

In pursuit of  
Excellence  
Since 1960

# Annual Report

## 2023



**Jagadis Bose National Science Talent Search**





“The true laboratory is the mind, where behind illusions we uncover the laws of truth.”

-Sir Jagadish Chandra Bose



# JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH

(Registered under Act XXI of 1860)

## Memorandum of The Association

1. Name of the Society : JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH
2. The Registered Office of the Society is situated at 93/1, Acharya Prafulla Chandra Road, Calcutta – 9 in the State of West Bengal
3. The object for which the Society is established are: to select students with the special aptitude for Science and providing a scheme for counseling. Conserving and helping this most precious resource, namely human talent, which is necessary for building up the nation, by award of scholarships and otherwise. The scheme of JBNSTS shall extend to the whole of West Bengal and may later be extended to other areas.
4. The Names and Addresses and Description of the present members of the Executive Committee (Governing Body) are :

DR. B C ROY, Writers' Buildings, Calcutta – 1, President, Governing Body;

SIRJEHANGIR GHANDY, Tata Iron & Steel Co. Ltd., Jamshedpur, Chairman, Governing Body;

SIR RAMASWAMY MUDALIAR, 9, Lower Rawdon Street, Calcutta – 16, Member, Governing Body;

MR. R P BILLIMORIA, Tata Iron & Steel Co. Ltd., Jamshedpur, Member, Governing Body;

DR. D M BOSE, Bose Institute, Calcutta – 9, Member, Governing Body;

DR. P K BOSE, Bose Institute, Calcutta – 9, Member, Governing Body;

DR. D M SEN, Writers', Buildings, Calcutta – 1, Member, Governing Body;

DR. R L SENGUPTA, Presidency College, Calcutta – 12, Member, Governing Body;

DR. S K MITRA, Institute of Radio Physics, Calcutta – 9, Member, Governing Body

DR. S C MITRA, 12, Hindustan Road, Calcutta – 29, Member, Governing Body;

DR. K MITRA, 93/1 Acharya Prafulla Chandra Road, Calcutta – 9, Secretary, Governing Body.



Pandit Jawaharlal Nehru addressing the Inaugural Award Giving Ceremony on 11th April, 1961



## MEMBERS OF THE GOVERNING BODY OF JBNSTS

**Prof. (Dr.) Amitava Raychaudhuri**

Chairman, JBNSTS and Professor Emeritus  
Formerly Sir Tarak Nath Palit Professor of Physics,  
Department of Physics  
University of Calcutta,  
92, Acharya Prafulla Chandra Road, Kolkata -700 009

**Shri Hridyesh Mohan, IAS**

Additional Chief Secretary,  
Government of West Bengal  
Department of Science & Technology and Biotechnology  
Vigyan Chetana Bhavan (6th Floor)  
Plot No. 26/B. Block DD, Sector – I, Salt Lake, Kolkata – 700 064

**Shri Manish Jain, IAS**

Principal Secretary,  
Government of West Bengal  
Department of Higher Education & School Education Department  
Bikash Bhavan, Sector-I, Salt Lake, Kolkata -700 091

**Prof. (Dr.) Amita Chatterjee**

Emeritus Professor,  
School of Cognitive Science, Darshan Bhavan  
Jadavpur University Campus Jadavpur, Kolkata -700 032

**Shri Samar Ghosh, IAS**

Q-2 Panchasayar,  
Near New Garia Railway Station, Kolkata -700 094

**Prof (Dr.) Dhrubajyoti Chattopadhyay**

Vice Chancellor,  
Sister Nivedita University  
DG Block (Newtown) Action Area - I, Newtown, Kolkata – 700156

**Prof. (Dr.) Partha Pratim Majumder**

National Science Chair  
&  
Distinguished Professor,  
John C. Martin Centre for Liver Research and Innovations  
Emeritus Professor,  
Indian Statistical Institute  
Human Genetics Unit , 203 B.T. Road, Kolkata 700108

**Dr. Sudip Chatterjee**

Hon. Professor,  
Vivekananda Institute of Medical Sciences Kolkata  
Park Clinic, 4 Gorky Terrace, Kolkata -700 017

**Prof. (Dr.) Maitree Bhattacharyya**

Director and Member-Secretary (Ex-officio),  
Jagadis Bose National Science Talent Search,  
1300, Rajdanga Main Road, Kolkata - 700107





মমতা ব্যানার্জী  
মমতা বনার্জী  
ممتا بنرجی  
Mamata Banerjee



মুখ্যমন্ত্রী, পশ্চিমবঙ্গ  
मुख्यमंत्री, पश्चिम बंगाल  
وزیر اعلیٰ مغربی بنگال  
CHIEF MINISTER, WEST BENGAL

10<sup>th</sup> January, 2024

### MESSAGE

I am happy to know that the 'Annual Award Ceremony' of Jagadis Bose National Science Talent Search (JBNSTS) will be held in a befitting manner at the premises of Presidency University, Kolkata, on 27<sup>th</sup> January, 2024.

Jagadis Bose National Science Talent Search plays an important role in society by recognizing, inspiring and cultivating the potential of young scientific minds. The JBNSTS team has been fulfilling this national objective with a lot of sincerity and dedication over the years, and I express my best wishes for the continued success of the institution in their forthcoming endeavours.

My heartiest congratulations to all the scholars and awardees on this special occasion. I wish the programme all success.

  
(Mamata Banerjee)

**Prof. (Dr.) Maitree Bhattacharyya**  
Director  
Jagadis Bose National Science Talent Search  
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" Research is to see what everybody else has seen, and to think what nobody else has thought."

**Albert Szent-Gyorgyi**  
Nobel Prize winner in Physiology/  
Medicine, 1937)





### Chairman's message to the new awardees

It gives me satisfaction and pleasure to write a few words for this Annual Report of JBNSTS. The primary focus of JBNSTS has historically been to identify and nurture talented youngsters pursuing careers in science, technology, and medicine. Initially JBNSTS identified only ten top students on the basis of tests and interviews as they were entering Colleges. Many changes have happened since then. With support from the Government of West Bengal the number of scholarships at every level have been enhanced. Further, in addition to the original Senior JBNSTS scholars, there is also the Junior JBNSTS scholarships. With a vision to encourage girls to pursue careers in Science, Technology, and Medicine, Bigyani Kanya Medha Brittis at both the senior and junior levels have been initiated. Every year the number of students sitting for the selection tests at the two levels has grown more than 10,000. The entire JBNSTS rises to the occasion and ensures the smooth functioning of this major activity year after year.

Besides the above Scholarship programs, JBNSTS also plays an important role in several other programs. A case in point is the Vidyasagar State Science Olympiad. Conducted at block, district, and state levels, the Olympiad seeks to identify one hundred talented students of Class IX who are then mentored for the National Science Olympiad. Another remarkable program in which JBNSTS plays an important role is the program for teachers' sensitization cum orientation for children with special needs. The thriving Biotechnology Program to encourage high school students is also noteworthy.

