

**Comprehensive report on the national level seminar titled  
“Environmental Perturbations: Root Causes and Remedies” held on  
28<sup>th</sup> Feb. 2020 at Sripat Singh College, Jiaganj**

**Preface**

*“Science is a best invention of a universe. Without science, there is no change in the world.”*

28<sup>th</sup> February is a red letter day for all Indians. The day marked the discovery of the Raman Effect by Indian physicist Sir C. V. Raman in 1928 and for his landmark discovery; he was awarded the Nobel Prize in Physics in 1930. In 1986, the NCSTC (National Council for Science and Technology Commission) asked the Government of India to designate February 28 as National Science Day. The day is now celebrated all over the country in schools, colleges, universities and other academic, scientific, technical, medical and research institutions. National Science Day is being celebrated every year to widely spread a message about the importance of science in the daily life. Organizing a seminar on this occasion was possibly the best way to commemorate the day.

Our poor earth is heading towards disaster. Environmental degradation is one of the largest threats to the world today. Over exploitation of natural resources, indiscriminate use of land, habitat fragmentation, wanton deforestation, rampant use of chemical fertilizers, increasing soil-water-air pollution by various anthropogenic means are the leading causes of environmental perturbation and subsequent degradation. It invariably causes loss of human health, loss of biodiversity, depletion of ozone layer, global warming, melting of polar ice and affects tourism industry and economy of the country by and large. The long term effects of such phenomena are so gigantic that appropriate strategies must be adopted in no time to save our earth from its imminent destruction. The seminar principally aimed at exploring the various underlying mechanisms of proposed solutions and also focused on generating novel ideas for successful mitigation of the dreadful impact of environmental degradation and subsequent restoration.

### **Inception of the seminar**

The seminar was the brain child of honorable Principal of Sripat Singh College, Dr. Shamsuzzaman Ahmed. He made an announcement about the seminar on 2<sup>nd</sup> January, 2020 at college staffroom to greet the New Year. Shortly, he called on a meeting on 3<sup>rd</sup> Feb. 2020, where the heads of the departments' viz., Zoology, Botany, Molecular Biology and Biotechnology and Environmental Science were present to discuss about the proceedings of the national seminar. Names of various eminent speakers were surfaced in that meeting and eventually Principal Dr. S. Ahmed in consultation with the members present in the meeting, decided that Dr. Amit Chakraborty (Professor, Central University of Rajasthan), Dr. Susanta Kr. Chakraborty (Professor, Deptt. of Zoology, Vidyasagar University), Dr. Zahed Hossain (Professor, Head of the Department of Botany, Kalyani University) and Dr. Suniti Kr. Mandal (Rtd. Associate Professor, Deptt. of Botany, Sripat Singh College, Jiaganj) will be invited as honorable speakers to deliver their talk in the seminar titled "*Environmental Perturbations: Root Causes and Remedies*" on 28<sup>th</sup> Feb. 2020, at Sripat Singh College, Jiaganj.

Honorable Principal of the college framed a committee lead by Dr. Roushan Islam (Head of Deptt. of Botany) as convener of the seminar. The other important members of the team were Mrs. Sangita Bhatta (Head of the Deptt. of Zoology) as joint convener, Ms. Debjani Mondal (Head of the Deptt. of Mol. Biology & Biotech.) as secretary and Mr. Amitava Kar (Head of the Deptt. of Environmental Science) as joint secretary.


**PATRONS:**  
**Sri. Debashis Sarkar**- President Governing Body  
**Sri. Prasenjit Ghosh**- Chairman, JA Municipality & Member of GB  
**Sri Gour Gopal Chatterjee**- Member of GB  
**Dr. Sujata Mukhopadhyay**- Member of GB  
**Prof Zahed Hossain**- Member of GB  
**Sri. Sanjoy Dugar**- Member of GB  
**Sri. Rajib Churoria**- Member of GB

**SPEAKERS**  
**Prof. Amit Chakraborty**, Professor  
 School of Mathematics, Statistics, and Computational Sciences, Central University of Rajasthan  
**Prof. Susanta Kumar Chakraborty**, Professor  
 Deptt. of Zoology, Vidyasagar University  
**Prof. Zahed Hossain**, Professor & Head,  
 Deptt. of Botany, Kalyani University  
**Dr. Suniti Kumar Mandal**  
 Former Associate Prof. Deptt. of Botany, Sripat Singh College

**ORGANISING COMMITTEE**  
**CHAIRMAN**  
**Dr. Shamsuzzaman Ahmed**, Principal  
**CONVENER**  
**Dr. Roushan Islam**, HOD, Botany  
 Mail: rislammod@gmail.com, Ph. 7679925630 and  
**Mrs. Sangita Bhaita**, HOD, Zoology Deptt.  
**SECRETARY**  
**Sri Amitava Kar**, HOD, Environmental Science  
**Smt Dehjani Mandal**, HOD, Mol. Bio & Biotechnology

**MEMBERS**  
 Sri. A.K. Sen Dr. R. Islam  
 Sri. S. Bondopadhyay Sri. T. Burnman  
 Dr. S. Mal Dr. S. K. Dey  
 Dr. R Nath Sri. S. Paul  
 Dr. A.K.Mondal Dr. A. Debnath  
 Sri. B.K.Pattanaik Dr. C. Sen  
 Dr. P Nanda Sri. E. Kabir Pasa  
 Dr. G.P.Pakria Sri. D. Sarkar  
 Dr. A. Modak Dr. D.P. Dutta  
 Sri. S.K.Das Sri. P. Bitter  
 Dr. S. Dutta Banik Sri. A.R Mahali  
 Dr. D. Bhowmick Smt. S. Hansda  
 Dr. B.M.U. Afsan Sri. A.K. Mondal  
 Dr. I Saha Sri. U. Ghosh  
 Dr. M. Tikader Sri. B. Bhattacharya  
 Dr. H. Guhathakurata Smt. S. Bhatta  
 Smt. E. Rumi Smt S. Basu  
 Sri. S.K.Sarkar Sri. D. Mondal  
 Sri. S. Simlandy Smt. B. Chatterjee  
 Sri. A. K. Mondal Sri. A. Kar  
 Smt. S. Yasmin Sri. B. Choudhary  
 Sri. D. Das Sri. S. Bhattacharya  
 Sri. S. Sarkar Sri. A. Chhajore  
 Dr. A. Chakravorty Sri. S. K. Bhaskar  
 Smt. N. Yasmin Sri. T. Sarkar  
 Sri. P. Mondal Sri. S. Ghosh  
 Sri. S. K. Biswas Smt. R. Singha  
 Sri. S. Mandal Mst. G. Chanda  
 Sri. A. Halder Sri. C. Goswami  
 Sri. S. Mandal Sri. S. Chakraborty  
 Dr. S. Mukherjee Sri. P. Chakraborty  
 Dr. A. Basu Smt. I. Thapa  
 Smt. D. Mandal  
 Sri. A. Chowdhury  
 Dr. S. Mukherjee

On the occasion of  
**National Science Day**  
**ONE-DAY NATIONAL SEMINAR**  
**ON**  
**Environmental Perturbations:**  
**Root Causes and Remedies**



Jointly organized by  
 Departments of Zoology, Botany  
 Mol. Biology & Biotechnology and  
 Environmental Science

In Collaboration with  
**Jiaganj-Azimganj Municipality**

**SRIPAT SINGH COLLEGE**  
 Jiaganj, Murshidabad  
 West Bengal-742123  
 Web: www.sripatsinghcollege.org  
 Email: sscollege2009@gmail.com

**Our College**  
 Sripat Singh College, the first Govt. sponsored co-educational degree college in West Bengal, started its journey in 1949 in the "Cutchi Bari" of great Mahatma Sripat Singh Dasgupta. Now, this institution enriches youth and fulfills all-out socio-economic-educational-cultural needs of the mass of Murshidabad by virtue of its utmost sincerity and efficacy.

**Invitation**  
 All are cordially invited to the one-day National Level Seminar, 2020 on "Environmental Perturbations: Root Causes and Remedies" on February 28, 2020, the National Science Day.

