

**Comprehensive report on the national level seminar titled
“Environmental Perturbations: Root Causes and Remedies” held on
28th 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.”

28th 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 2nd January, 2020 at college staffroom to greet the New Year. Shortly, he called on a meeting on 3rd 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 28th 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
Dept. of Zoology, Vidyasagar University
Prof. Zahed Hossain, Professor & Head,
Dept. 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: rislamod@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. Burman
Dr. S. Mal	Dr. S. K. Dey
Dr. R Nath	Sri. S. Paul
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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
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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 Mahanaja Sripat Singh Doogar. Now, this institution enmeshes 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 believe 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 ardently...*How dare you! You have stolen my dreams and my child hood with your expoy 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: 24th February, 2020
Last date of Registration: 25th February, 2020
Last date of full Paper submission: 25th February, 2020

Mode of payment: Online

In Favour of: PRINCIPAL, SRIPAT SINGH COLLEGE

(Project)

A/C No. 5256010000695

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: rislamssd@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 28th, 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 and send it in advance with the registration fees.

Photo copy of the registration form can be sent to

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 8th 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. 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	Sri. A.K. Sen Sri. S. Bandyopadhyay Dr. S. Mal Dr. R Nath Dr. A.K.Mondal Sri. B.K.Pattanaik(IQAC) Dr. P Nanda Dr. G.P.Pakira Dr. A. Modak Sri. S.K.Das (TCS) Dr. S. Dutta Banik Dr. D. Bhowmick Dr. B.M.U. Afsan Dr. I Saha Dr. M. Tikader Dr. H. Guhathakurata Smt. E. Rumi Sri. S.K.Sarkar Sri. S. Simlandy Sri. A. K. Mondal Smt. S. Yasmin Sri. D. Das Sri. S. Sarkar Dr. A. Chakravorty Smt. N. Yasmin Sri. S. K. Biswas Sri. S. Mandal Sri. A. Halder Sri. S. Mandal Dr. S. Mukherjee Dr. A. Basu Smt. D. Mandal Sri. A. Chowdhury Dr. S. Mukherjee	Dr. R. Islam Sri. T. Burman Dr. S. K. Dey Sri. S. Paul Dr. A. Debnath Dr. C. Sen Sri. E. Kabir Pasa Sri. D. Sarkar Dr. D.P. Dutta Sri. P. Bitter Sri. A.R Mahali Smt. S. Hansda Sri. A.K. Mondal Sri. U. Ghosh Sri. B. Bhattacharya Smt. S. Bhatta Smt S. Basu Sri. D. Mondal Smt. B. Chatterjee Sri. A. Kar Sri. B. Choudhary Sri. S. Bhattacharya Sri. T. Sarkar Sri. S. Ghosh Smt. R. Singha Mst. G. Chanda Sri. C. Goswami Sri. S. Chakravorty Sri. P. Chakravorty Smt. I. Thapa
SPEAKERS Prof. Amit Chakravorty, Professor School of Mathematics, Statistics, and Computational Sciences, Central University of Rajasthan Prof. Susanta Kumar Chakravorty, 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		On the occasion of National Science Day ONE-DAY NATIONAL SEMINAR ON Environmental Perturbations: Root Causes and Remedies On 28th February 2020  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
ORGANISING COMMITTEE CHAIRMAN Dr. Shamsuzzaman Ahmed, Principal CONVENER Dr. Roushan Islam, HOD, Deptt. of Botany Mail: rislammsd@gmail.com , Ph. 7679925630 and Mrs. Sangita Bhatta, HOD, Zoology Deptt. SECRETARY Sri Amitava Kar, HOD, Environmental Science Smt Debjani Mandal, HOD, Mol. Bio & Biotechnology		

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. 24th 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 28th 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 3rd 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.