The small number of female professionals at the higher academic levels is a cause for serious concern. It is our earnest hope that in the years ahead we will see an improvement in gender balance in Science, Technology or Medicine, with the Bigyani Kanna Medha Brittis playing a supportive key role.

Needless to stress, the Scholarship is for the truly talented young. As it is across the world, this number will be limited. Through a selection process honed over the years, JBNSTS has maintained the highest standards and never compromised on the quality. It is the successful careers of the scholars which bring glory to the entire endeavour.

**Prof. (Dr.) Amitava Raychaudhuri**  
Chairman, JBNSTS



**“ I was not always the best student  
with the highest grades, but my teachers  
saw something in me and tried to encourage  
me“**

**May Britt Moser**  
(Nobel Prize winner in  
Physiology/ Medicine, 2014)





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### From the Director's Desk

**S**hri Bratya Basu, Honourable Minister in charge, Department of Higher Education and School Education Department, Government of West Bengal, our Chairman Prof. Amitava Raychaudhuri, Dr. Basudeb Das Gupta, the renowned scientist, esteemed members of the governing body, our Scholars and Awardees, Parents and guardians, respected scientists and professors, my colleagues, Alumni/ae, Well Wishers; I bring to you the greetings of the entire JBNSTS family which has ascended to its 64th year of existence. We do express our gratitude to the Hon'ble Chief Minister of our state, Ms. Mamata Banerjee for being a figure of support, hope of our institute.

As we gather to celebrate the outstanding achievements of our brilliant students, we believe that the presence of the Honorable Minister will add in measurable inspiration and encouragement to this auspicious occasion. The Minister's dedication contribution and initiative for the advancement of Education and Culture in our state of West Bengal will definitely inspire our young scholars present today. I am confident that his words will serve as a beacon of motivation for our bright minds; encouraging them to strive for even greater heights in their academic pursuits.

We are honoured that the brilliant scientist Dr. Basudeb Dasgupta, is with us today. He is a renowned theoretical physicist, his research focusses on dark matter and neutrino physics. Our young scholars had an illuminating, vibrant morning session with this exceptional teacher. We acknowledge his effort to motivate talented minds.

I congratulate the new awardees of 2023 that this gorgeous program is dedicated for you and we have expectation that you would be worthy global citizens of this honor conferred upon you.

It is my pleasant duty to present our organization's accomplishments and developments of the bygone year. As we draw closure to the chapter of 2023, no doubt an exciting spell of life awaits all of you promising a symphony of accomplishments in every further stages. From a pool of more than 12,000 applicants from all over the state, we have identified 57 number of Senior Scholars, 52 number of Senior Bigyani Kanya Medha Britti Awardees, 209 number of Junior Scholars, 52 number of Junior Bigyani Kanya Medha Britti Awardees and 50 number of





Encouragement Awardees who have not only been christened as JBNSTS scholars and got inducted into the institute's hall of fame but also has exemplified the cornerstone of perseverance and excellence that defines your exceptional talent and enduring dedication towards science. Let me humbly assure you that JBNSTS shall always be the guiding force and mentor in your endeavors thereby enrich your academic potency through activities and initiatives. It has been aptly remarked by our first Prime Minister Jawaharlal Nehru that one can tell the condition of a nation by looking at the status of women and no other than education can only empower women with the necessary lifeline. India is home to many inspiring women who have overcome obstacles and achieved remarkable success in STEM fields. Women like Dr. Tessy Thomas, the "Missile Woman of India," and Dr. Mylswamy Annadurai, the project director of India's Mars Orbiter Mission, serve as role models for young girls aspiring to make their mark in STEM. These success stories not only showcase the immense talent and potential of women in STEM but also inspire and encourage future generations. Our Bigyani Kanya Medha Britti programs (both the senior and junior categories) are the flagship programs of JBNSTS.

Since inception of Vidyasagar State Science Olympiad which was instituted to observe the bicentennial year of Pandit Iswar Chandra Vidyasagar, we have made significant progress for pupils at the secondary level of science curricula of West Bengal state board for developing the scientific aptitude amongst them which will further enhance human resources of our country in the scientific and technological domains and strengthen our state's global participation. Mere identification of talent is not our priority; the selected Olympiad scholars are introduced to unique pedagogy of learning under the abled mentorship of National Level experts to keep them updated for the diverse national level examinations and help them to perceive science education from a competitive standpoint. In this connection, I would love to remember the precious contribution of Dr. Neeraj Kayal, a former scholar of our institute and a recipient of the prestigious Shanti Swarup Bhatnagar Award (year 2022) and Infosys prize who has donated half of the Bhatnagar award money to his alma mater for the significant contribution of JBNSTS to the society. We are proud of him.

With regard to the social commitment, JBNSTS had initiated an enterprising program titled "Teachers' Sensitization cum Orientation & Training Program on Inclusive Education for the Children with Special Needs". This program is a guidance to the facilitators, to develop dedication, compassion and conscience for imparting value based inclusive education. We are confident that this endeavor will ensure equality and accessibility of quality education with new focus to universal design of learning to the vulnerable section of the society. The program incorporates all the teachers of Primary & Secondary Schools, Upper Primary, Higher Secondary framework along with Sahayak, Sahayikas of Shishu Shiksha Kendra (SSK) and Madhyamik Shiksha Kendra (MSK) of the Government of West Bengal consisting of 24 educational districts of West Bengal.

We have witnessed several nurturing programs, be it Talent Enrichment Program, District School Program, Biotechnology Program and Teachers Training program in the previous year. I am delighted to share that this year we had organized Talent Enrichment program at the research institutes of Bangalore and New Delhi, respectively for our Senior Scholars and Senior Bigyani Kanya awardees. In this context, I would humbly mention that the science institutes of national



importance like Institute of Genomics and Integrative Biology, Indian Academy of Sciences and others had extended their ardent support to us for discharging the academic endeavor. The programs were designed to be a transformative and immersive experience based on experimental learning in STEM education and research. Our scholars participated in synergistic sessions by renowned scientists, science professionals and technologists by visiting the state-of-the-art laboratory facilities and explored various sustainability projects to reimagine solutions to real-world sustainability challenges. We had organized a phenomenal discourse titled Those Who make us Proud which laid a connection of our senior scholars and Bigyani Kanya Medha Britti Awardees with the doyens of science and other distinguished resource persons of the society thereby forging a remarkable discourse on pleasing blend of the basic science, applied science and the contemporary science and methodologies. Under the guidance of experts, our talented student scientists were induced to the technicalities of operating a telescope and observe the vast dark night sky along with viewing of planets and connect to the enormous cosmic world beyond our ephemeral consciousness at Deul Park, Shantiniketan.

Our Teachers' Training Program for science teachers in school has achieved immense popularity and our challenge now is how to expand this program through all the districts of West Bengal to motivate the teachers. Our academic standards are constantly improving and the pedagogy we offer is carefully designed to motivate and stimulate thereby providing students and the science faculties/ teachers of West Bengal with the skills they need to succeed in an ever-changing world and satisfaction that JBNSTS is making progress on that note. Emphasis is being placed on teaching and learning with due importance on hand-on experimental learning and to adopt best practices in teaching. Our Biotechnology laboratory has conquered the young minds of plus two level from different schools of our state. The students and even teachers feel excited when they perform experiments with latest equipment and technologies in JBNSTS biotechnology laboratory.

It has been an honor and fulfilling experience to serve and lead JBNSTS. I have always believed that no one singly can whistle a symphony, rather it takes a whole orchestra to play it. The sincere effort of my staff and colleagues has made our institute possible to achieve our goals and objectives. In this endeavor of ours, involvement of the Department of Higher Education (Social Education branch), School Education Department and Department of Science and Technology and Biotechnology, Government of West Bengal is indispensable, their grant, their guidance, their unconditional support have made all these objectives achievable. Once again, I extend a warm welcome to our scholars and awardees. May science be the constant vigil of your path towards achieving excellence in whatever you pursue. All of you are the pride of the institute who would lay imprint and contribute significantly for new inventions and innovations in the domain of science.

As the saying goes by Galileo, "**All truths are easy to understand once they are discovered; the point is to discover them.**" I firmly believe that you belong to the legion of extraordinary men and women of the new age in the contemporary society and the instant quote is being meant for you.

**Prof. (Dr.) Maitree Bhattacharya**

Director, JBNSTS Kolkata



## VISION

Identify, Motivate and Nurture to develop the world's brightest minds

## MISSION STATEMENT

To see every talented student of science realize their potential and to harness their talent for nation building.

To convey the joy of learning science amongst high ability students and to create innovative learning environments for them.

To build up human resource in applied and basic sciences to produce future leaders in science and technology.

## OUR MANIFOLD ACTIVITIES

- Senior Scholarship Program
- Senior Bigyani Kanya Medha Britti
- Junior Scholarship Program
- Junior Bigyani Kanya Medha Britti
- West Bengal District School Program
- Teachers' Training Program
- Talent Enrichment Program
- Biotechnology Program for Students
- JBNSTS- Vigyan Prasara Initiative
- Vidyasagar State Science Olympiad
- Teachers Training on Inclusive Education for the Children with Special Needs.



**“ Be thankful for life and be thankful  
to people who like to engage in meaningful  
dialogue with you “**

**John Goodenough**  
(Nobel Prize winner in  
Chemistry, 2019)





Dr. Paromita Roy



Prof. (Dr.) Maitree Bhattacharyya



Mr. Joydip Das



Dr. Abhijit Kar



Dr. Smarajit Manna



Mr. Prasenjit Chakraborty



Mr. Dipankar Sarkar



Ms. Swapna Dey



Mr. Sanjay Dutta



Mr. Raja Das



Mr. Sougata Roy



Dr. Arnab Pramanik



Dr. Pijush Basak



Dr. Sanchari Chattopadhyay



Mr. Puskar Naskar



स जीवति मनो यस्य मननेन हि जीवति

OUR JBNSTS TEAM



Mr. Sudip Das



Mr. Ranjit Kumar Mallik



Ms. Paromita Majumder



Ms. Pushpa Biswas



Ms. Sweta Chakraborty



Mr. Sushabhan Deb



Ms. Shrayasi Chatterjee





Dr. Shampa Dutta



Ms. Prakriti Saha



Dr. Atanu Jana



Ms. Oliviya Das



Ms. Angana Bhattacharya



Mr. Biswatosh Saha



Mr. Suman Mondal



Mr. Gourab Das



Mr. Debmalya Chowdhury



Mr. Sukanta Manna



Mr. Mahadev Das



Mr. Debnarayan Mukherjee



**“ Is science fun ? It's hard work, but  
it's satisfying.”**

**John Goodenough**  
(Nobel Prize winner in  
Chemistry, 2019)





ANNUAL REPORT 2023

# JBNSTS SENIOR SCHOLARSHIP PROGRAM

A unique talent search program of India since 1960 mandated to identify and mentor student scientists to face the 'real' science world



## Senior Talent Search Test

Identifying and motivating the students with passion for science

### Genesis of the program

JBNSTS is the nation's first science talent search organization and is unique of its kind. The Senior Talent Search Program is one of the first endeavors and the flagship program of JBNSTS. In addition, this is the oldest Science Talent Search program of our nation. The talented students are identified through a three-step examination process and further, these selected scholars are rigorously nurtured through different research projects, various mentorship programs with outstanding scientists and educators, open ended thematic workshops, visits to different research institutions and laboratories of national and international repute, enrichment programs through academic apprenticeship, presentations at seminars etc. It envisages creating a talent pool of meritorious students who would make a significant contribution towards the development of the nation in the field of science and technology.

Senior Scholarship Program is an acclaimed initiative of JBNSTS to motivate the young students who are on the threshold of higher education in science. This dynamic initiative has received enormous recognition from all over India since its inception in the year 1960. The program has been formulated to recognize, encourage, and nourish the undergraduate students studying Basic Sciences, Engineering, and Medicine in the recognized institutions of West Bengal. DST, Govt. of India has also recognized the Talent search test by awarding INSPIRE scholarship to the basic science scholars of JBNSTS.

### Objectives

- ❖ To develop research aptitude through research activities and scholars gets the exposure for working with the brilliant minds on the recent trends of cutting-edge research.
- ❖ Providing financial support to facilitate the academic pursuits of the talented scholars of our state.
- ❖ Several nurturing programs/ workshops for scholars all throughout the year to stimulate talented minds into the sphere of innovation and inculcate an enduring scientific temper amongst them.
- ❖ The Senior Scholarship Program aims to create future resource base of India in the domain of Basic Science, Technology, and Medicine.

## Process of identifying JBNSTS Senior Scholars – 2023

The JBNSTS senior scholars are being selected through Senior Talent Search Test this year. Furthermore, the criterion for applying to the instant examination is laid below.

### Eligibility Criteria for the year 2023

- Students who have passed / appeared in (10 + 2) Board examination (WBCHSE / CBSE / ISC / Visva-Bharati Board) in the year 2023 in science discipline and are studying / aspiring to study Science (Hons.) (Subjects as acceptable under the scope of DST - INSPIRE, Government of India) / BS-MS/Engg./ Medicine in West Bengal.
- It is pertinent to mention in this regard, that this scholarship can be availed by the students studying science in undergraduate framework in West Bengal in the current year only.

### Financial benefits & grants that the senior scholars are entitled to avail

Financial Benefits availed by Medicine and Engineering aspirants	INSPIRE Fellowship & Grant
<ul style="list-style-type: none"> <li>● A senior scholar is entitled to receive Rs. 4,000/- as scholarship grant along with one-time Rs. 5,000/- as book grant for 4/5 years till completion of undergraduate studies in engineering and medicine</li> <li>● <b>The scholarship and book grants are sponsored by Department of Science and Technology and Biotechnology, Government of West Bengal.</b></li> </ul>	<p>Research grant amounting to Rs. 80,000/- (Rs. 60,000 + Rs. 20,000) per annum is awarded to JBNSTS senior scholars till completion of Master’s Degree in Basic Science curriculum vis-à-vis DST INSPIRE norms and regulation, Government of India.</p>





## Award for top ten

To facilitate the academic endeavor and scope of web access in STEM education and research top ten boys and top ten girl scholars respectively in Senior Scholarship category are being presented with licensed software enabled modern laptops.

## Scheme and structure of Senior Talent Search Test – Year 2023

The three-tier examination convention which selects our senior scholars is expounded as under.

### First Phase: Written Test Full Marks: 100

The first phase examines the basic concepts of students over a range of prominent science subjects and topics.

The candidates are required to answer to explanatory questions, problem based questions from any three subjects out of Physics, Chemistry, Mathematics and Biology.

### Second Phase: Interview Full Marks: 100

This phase evaluates the aptitude of a science aspirant along with the presence of mind, intelligence, mode of approach to a problem, personality and academic orientation being assessed by a board of experts of different subjects.

Post qualification of the preliminary phase, the incumbents appear before board of experts who assess their innovative and inventive acumen and expand their ideas before the panelists and interact with them.

### Third and Final Phase: Scientific Creativity Test Full Marks: 100

Here the aptitude and talent of the candidate is judged via handling of open ended scientific problem which may or may not have any definite standard solution. This is an open book residential test. The candidates are asked to spend overnight at JBNSTS to think/work on different challenging problems given to them. He/she is allowed to consult books and allowed to interact with other candidates but not to any computer or internet.

The candidate presents and defends on his/her proposition on the next day before a panel of experts; the mode of approach to solve the problem by the candidate is evaluated by panel members. The brain storming interaction with the student is most important in this phase.





## JBNSTS Senior Talent Search Test – 2023 at a glance

Stages of Examination	Written Examination	Interview	Scientific Creativity Test
Timeline	20 <sup>th</sup> August, 2023 Sunday	07 October, 2023 to 08 October, 2023	01 December, 2023 to 03 December, 2023
Total number of candidates	1572	327	142
Total number of selected scholars	<b>JBNSTS Senior Scholars</b>		
	<b>57</b>		

## 2023 batch of JBNSTS Senior Scholars (rank-wise)

Name	Present Institution	Subject	Rank
Souhardya Dandapat	Indian Institute of Technology, Kharagpur	Computer Science and Engineering (Dual Degree)	1
Shusmit Sarkar	Indian Institute of Technology, Kharagpur	Metallurgical and Materials Engineering	2
Swaraj Dian	Indian Institute of Technology, Kharagpur	Electronics and Electrical Communication Engineering (Dual Degree)	3
Srijan Bhowmick	Indian Statistical Institute, Kolkata	B-Stat	4
Sagnik Mazumdar	Indian Institute of Technology, Kharagpur	Electronics and Electrical Communication Engineering (Dual Degree)	5
Rakhi Ghosh	College of Medicine and J.N.M Hospital, Kalyani, Nadia	MBBS	6
Saptarshi Kundu	Jadavpur University, Kolkata	Computer Science and Engineering	7
Anjan Sadhukhan	Indian Statistical Institute, Kolkata	B-Stat	8
Debarshi Basak	Indian Institute of Technology, Kharagpur	Instrumentation Engineering	9
Ayush Bit	Indian Institute of Technology, Kharagpur	Computer Science and Engineering	10



Name	Present Institution	Subject	Rank
Devanshi Das	Institute of Post Graduate Medical Education and Research, Kolkata	MBBS	11
Snehasis Mondal	Jadavpur University, Kolkata	Computer Science and Engineering	12
Sharanya Baidya	Indian Institute of Technology, Kharagpur	Electronics and Electrical Communication Engineering (Dual Degree)	13
Arka Ghosh	Indian Institute of Technology, Kharagpur	Instrumentation Engineering	14
Shrestha Banerjee	Institute of Post Graduate Medical Education and Research, Kolkata	MBBS	15
Bipayan Banerjee	Indian Statistical Institute, Kolkata	B-Stat	16
Srinjan Palchaudhuri	Medical College, Kolkata	MBBS	17
Abir Saha	Medical College, Kolkata	MBBS	18
Souriyok Ghosh	Institute of Post Graduate Medical Education and Research, Kolkata	MBBS	19
Pranjal Sengupta	Indian Association for the Cultivation of Science, Kolkata	BS-MS	20
Krityapriya Bhaumik	Indian Institute of Technology, Kharagpur	Mechanical Engineering	21
Shaswata Dirghangi	Medical College, Kolkata	MBBS	22
Seaverna Pradhan	Institute of Engineering & Management, Salt Lake, Kolkata	Computer Science and Engineering	23
Inesh Chattopadhyay	Indian Statistical Institute, Kolkata	B-Stat	24
Rimjhim Gorai	Institute of Post Graduate Medical Education and Research, Kolkata	MBBS	25
Shibashis Das	Indian Institute of Technology, Kharagpur	Electronics and Electrical Communication Engineering	26
Tigmangsu Das	Medical College, Kolkata	MBBS	27
Sumit Mukherjee	Indian Institute of Technology, Kharagpur	Chemical Engineering	28
Utsa Ghosh	Indian Institute of Technology, Kharagpur	Mathematics and Computing	29

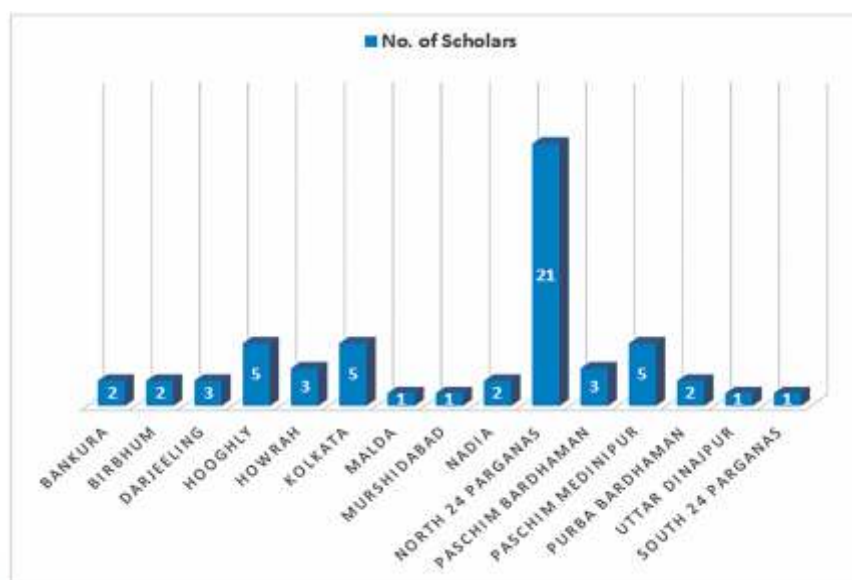


Name	Present Institution	Subject	Rank
Subhadeep Goswami	Medical College, Kolkata	MBBS	30
Advay Dhar	Jadavpur University, Kolkata	Computer Science and Engineering	31
Saikat Halder	Medical College, Kolkata	MBBS	32
Arkajyoti Dey	Indian Institute of Technology, Kharagpur	Instrumentation Engineering	33
Nilangshu Ghosh	Jadavpur University, Kolkata	Computer Science and Engineering	34
Soumyadeep Goswami	Medical College, Kolkata	MBBS	35
Agnirup Chakraborty	All India Institute of Medical Sciences, Kalyani	MBBS	36
Abhradeep Sarkar	Jadavpur University, Kolkata	Electronics and Tele-communication Engineering	37
Rhitambhar Choudhury	Jadavpur University, Kolkata	Electrical Engineering	38
Bouddhaditya Roy	College of Medicine and JNM Hospital, Kalyani, Nadia	MBBS	39
Aryaan Sinha	Indian Institute of Technology, Kharagpur	Electronics and Electrical Communication Engineering (Dual Degree)	40
Ankan Saha	Medical College, Kolkata	MBBS	41
Priyadarshini Bagchi	Sarat Chandra Chattopadhyay Government Medical College and Hospital, Howrah	MBBS	42
Rupankar Ghatak	Medical College, Kolkata	MBBS	43
Shreya Maji	Nilratan Sircar Medical College and Hospital, Kolkata	MBBS	44
Ankana Pari	Indian Institute of Technology, Kharagpur	Mathematics and Computing	45
Pritam Sarkar	Medical College, Kolkata	MBBS	46
Shubhayu Maji	All India Institute of Medical Sciences, Kalyani, Nadia	MBBS	47
Soumendu Sinha	Medical College, Kolkata	MBBS	48
Prantik Das	Jadavpur University, Kolkata	Chemical Engineering	49
Dipankar Koley	Medical College, Kolkata	MBBS	50

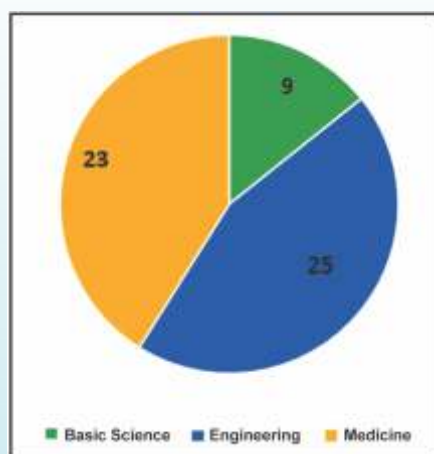


Name	Present Institution	Subject	Rank
Srijita Biswas	Medical College, Kolkata	MBBS	51
Bitan Bhakta	Medical College, Kolkata	MBBS	52
Soham Dutta	Indian Statistical Institute, Kolkata	B-Stat	53
Atrij Roy	Jadavpur University, Kolkata	Information Technology	54
Avilasha Banerjee	Jadavpur University, Kolkata	Electrical Engineering	55
Ayush Munshi	Indian Institute Of Technology, Kharagpur	Biotechnology and Biochemical Engineering (Dual Degree)	56
Anibha Modak	All India Institute of Medical Sciences, Kalyani	MBBS	57

### District wise representation of our senior scholars – year 2023



### Analysis of senior scholars vis-à-vis stream of study







ANNUAL REPORT 2023

# **JBNSTS SENIOR BIGYANI KANYA MEDHA BRITTI PROGRAM**

Long journey towards Equity:  
Elimination of barriers to girls'  
higher education in science



## Senior Bigyani Kanya Medha Britti Program

### Empowering the girls in STEM

#### Perspective of the program

The gender disparity in education is quite alarming, especially as STEM fields for girls' aspirants which reveals a lacuna in the science ecosystem of the nation. Since long back, in spite of several reformative measures aimed towards significant participation of young girls in science, they are outnumbered by their male counterparts in the academic pursuits. JBNSTS has provided unabated impetus to the girl students pursuing science in our state. The institute is credited for introducing a platform which identifies talented girl students of West Bengal and transform them into dynamic citizens who are intellectually stimulated, socially aware by offering value-based and quality science education. JBNSTS is committed to the cause of enabling the girls from all streams of science through access to higher education, by providing financial support and mentoring their career growth.

JBNSTS sowed the seeds in 2017 a phenomenal program titled Bigyani Kanya Medha Britti under the financial patronage of the Department of Science & Technology, Government of West Bengal. Since the inaugural edition of this program, JBNSTS with its demonstrated best practices, the Bigyani Kanya Medha Britti program has won the hearts of our girl students and scientific community of West Bengal. This is a unique program in the national context and will have remarkable implications in the long run.

#### Distinctive features of this initiative

- ❖ This program contributes to the innate talent of girl science aspirants by providing them access to manifold fields of STEM education at a young age which is never possible in the regular academic curricula.
- ❖ Scholarships and book grants for our Senior Bigyani Kanya Medha Britti awardees are the financial offerings by the institute which serve the academic pursuits of our awardees from all across the state.
- ❖ JBNSTS has created a gender-equitable mechanism which empowers our girls to prosper in their academic careers at an early age.
- ❖ Participation in seminars, academic interactive symposia, nurturing programs, internships in research laboratory over vivid topics of science along with orientation on health and hygiene, thus enabling our awardees to develop knowledge and skills in an integrated manner.

## Selection of Senior Bigyani Kanya Medha Britti Awardees – 2023

**Process of identification:** The Senior Bigyani Kanya Medha Britti awardees are identified through the Senior Talent Search Test, 2023. This program is integrated with the senior scholarship examination which is essentially a tri-phased test.

### Who can apply

Girl students having qualified science in higher secondary framework (10+2) from any government recognised Board namely, WBCHSE/ CBSE/ ISC/ Visva-Bharati Board are eligible to appear for the Senior Talent Search Test.

It is worth mentioning in this context that the girl students would have to pursue their subsequent phase of undergraduate studies in Basic Science (Hons.) / BS-MS (integrated) / Engg. / Medicine within the jurisdiction of West Bengal in 2023 only.

## Financial benefits for our awardees – Snapshot

### Scholarship Details

The recipients of JBNSTS Senior Bigyani Kanya Medha Britti program are entitled to receive monthly scholarship valued Rs. 4,000/- for a total period of 5 years in case of studies in Basic Sciences (Master's Degree) including Integrated curriculum and 4 years pertaining to Engineering and 4.5 years Medicine stream of studies, respectively.

### Book Grants

In addition to monthly fellowship, the selected JBNSTS Senior Bigyani Kanya Medha Britti Awardees are entitled to receive Rs. 5,000/- as Annual Book Grant which would be remitted to them on a yearly basis.





## List of JBNSTS Senior Bigyani Kanya Medha Britti Awardees – Batch of 2023 (rank-wise)

Name	Present Institution	Subject	Rank
Dyuti Kole	Indian Institute of Engineering Science And Technology, Shibpur, Howrah	Information Technology	1
Anwasha Pakhira	Institute of Post Graduate Medical Education and Research, Kolkata	MBBS	2
Anuska Akhuli	Institute of Post Graduate Medical Education And Research, Kolkata	MBBS	3
Sneha Mondal	Calcutta National Medical College, Kolkata	MBBS	4
Anandi Ghosh	St Xavier's College (Autonomous), Kolkata	Chemistry	5
Meghamala Dasgupta	Jadavpur University, Kolkata	Chemistry	6
Monideepa Ghosh	Indian Institute of Science Education and Research, Mohanpur, Nadia	BS-MS	7
Arina Khatun	Institute of Post Graduate Medical Education and Research, Kolkata	MBBS	8
Nandita Sen	Indian Statistical Institute, Kolkata	B-STAT	9
Anusha Mukhopadhyay	Jadavpur University, Kolkata	Electronics and Telecommunication Engineering	10
Aindree Chatterjee	Jadavpur University, Kolkata	Electronics and Telecommunication Engineering	11
Shaona Kundu	Indian Institute of Science Education and Research, Mohanpur, Nadia	BS-MS	12
Sumana Ray	Presidency University, Kolkata	Life Science	13
Soumili Mitra Roy	Bethune College, Kolkata	Botany	14
Pranjali Khatua	Indian Institute of Technology, Kharagpur	Mechanical Engineering	15
Sawini Jana	Indian Institute of Science Education and Research, Mohanpur, Nadia	BS-MS	16
Nairita Nath Bhowmik	St Xavier's College, (Autonomous), Kolkata	Microbiology	17



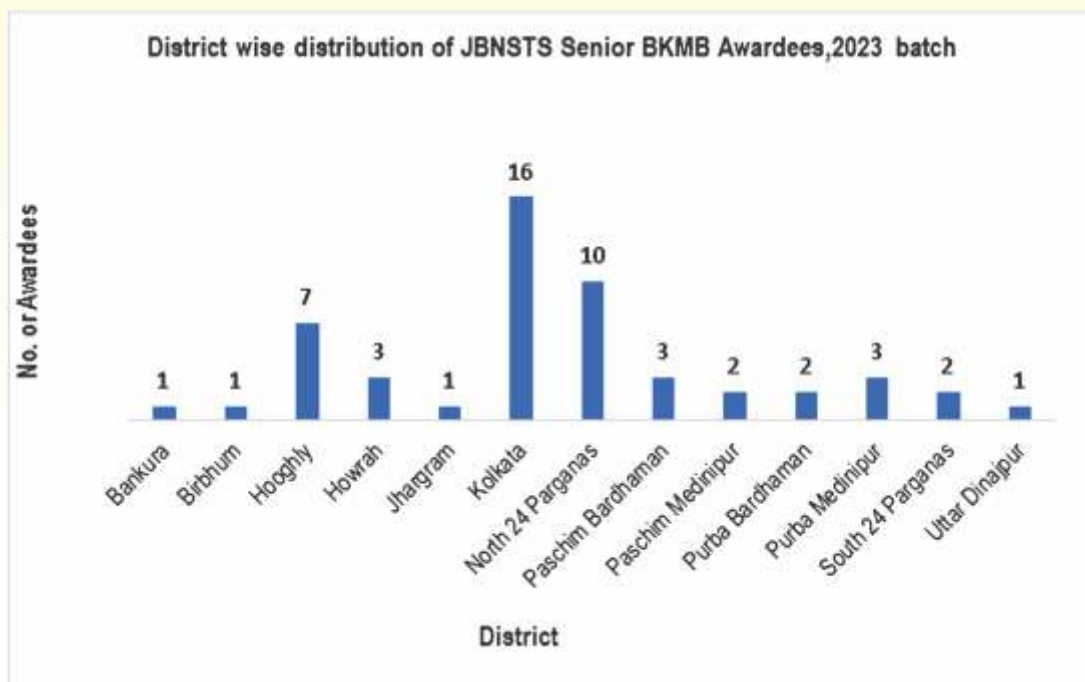


Name	Present Institution	Subject	Rank
Torsha Majumdar	Indian Association for the Cultivation of Science, Kolkata	BS-MS	18
Anulipi Patwari	Indian Institute of Science Education and Research, Mohanpur, Nadia	BS-MS	19
Hridita Mukherjee	Lady Brabourne College, Kolkata	Chemistry	20
Pratishtha Shaw	Institute of Post Graduate Medical Education & Research, Kolkata	MBBS	21
Tiasha Kar	Icare Institute of Medical Sciences and Research and Dr. Bidhan Chandra Roy Hospital, Haldia	MBBS	22
Rachayetri Mitra	Heritage Institute of Technology, Kolkata	Biotechnology	23
Srijani Roy	Jadavpur University, Kolkata	Information Technology	24
Anoushka Chatterjee	Barasat Government Medical College, North 24 Pgs	MBBS	25
Soumita Maity	Netaji Mahavidyalaya, Hooghly	Botany	26
Ankita Saha	Bethune College, Kolkata	Chemistry	27
Arti Mondal	Jadavpur University, Kolkata	Civil Engineering	28
Kamalika Kundu	Institute of Engineering and Management, Saltlake, Kolkata	Electronics and Communication Engineering	29
Rittika Dhar	St. Xavier's College (Autonomous), Kolkata	Biotechnology	30
Meghamitra Banerjee	University of Engineering & Management, Kolkata	Computer Science Engineering	31
Meghna Maji	St Xavier's College(Autonomous), Kolkata	Biotechnology	32
Ramisha Naj	Lady Brabourne College, Kolkata	Physics	33
Ahana Pal	Institute of Post Graduate Medical Education and Research, Kolkata	MBBS	34
Shreyasi Dey	Bangabasi College, Kolkata	Zoology	35

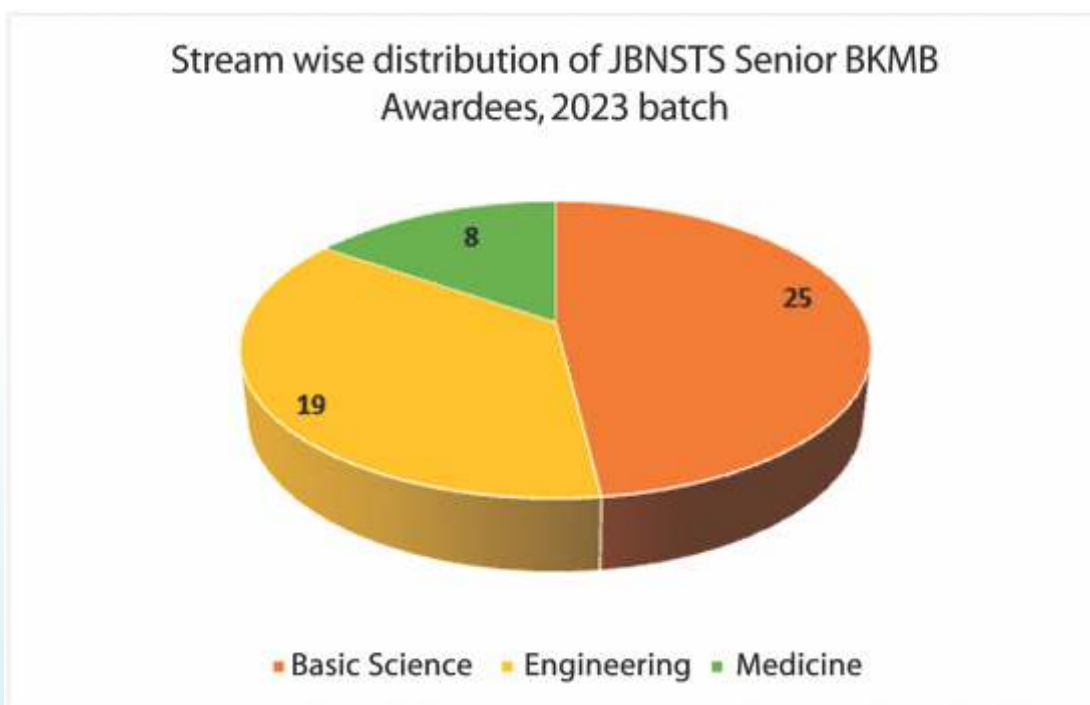


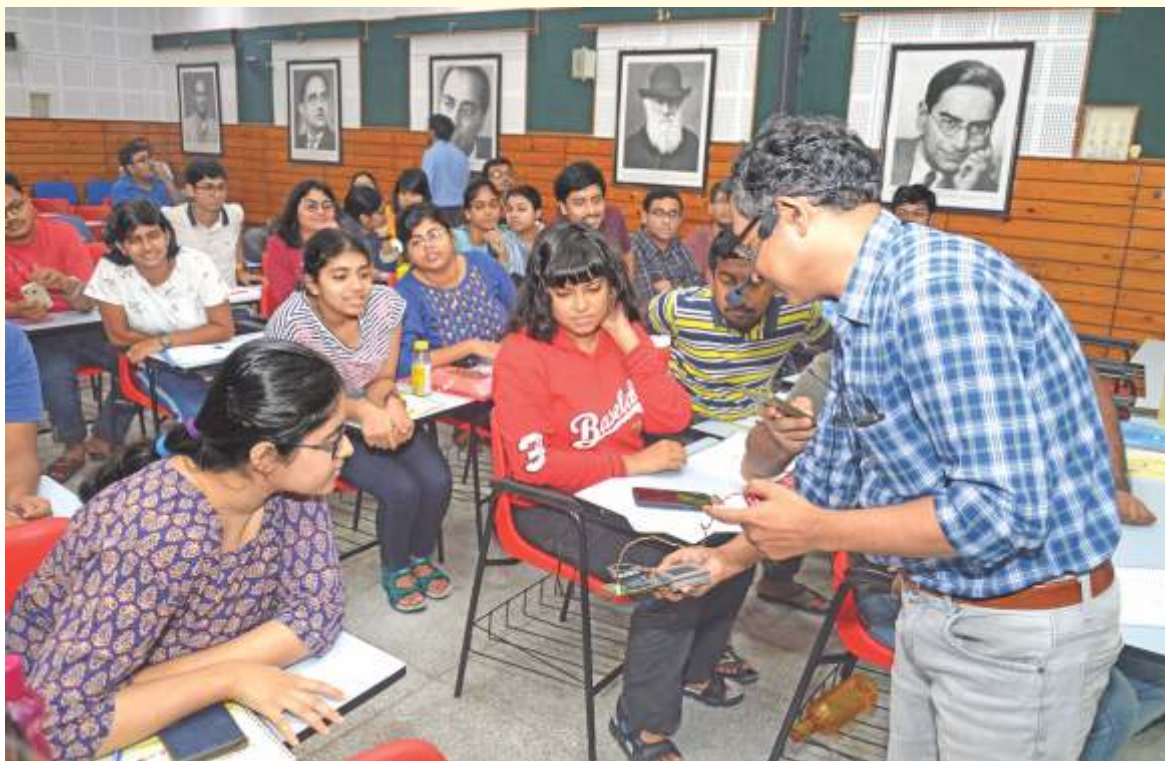
Name	Present Institution	Subject	Rank
Sunanda Patra	Jadavpur University, Kolkata	Mathematics	36
Chandrima Chakrabarti	Guru Nanak Institute of Technology, Kolkata	Information Technology	37
Aparna Dey	Visva-Bharati, Birbhum	Chemistry	38
Srishti Chanda	Indian Institute of Science Education and Research, Mohanpur, Nadia	BS-MS	39
Sudeshna Hazra	Indian Institute of Engineering Science and Technology, Shibpur, Howrah	Mechanical Engineering	40
Arpita Haldar	Vidysagar College for Women, Kolkata	Zoology	41
Soumi Sahu	St. Thomas College of Engineering and Technology, Kolkata	Computer Science and Engineering	42
Saraddyuti Chakravarty	Institute of Engineering and Management, Saltlake, Kolkata	Electronics and Communication Engineering	43
Sampurna Chakraborty	Jadavpur University, Kolkata	Chemistry	44
Suchandra Sahoo	Institute of Engineering and Management, Kolkata	Computer Science and Engineering	45
Sneha Panda	Indian Institute of Engineering Science and Technology, Shibpur, Howrah	Information Technology	46
Suchismita Saha	Netaji Subhash Engineering College, Kolkata	Biomedical Engineering	47
Sanchari Ghosh	Visva-Bharati, Birbhum	Zoology	48
Sneha Saha	National Institute of Technology, Durgapur	Computer Science and Engineering	49
Moupriya Das	Raiganj University, Uttar Dinajpur	Zoology	50
Monika Mandal	Govt. College of Engineering and Ceramic Technology	Information Technology	51
Prantika Ghosh	University of Engineering and Management	Computer Science and Engineering	52

### District wise interpretation of awardees: Year 2023



### Stream-wise distribution of awardees: 2023





**Best School Award 2023  
South Point High School,  
Kolkata**





ANNUAL REPORT 2023

# JBNSTS JUNIOR SCHOLARSHIP PROGRAM

Exploring young talents  
of our state



## Junior Scholarship Program

Novel initiative harnessing the potential of budding students in plus two level

### Perspective

JBNSTS has been conducting the time honored and prestigious Senior Talent Search Test program in West Bengal to identify, nurture and motivate the talented undergraduate students of science, engineering and medicine towards the pursuit of excellence since its inception. Through our work experience of more than fifty-six years, we realized that it would be more effective if we identify these talented students in their nascent stage. Finally, in the presence of our Honb'le Chief Minister, Ms. Mamata Banerjee, Junior Talent Search Program was announced and since then (2015) JBNSTS has been continuing this endeavor for students pursuing science in class XI.

### Manifold objectives of this program

- Motivating, identifying and nurturing of talented science students in plus two (+02 level) of West Bengal.
- To provide scholarship to deserving students to encourage them for studying science in higher standards.
- To expose the young minds to the world of science through interaction with renowned scientists, doctors, engineers and creative personnel.
- To encourage and inculcate the creative aptitude of the talented students and nurture their innovative ideas and support for their higher education in science.



## Identification process of Junior Scholars – 2023

The identification process is designed in a well thought-out dual phase selection procedure, i.e., written examination followed by interview with experienced experts from national level educational institutions. The identification process involves bi-phased rigorous examination procedure which is asserted below.

**Written Examination**  
**Total Marks Allotted: 90**  
**Total Time Allotted: 02**  
**hours**

### First Phase

This phase evaluates the understanding of the students' and their concepts towards science subjects, namely, Physical Sciences, Life Sciences and Mathematics through descriptive questions. The students are required to answer short type questions from these subjects.

**Interview**  
**Total Marks: 100**

### Second Phase

The students who successfully qualify the first phase of the examination are called for interview phase which essentially evaluates the in-depth conceptual knowledge, creativity and innovative acumen of the students and their perception, attitude towards solving problem before a board of experts.





## Eligibility conditions for applying to Junior Talent Search Test – 2023

### Who can apply

Students who have secured at least 75 per cent marks or equivalent CGPA in their qualifying examination, from any government recognized board namely, WBBSE, ICSE, CBSE etc. are eligible to apply for Junior Talent Search Test.

The students must be studying in class XI in science stream (with at least 3 subjects from Physics, Chemistry, Mathematics, Biology, Statistics, Electronics, Computer Science) in any school in West Bengal.

It is pertinent to mention in this context that this scholarship can be availed only by the incumbents pursuing science in plus two levels in West Bengal in this year only.

## Specifics of scholarship and financial benefits

### JBNSTS Scholarship for Junior Scholars

The Junior Scholars are awarded with scholarship valued Rs. 1,250/- per month for two years.

### Book Grant

Apart from the scholarship, Rs. 2,500/- is being provided for two subsequent years as Annual Book Grant.

### JBNSTS Encouragement Awards

In appreciation to the academic excellence of the candidates, fifty (50) candidates are selected as encouragement awardees are rewarded with one-time book grant amounting to Rs. 5,000/-.

## Factsheet of 9<sup>th</sup> edition of Junior Talent Search Test – year: 2023

Stages of the Junior Talent Search Test		
	Written Examination	Interview
Timeline	20 <sup>th</sup> day of August, 2023 Sunday	09th day of December, 2023 to 10th day of December, 2023
Total number of candidates	8969	478
Total No. of Examination centres	34	<b>JBNSTS campus</b>





Total no. of selected scholars and awardees	
JBNSTS Junior Scholars	JBNSTS Encouragement Awardees
209	51

### List of JBNSTS Junior Scholars: 2023 batch (According to Merit)

Based on the overall performance of the candidates in the successive selection examinations, the following candidates have been selected as JBNSTS Junior Scholars of the year 2023.

Sl. No.	Name of the scholars	Present Institution
1	Devdutta Majhi	Katwa D.D.C Girls High School
2	Aritro Ray	Delhi Public School Ruby Park
3	Dhruba Jyoti Panja	St. Stephens School
4	Soumyadip Mallick	Berachampa Deulia Uchcha Vidyalaya
5	Subham Paul	Burdwan Municipal High School
6	Sambit Mukhopadhyay	Burdwan Model School
7	Tathagata Roy	Patha Bhavan
8	Rupayan Pal	Burdwan CMS High School
9	Ankur Ghosh	Garden High School
10	Soham Nandi	Midnapore Collegiate School
11	Prantik Ganguli	Arambagh High School
12	Mounak Ghosh	Gorabazar I.C.Institution
13	Atrija Pal	Aditya Academy Secondary School
14	Sagnik Patra	Midnapore Collegiate School
15	Ritendu Sarkar	Salt Lake School English Medium
16	Ritesh Chand	Bankura Christian Collegiate School
17	Brotin Naskar	Ramakrishna Mission Vidyalaya, Narendrapur
18	Prayas Dey	Arambagh Vivekananda Academy
19	Soham Pattanayak	Ramakrishna Mission Vidyalaya, Narendrapur
20	Sayan Manna	G. B. Memorial Institution
21	Ankit Gyen	New Barrackpore Colony Boys High School
22	Saptodip Modak	Baranagore Ramakrishna Mission Ashrama High School



Sl. No.	Name of the scholars	Present Institution
23	Antareep Nath	Ramakrishna Mission Vidyalaya, Narendrapur
24	Archisman Nandy	DAV Model School, IIT Kharagpur
25	Rounak Garain	Chandernogre Sri Aurobindo Vidyamandir
26	Aniket Ghosh	DAV Public School, Haldia
27	Suprakash Mitra	Ramakrishna Mission Boys Home High School
28	Reman Dey	Calcutta Airport English High School H.S.
29	Sunayana Datta	Pathfinder Higher Secondary Public School
30	Aishik Mukherjee	St.Xaviers Collegiate School
31	Sattwik Ghosh	Parambua Jagadhatri High School
32	Apurba Mondal	Bankura Zilla School
33	Oishik Basu	South Point High School
34	Ayan Rakshit	Gobardanga Khantura High School H.S.
35	Samriddha Sahu	South Point High School
36	Biresh Ghosh	Ramakrishna Mission Vidyabhavan H.S
37	Souhardya Debnath	South Point High School
38	Kinshuk Banik	Ramkrishna Misson Vidyalaya Narendrapur
39	Ankan Nandi	Goghat High School
40	Aritra Basu	Magnus Global School
41	Diyasha Biswas	Vivekananda Mission School
42	Anubhab Ghosh	Narendrapur R.K Mission Vidyalaya
43	Dhiman Kundu	Ashalata Basu Vidyalaya
44	Sutirtho Paul	Ramakrishna Mission Vidyalaya, Narendrapur
45	Koushiki Patra	St Joseph's Convent
46	Shinjon Ghosh	Patha Bhavan
47	Spandan Mishra	DPS Ruby Park, Kolkata
48	Soham Purkait	St. Lawrence High School
49	Anirban Dey	Arambagh High School
50	Taradrita Routh	D.P.S Ruby Park
51	Aditi Biswas	Our Lady Queen of The Missions School, Salt Lake



Sl. No.	Name of the scholars	Present Institution
52	Subhajit Bhattacharya	Ramakrishna Mission Vidyalaya, Narendrapur
53	Hrishiraj Dutta	Baranagore Ramakrishna Mission Ashrama High School
54	Rounak Chattopadhyay	South Point High School
55	Adrij Gupta	Ramakrishna Mission Vidyalaya
56	Aritra Bhowmick	Shri Santoshi Maa Academy
57	Sayak Moulic	Kalyani Central Model School
58	Raju Mondal	Chandpara Bani Vidyabithi HS School
59	Swapnil Sarkar	Swami Vivekananda Academy For Educational Excellence
60	Soumy De	Purandarpur High School
61	Ibtisama Anjum	Delhi Public School
62	Sutirtha Karmakar	Ramakrishna Mission Vidyalaya, Narendrapur
63	Mohana Dey	Makhla Debiswari Vidya Niketan for Girls'
64	Veni Tulsian	M.C. