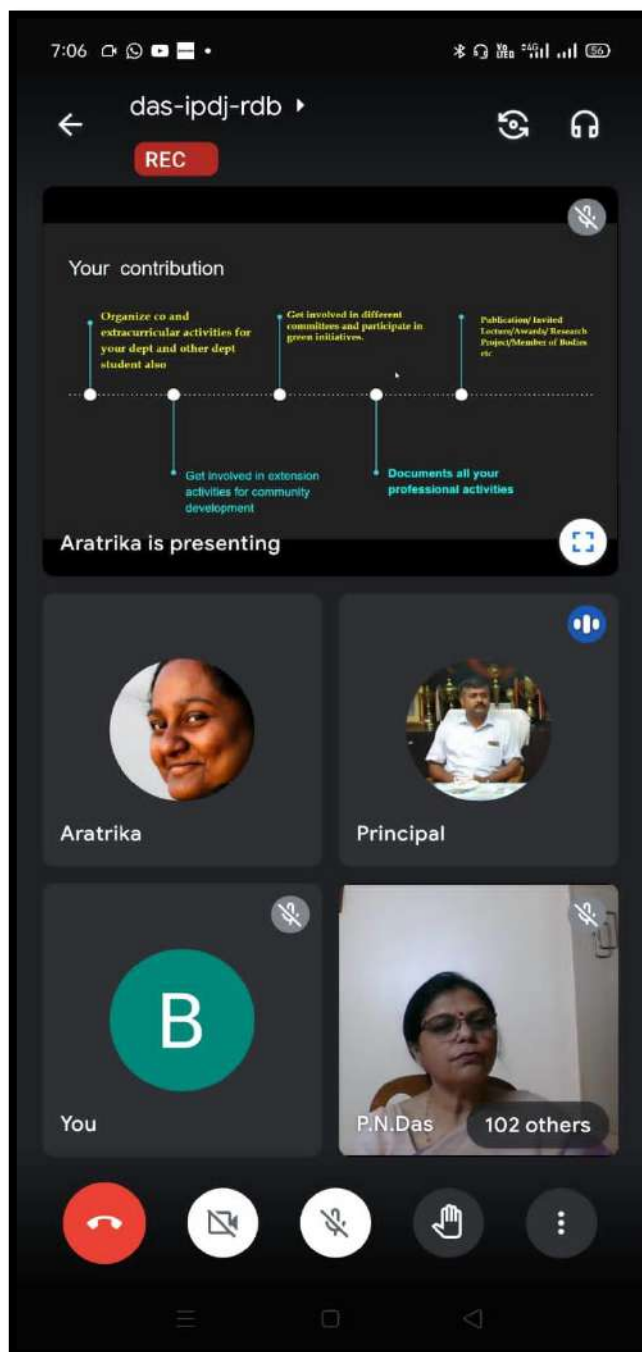
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Link of the Activity Report: [https://pndascollege.in/pdf/act/2020-21/Seminar%20on%20Preparing%20for%20Assessment%20and%20Accreditation%20%20under%20RAF %2012.05.21.pdf](https://pndascollege.in/pdf/act/2020-21/Seminar%20on%20Preparing%20for%20Assessment%20and%20Accreditation%20%20under%20RAF%2012.05.21.pdf)

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9. One-day Webinar on Financial Literacy and Planning

Date: 04.10.2021

Department of Commerce, P.N. Das College,
In Association with
Securities and Exchange Board of India (SEBI),
Patronized by the
Internal Quality Assurance Cell (IQAC), P.N. Das College

Organizes

State-Level Workshop
on
Financial Literacy and Planning

Speaker:
Dr. Sudipto Ghosh
SEBI Resource Person
154.29% Cumulative Return 11 years

DATE : 4th October, 2021

TIME: 2:45 p.m.