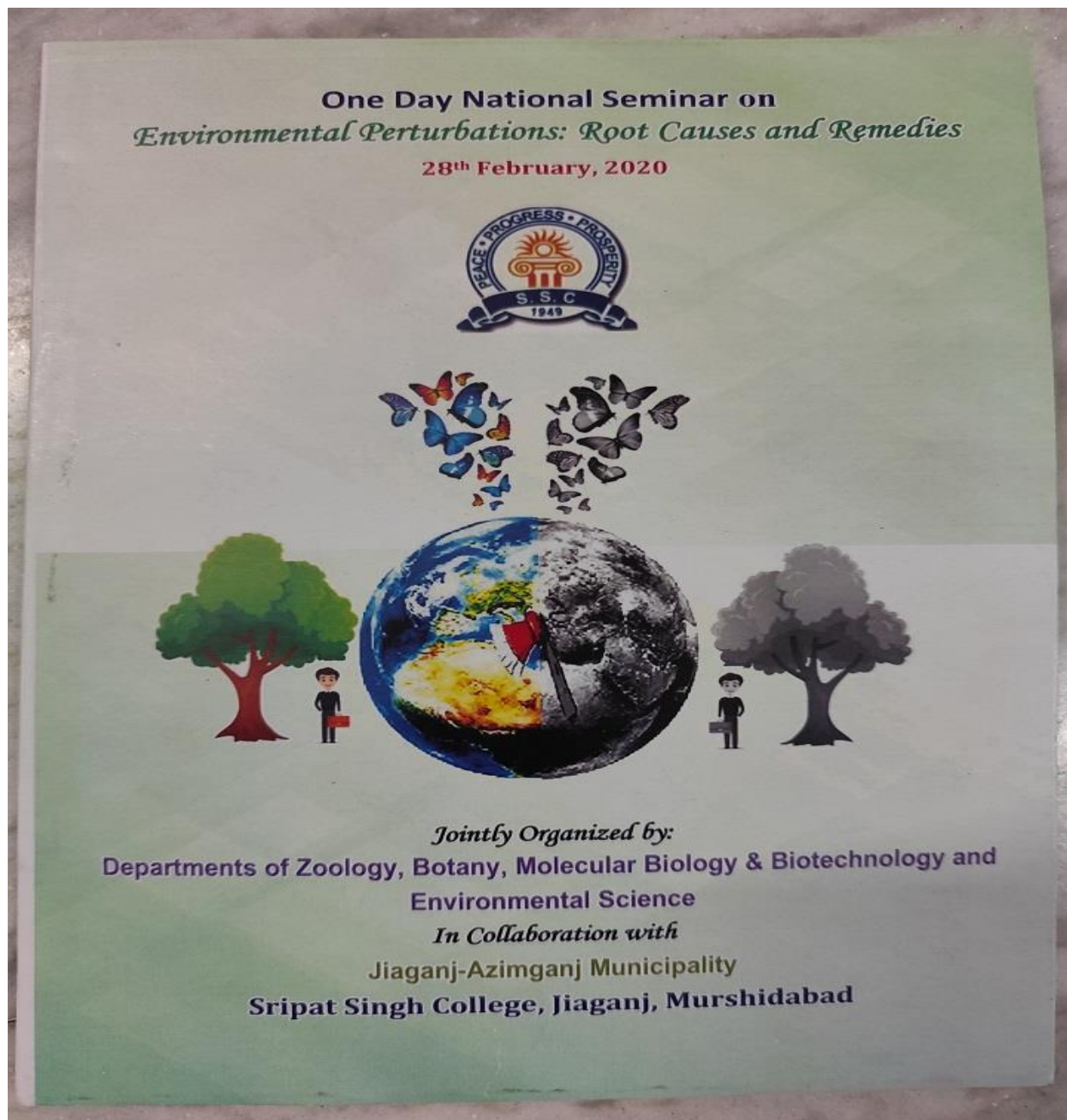
Mr. Debasish Sarkar (former student and present president of the G.B. of the college) was then asked to say few words on the occasion of the seminar. He expressed his contentment with regards to Sripat Singh College organizing the seminar on the occasion of National Science Day and wished grand success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



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.



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 3rd 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 20-21st 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.