**Brief Description of the Seminar**  
 "The greatest threat to our planet is the belief that someone else will save it"..... Robert Swan  
 Environment has become the main concern for the human being to have a safe living on the earth. It started since Rachel Carson published her book *Silent Spring* in 1962 and drew the attention on environmental degradation. As a consequence the first major international conference on environment was held in 1972 in Stockholm, Sweden. Since then a lot of summits, conferences and meets have been going on worldwide. Recently, Greta Thunberg, mere a school girl, attending the UN Climate Action Summit in mid-August 2019 and uttering audaciously...*How dare you! You have stolen my dreams and my child hood with your expoxy world.....* and it shook the conscience of all. But it is a sorry state is that all spheres of environment have been deteriorating gradually causing climate change severely in spite of all efforts (?). There is a popular saying amongst the environmental activists: **to Save Environment, Think Globally and Act Locally.**  
 With this background our Sripat Singh College is going to organize the seminar having the title: **Environmental Perturbations: Root Causes and Remedies**, on 28 February 2020, the National Science Day.

**Registration:**  
**Registration Fees**  
 Faculty : 750/-  
 Research Scholars: Rs. 300/-  
 Students: Rs. 100/-  
 Last date of Abstract Submission: 24<sup>th</sup> February, 2020  
 Last date of Registration: 25<sup>th</sup> February, 2020  
 Last date of full Paper submission: 25<sup>th</sup> February, 2020

**Mode of payment: Online**  
**In Favour of: PRINCIPAL, SRIPAT SINGH COLLEGE (Project)**  
 A/C No. 5254010000695  
 Bank of Baroda, Jiaganj Branch  
 IFSC: BARB0JIAGAN. (Note: 0-zero)

**Venue: Sripat Singh College, Murshidabad.**

**Call for Paper:**  
 Abstracts for the paper should be submitted before last date. Selected full papers will be published later on.  
 Abstracts should be neatly typed in MS Word (Font: Times New Roman, Size: 12, Line Spacing: 1.5).  
 Soft copy of abstract and full paper should be submitted electronically to the Convener at  
 Email: rislammod@gmail.com

- Thrust Areas:**
1. Heavy Metal Toxicity and Xenobiotic Stress Effect on the Environment
  2. Climate Change and its Impact on Biodiversity
  3. Waste Management- Reuse and Recycling
  4. Food Safety and Security
  5. Degradation, Over-Exploitation and Restoration of Natural Resources
  6. Environmental Conservation and Sustainable Development
  7. Effect of Environmental Perturbation on Human Health
  8. Green Technology- Application in Pollution Control
  9. Aquaculture, Fisheries and Blue Economies
  10. Mathematical of Application in Biosciences
  11. Environmental Chemistry and its Application
  12. Role of Environment in Economic Development

**WELCOME TO**  
**Department of Life Sciences,**  
**Sripat Singh College**  
**Venue: Sripat Singh College,**  
**Murshidabad, W.B.**  
**ONE-DAY NATIONAL LEVEL**  
**SEMINAR**  
**ON**  
**Environmental Perturbations : Root**  
**Causes and Remedies**  
**February 28<sup>th</sup>, 2020**  
**Registration Form**  
 (Please type or fill up in block letters)

NAME.....

DESIGNATION.....

INSTITUTION.....

TITLE OF ABSTRACT.....

FULL MAILING ADDRESS.....

Email.....

Contact No.....

Abstract attached? (Y/N).....

Food Habit (Veg/Non Veg).....

Details of Registration Fee.....

Date.....

**Signature**  
 Registration form can be downloaded from the college website [www.sripatsinghcollege.org](http://www.sripatsinghcollege.org) and send it in advance with the registration fees.  
 Photo copy of the registration form can be sent to.....

Caption: Brochure of one day national seminar on Environmental Perturbation: Root Causes and Remedies, 28th Feb 2020

## Preparatory phase of the seminar

Soon after the formation of the organizing committee, every member started playing their part to the best of their ability. The brochure of the seminar was finalized in least possible time and was printed on 8<sup>th</sup> Feb. 2020. The soft copy was though put in circulation a couple of days earlier before the printed copies were available. A total of 70 copies were printed and the printed copies of the brochure were delivered to nearly all the colleges of Murshidabd and Nadia district. A few copies of the brochure were delivered to other colleges of the state via speed post. The circulation of the soft copies was even more pronounced. All the members of the organizing committee left no stone unturned for wide circulation of the brochure of the seminar. The convener of the seminar personally visited all the nearby colleges of the Murshidabd district to cordially invite the faculty members of the respective colleges to the seminar which was scheduled to be held on National Science Day. Nominal registration fees of Rs. 750/- for faculty members, Rs. 300/- for research scholars and Rs. 100/- for students were fixed for participation in the seminar. Both the facilities of online payment and spot registration were enjoyed by the participants.

PATRONS:	MEMBERS	
Sri. Debashis Sarkar- President Governing Body	Sri. A.K. Sen	On the occasion of
Sri. Prosenjit Ghosh- Chairman, JA Municipality & Member of GB	Sri. S. Bandopadhyay	National Science Day
Sri Gour Gopal Chatterjee- Member of GB	Dr. S. Mal	<b>ONE-DAY NATIONAL SEMINAR</b>
Dr. Sujata Mukhopadhyay- Member of GB	Dr. R. Nath	<b>ON</b>
Prof Zahed Hossain- Member of GB	Dr. A.K.Mondal	<b>Environmental Perturbations:</b>
Sri. Sanjoy Dugar- Member of GB	Sri. B.K.Pattanayak	<b>Root Causes and Remedies</b>
Sri. Rajib Chandra- Member of GB	Dr. P. Nanda	<b>On 28<sup>th</sup> February 2020</b>
	Dr. G.P.Pokra	
	Dr. A. Modak	<b>Jointly Organized by</b>
	Sri. S.K.Das	Departments of Zoology, Botany
	Dr. S. Datta Barik	Mol. Biology & Biotechnology and
	Dr. D. Bhattacharya	Environmental Science
	Dr. B.M.U. Afian	
	Dr. I Saha	<b>In Collaboration with</b>
	Dr. M. Tikader	<b>Jiaganj-Azinganj Municipality</b>
	Dr. H. Gahlotkaranta	
	Sri. E. Rauti	
	Sri. S.K.Sarkar	
	Sri. S. Srinandji	
	Sri. A. K. Mondal	
	Sri. S. Yasmin	
	Sri. D. Das	
	Sri. S. Sarkar	
	Dr. A. Chakraverty	
	Sri. N. Yasmin	
	Sri. P. Mondal	
	Sri. S. K. Biswas	
	Sri. S. Mondal	
	Sri. A. Halder	
	Sri. S. Mondal	
	Dr. S. Mukherjee	
	Dr. A. Basu	
	Sri. D. Mondal	
	Sri. A. Chowdhury	
	Dr. S. Mukherjee	
	Dr. R. Islam	
	Sri. T. Barman	
	Dr. S. K. Dey	
	Sri. S. Paul	
	Dr. A. Deb Nath	
	Dr. C. Sen	
	Sri. E. Kabir Pasa	
	Sri. D. Sarkar	
	Dr. D.P. Datta	
	Sri. P. Bitter	
	Sri. A.R. Mahali	
	Sri. S. Hossain	
	Sri. A.K. Mondal	
	Sri. U. Ghosh	
	Sri. B. Bhattacharya	
	Sri. S. Bhutta	
	Sri. S. Basu	
	Sri. D. Mondal	
	Sri. B. Chatterjee	
	Sri. A. Kar	
	Sri. B. Chowdhury	
	Sri. S. Bhattacharya	
	Sri. A. Chakraborty	
	Sri. S. K. Bhunia	
	Sri. T. Sarkar	
	Sri. S. Ghosh	
	Sri. D. Singha	
	Md. G. Charul	
	Sri. C. Goswami	
	Sri. S. Chakraborty	
	Sri. P. Chakraborty	
	Sri. I. Thapa	

**ORGANIZING COMMITTEE**

**CHAIRMAN**  
Dr. Skarsozaman Ahmed, Principal

**CONVENER**  
Dr. Roushan Islam, HOD, Deptt. of Botany  
Mail: [r.islam@jagaj.org](mailto:r.islam@jagaj.org), Ph. 7679025638  
and  
Mrs. Sangita Bhattacharya, HOD, Zoology Deptt.

**SECRETARY**  
Sri Anindya Kar, HOD, Environmental Science  
Sri Debajit Mandal, HOD, Mol. Bio & Biotechnology

**SRI PAT SINGH COLLEGE**  
Jiaganj, Murshidabad  
West Bengal-742123  
Web: [www.sripatsinghcollege.org](http://www.sripatsinghcollege.org)  
Email: [csr@jagaj.org](mailto:csr@jagaj.org)

In the seminar, abstracts and posters from the participants were called for. An overwhelming response was received in terms of abstracts and posters presentation from the delegates of different colleges and universities. Publication of an abstract book was also planned on the occasion of the seminar. A total of 68 abstracts were received till the deadline of abstract submission, i.e. 24<sup>th</sup> Feb. 2020. In the mean time, the printing of certificates as well as all the other accessory requirements of the seminar were also fulfilled. The seminar hall (Room No. 5) and the entrance of the college were beautifully decorated before the day of the seminar. Room no. 1 of the college was selected exclusively for poster presentation. . The seminar was all set to kick off on 28<sup>th</sup> Feb. 2020, the National Science Day. It is worth mentioning that Jiaganj-Azimganj Municipality also collaborated with Sripat Singh College for successfully organizing the seminar and stretched all possible financial support to make the seminar a success.

### **Inaugural session of the seminar**

On the day of seminar, Dr. Suchetana Mukherjee, Assistant Professor, Deptt. of Botany, Sripat Singh College, conducted the programme for the entire day. The programme started at 11.00 am in the morning at “Rabindra Sabhagriha” (Room No. 5). At the start of the programme, she heartily welcomed all the delegates and briefly introduced the essence of the seminar. The anchor next called all the dignitaries on the dais and asked them to take their seats. Mr. Debasish Sarkar (President of the Governing Body of the College), Dr. S. Ahmed (Principal of College), and four eminent speakers of the seminar were called on the dais and felicitated by the students of 3<sup>rd</sup> year Botany (Hons.). Registration of the incoming delegates was also running concurrently with the proceedings of the seminar. Mrs. Sayantani Basu (Faculty of Mol. Bio. & Biotech.) and Biplab Sarkar (HoD, Deptt. of Computer Sc.) performed their duties well at the registration desk. The delegates were given the seminar kit containing file, pen, note pad, programme schedule, abstract book and a lunch coupon. After finishing registration, the delegates were offered snacks and tea before entering into the seminar hall. A total of 31 delegates from exterior colleges and universities registered their presence on the day of seminar. Participation of faculty members and students of Sripat Singh College was even more encouraging. A total of 66 faculty members and 67 students from different departments of the college made their active presence in the seminar.

Next, the Principal of the college, Dr. S. Ahmed delivered his inaugural speech. He talked about the glorified history of the college in organizing seminars from time to time in the past. He also emphasized much on the importance of organizing such seminars in modern times.

Mr. Debasish Sarkar (former student and present president of the G.B. of the college) was then asked to say few words on the occasion of the seminar. He expressed his contentment with regards to Sripat Singh College organizing the seminar on the occasion of National Science Day and wished grand success of the seminar. Mr. Sarkar also opened the abstract book of the seminar along with Principal of the college Dr. Shamsuzzaman Ahmed.

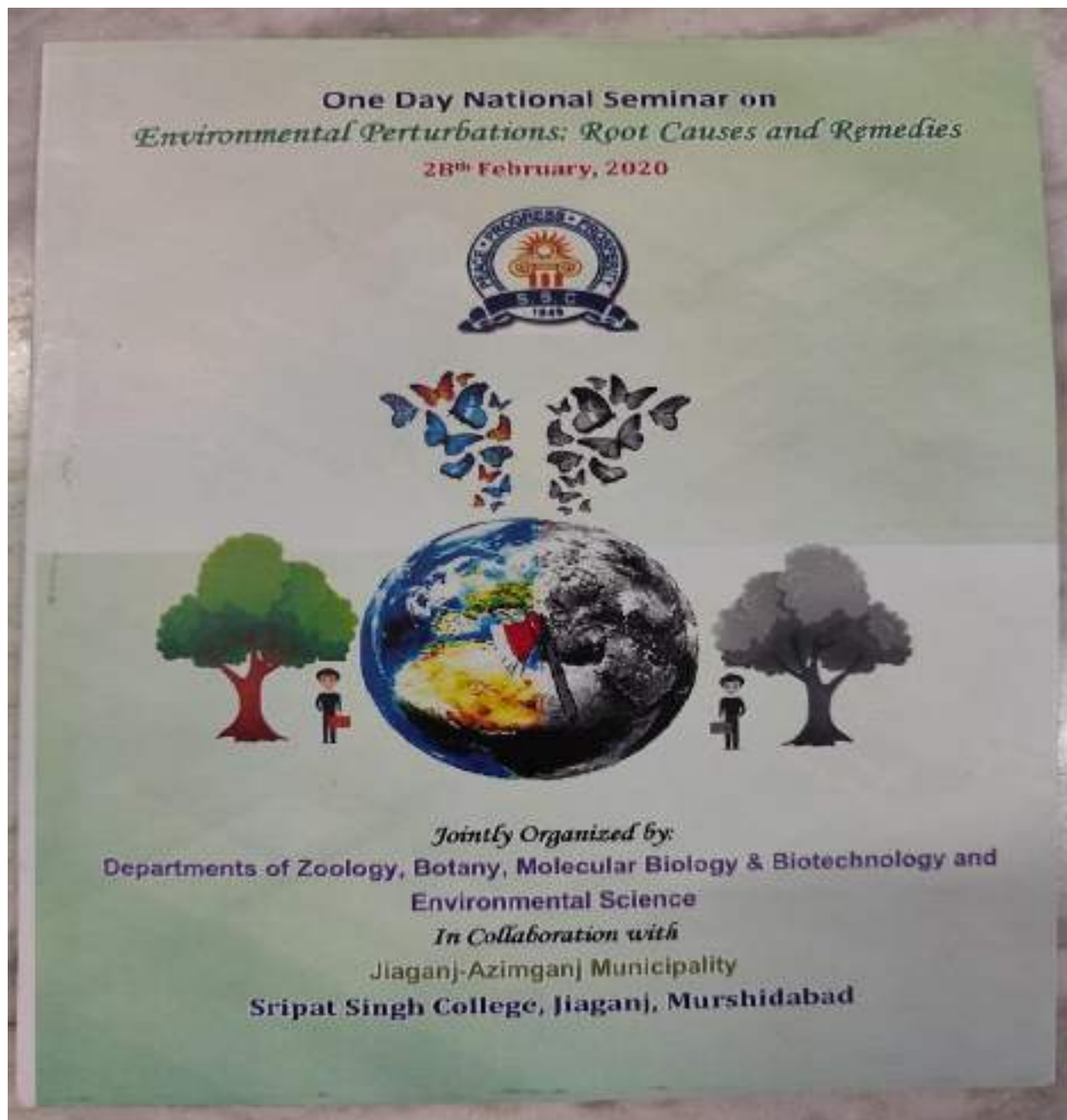


*Lecture Delevered by convener Prof. Dr. Roushan Islam, Date:28th Feb 2020*

### **Pre-lunch lecture session of the seminar**

Pre-lunch session of the seminar started with the key note address delivered by Dr. Susanta Kr. Chakraborty of Vidyasagar University, who started his professional career from the Sripat Singh College in early 90's. At the start of his lecture, he thanked Principal of the college for inviting

him in the seminar and recollected his fond memories of the past during his brief stay at the college. He then started delivering his talk and brilliantly described the importance of mega diversity of Sundarban in keeping ecological balance and presented some beautiful slides to the audience. The students in the seminar hall enjoyed the power point presentation to the fullest. He took an hour to finish his lecture and also answered a few questions from the audience.



Banner of the Seminar, Date:28th Feb 2020

Next, Dr. Amit Chakraborty of Cental University of Rajasthan was asked to deliver his presentation. He talked about the application of mathematical science in biology to improve agro-ecosystems. He stressed on modeling of nitrogen limitation and enrichment in agricultural soil for increasing crop yield. The idea was quite novel which sparked interests in everybody present in the seminar hall. He also expressed his serious concern about the lethal impact of green revolution in Iindia that resulted due use to excessive use of chemical fertilizers in soil. He also shared his ideas about restoring the physic-chemical properties of the natural soil and thus improving the soil health by way of limited use of chemical fertilizers. He also encouraged more and more use of eco-friendly biofertilizers in agricultural fields. An hour long lecture ended with answering some relevant questions from the audience.

### **Lunch Break and Poster Session**

After the nice deliverance of Dr. A. Chakraborty, lunch break was announced at 1.30 pm. The delegates were asked to collect their lunch packets from Room No. 23 by showing their lunch coupons. Mr. Arunava Chowdhury (Asstt. Prof. in Economics) and Mr. Shibu Paul ( Asstt. Prof. in Pol. Sc.) neatly performed their duties with regards to giving away lunch packets to the participants. Mr. Babin Kr. Pattanaik (Associate Professor of Sanskrit) and Mr. Shakti Mondal ( Asstt. Professor in Geography) also supervised their work at Room No. 23 during the distribution of lunch packets. The lunch packets contained fried rice with chicken-masala which was quite delicious and appreciated by all the delegates. A mineral water bottle of 500 ml was also served to each of the delegates along with their lunch packets. Several dustbins were well placed at different floors of the college for throwing away the packets after finishing the lunch meal. It took 45 minutes to complete the lunch session.

The poster session kicked off at 2.00 pm. A total of 12 posters were displayed properly in Room No. 1. The delegates had a keen look on every posters displayed in the room. It was worth mentioning that students of different colleges also presented posters and got very much enthusiastic about participating in the seminar.



### **Post lunch lecture session of the seminar**

After the lunch break, the seminar programme resumed at 2.30 pm. The post lunch session of the seminar started with the lecture of Dr. Zahed Hossain of Kalyani University who talked about the effects abiotic stress on crop plants. He precisely described the effects of arsenic pollution on maize and presented hardcore research data to elaborate the cellular response to the metal toxicity and its corresponding recovery mechanisms. The presentation was greatly appreciated by the faculty members present in the seminar hall and he satisfied all the queries of the audience in the interactive session after finishing nearly an hour long lecture.

The last lecture of the day was delivered by Dr. Suniti Kr. Mandal, Rtd. Associate Professor of Botany, Sripat Singh College. He is also a popular science activist and a writer. He took all the pain to come to the department even after so many years of his retirement to deliver his speech on biodiversity and its conservation which the students and the other faculty members present in the hall liked mostly. His lecture was easy to grasp the very basic concepts of biodiversity hotspots and in-situ, ex-situ conservation. His effortless deliverance was the centre of attraction for the day. He delivered his entire lecture in lucid english and during interaction with the students, he spoke bengali. He presented some slides showing self clicked pictures of rare flora and fauna from different parts of India. He also announced the publication of the 3<sup>rd</sup> vol. of his famous book titled “Common Indian Herbs and Shrubs- A pictorial Documentation” by the end of the year. He finished his lecture within 45 minutes.

### **Closing session of the seminar**

At the fag end of the seminar, the speakers were presented with the certificate of appreciation by the principal of college Dr. Shamsuzzaman Ahmed. Dr. Suchetana Mukherjee who had been conducting the programme brilliantly since the morning announced the very next two day long DST-sponsored seminar titled “Environmental Sustainability: Issues and Challenges” to be held on 20-21<sup>st</sup> Mar. 2020 at Sripat Singh College. She urged the present delegates to participate in the upcoming seminar as well.

Next, vote of thanks was given by convener of the seminar Dr. Roushan Islam (HoD and Assistant Professor in Botany, Sripat Singh College). He expressed indebtedness to president of

the governing body. He also expressed gratitude to the principal of the college for stretching unconditional support. He also thanked the chairman of Jiaganj-Azimganj Municipality for extending financial help to the college for organizing the seminar. Dr. Islam also acknowledged the tireless performance of the members of the organizing committee who left no stone unturned to make the seminar a grand success. He also thanked all the eminent speakers of the seminar and the delegates who had come from different parts of the states and also from other states. Lastly, he appreciated the efforts of the students of the college for successfully pulling off the seminar. The seminar got concluded with the official declaration by the principal of the college at 4.15 pm. Certificates were issued to each of the participants of the seminar.



Sample copy of Certificate