PLATFORM: Google Meet

Chief Patron: Dr. Sharmila De
Principal

Jt. Convener: Mr. Amal kumar Bhakat
Dr. Madhuchhanda Lahiri

Principal
P.N. Das College
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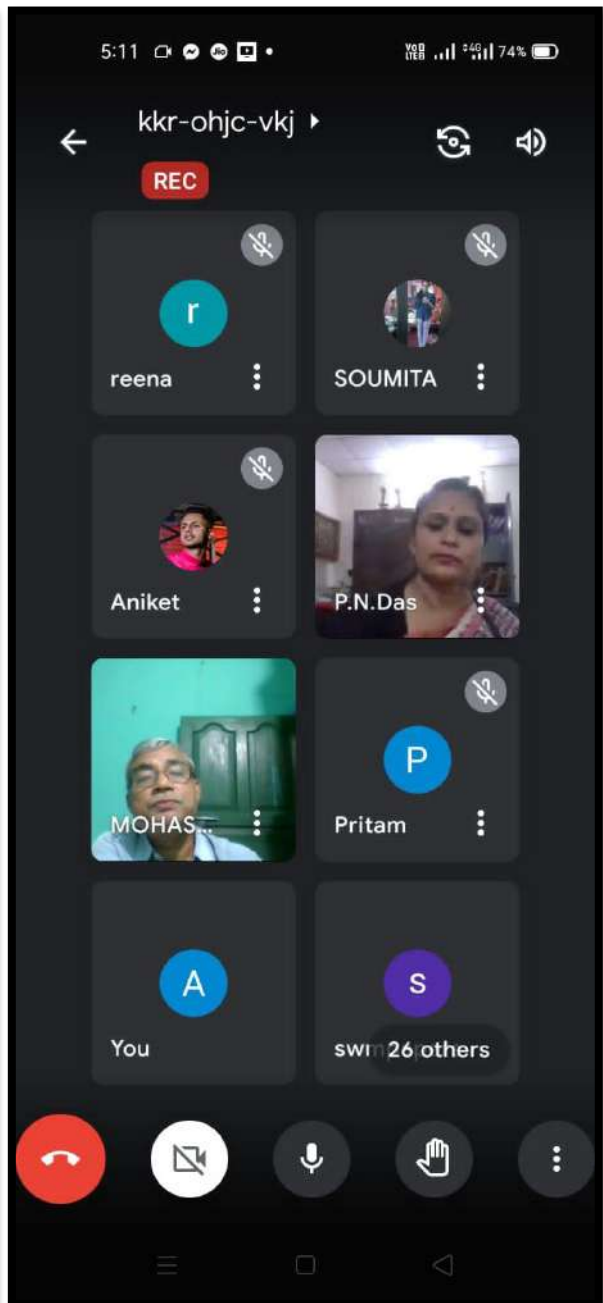
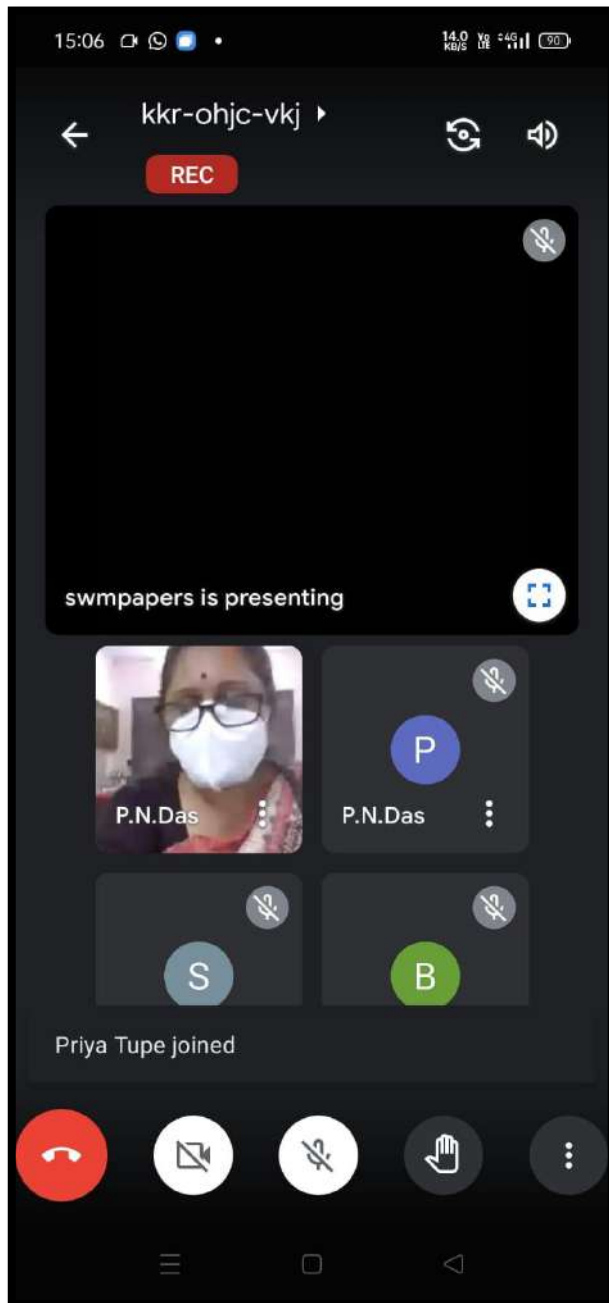
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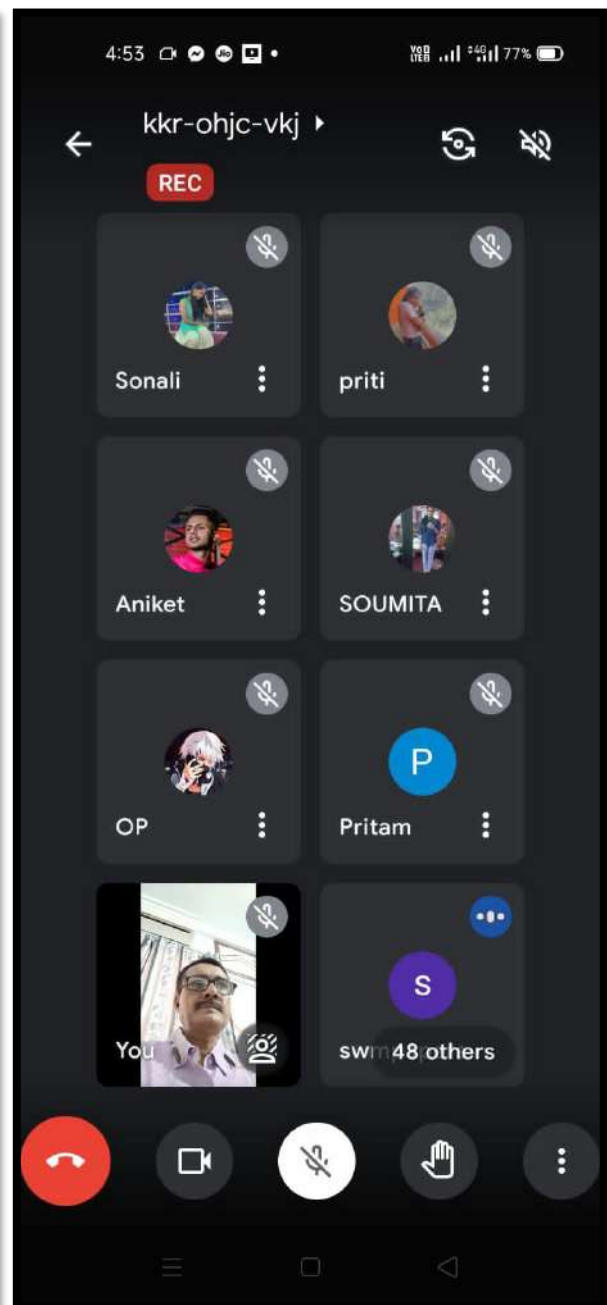
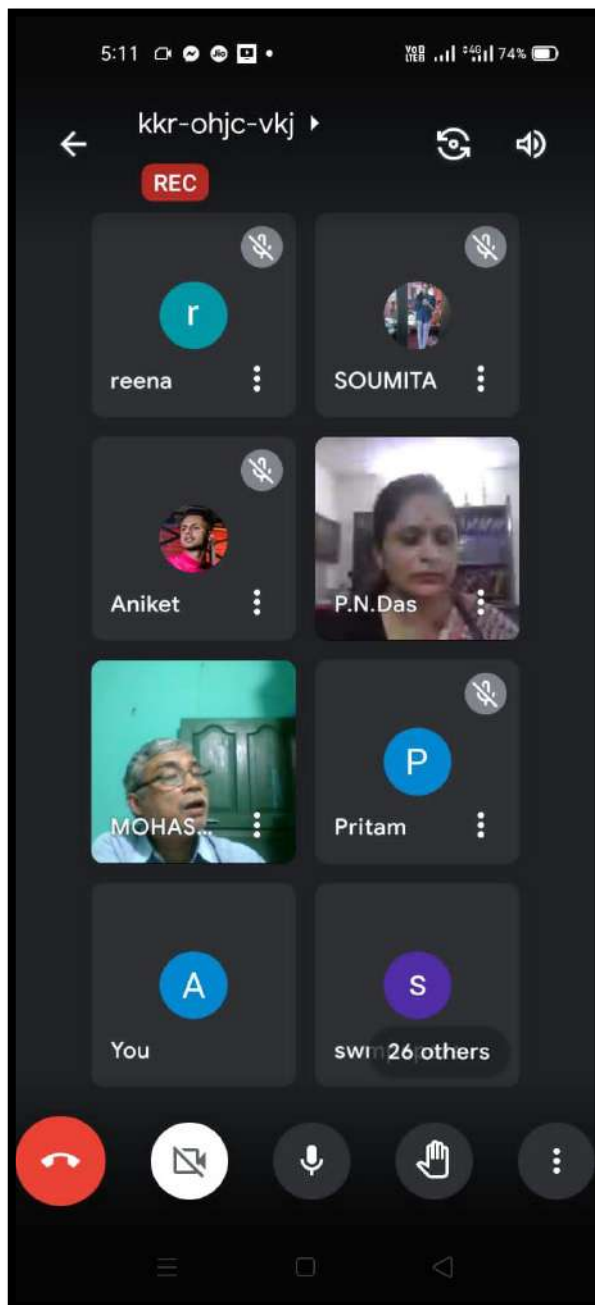
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10. Programme on National Science Day

Date: 03.03.2022



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Link of the Activity Report: <https://pndascollege.in/pdf/college-act-21-22/21-National-Science-Day-03032022.pdf>


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11. One-day Staff Development Programme on ICT based Teaching-Learning

Date: 26.04.2022



GOBARDANGA HINDU COLLEGE
NAAC ACCREDITATION AT GRADE "A"

IQAC, GOBARDANGA HINDU COLLEGE ORGANISES
A ONE DAY FACULTY DEVELOPMENT PROGRAMME

"ICT BASED TEACHING-LEARNING"

In collaboration with

DINABANDHU MAHAVIDYALAYA, BONGAON

SREE CHAITANYA MAHAVIDYALAYA, HABRA

P.N.DAS COLLEGE, PALTA

Date : 26th APRIL, 2022, TUESDAY

ALL ARE CORDIALLY INVITED TO JOIN THE PROGRAM

-Principal, Gobardanga Hindu College-

PROGRAMME SCHEDULE

Venue: Seminar Hall (Room No. 22), Anandoda Bhawan, Gobardanga Hindu College

A. PLENARY SESSION (9.30 AM)

FELICITATION

Welcome Address & Keynote:

Dr. Haro Krishna Mandal, Principal, Gobardanga Hindu College

Inaugural Address:

Sri Sankar Dutta, President G.H. Gobardanga Hindu College

Speech:

Dr. Biswajit Ghosh, Principal, Dinabandhu Mahavidyalaya, Bongaon

Speech:

Dr. Sharmila Das, Principal, P.N. Das College, Palta

Speech:

Dr. Subrata Chatterjee, Principal, Sree Chaitanya Mahavidyalaya, Habra

B. PLENARY SESSION (12.15 PM)

Speaker:

Dr. Rajat Pandit, Assistant Professor, Dept. of Computer Science, West Bengal State University

Topic of Discussion: ICT Based Teaching Learning

C. FAREWELL SESSION (4.30 PM)

Note of Thanks:

Dr. Paromita Das Sharma, Member, IQAC, Gobardanga Hindu College

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गोबर्दगा, पश्चिम बंगाल, भारत

VQH4+WW7, गढ़पारा, गोबर्दगा, पश्चिम बंगाल 743252, भारत

Lat 22.880009°

Long 88.756766°

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GPS Map Camera



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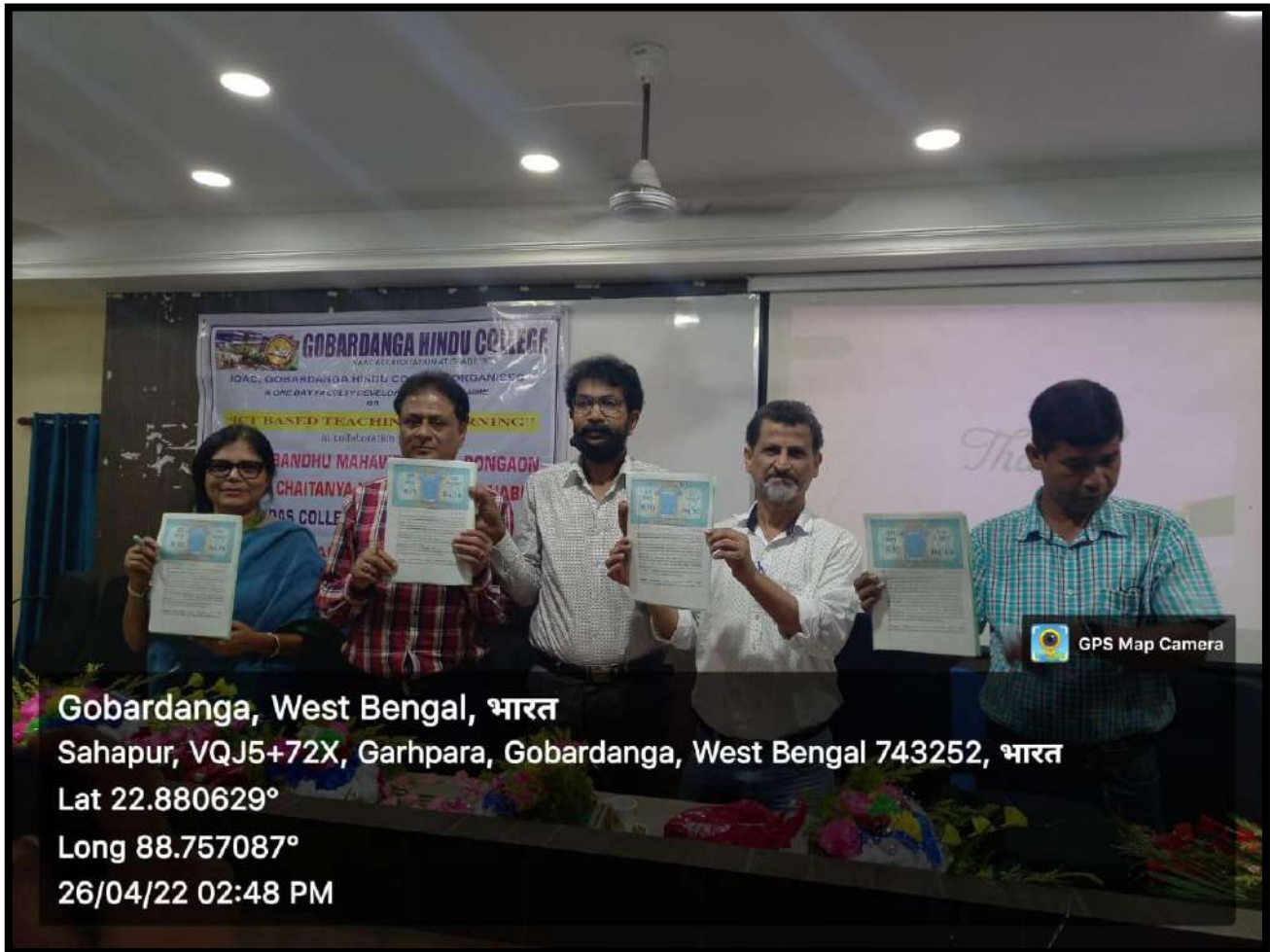
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Sahapur, VQJ5+72X, Garhpara, Gobardanga, West Bengal 743252, भारत

Lat 22.880629°

Long 88.757087°

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Link of the Activity Report: <https://pndascollege.in/pdf/college-act-21-22/31-One-day-Faculty-Devel-Prog-ICT-Teach-Lear-26042022.pdf>

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12. One-day Staff Development Programme on Website Designing and E-Module Development

Date: 10.05.2022



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13. One-day Workshop on Capacity Building for NTS

Date: 14.06.2022



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Link of the Activity Report: <https://pndacollege.in/pdf/college-act-21-22/39-Capacity-Building-NTS-14062022.pdf>

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14. 7-days National Level Faculty Development Programme on Preparedness for the Revised Accreditation Framework 2022-23

Date: 10.09.2022 to 26.09.2022



Principal
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Palta, Bengal Enamel, N. 24 Pgs.



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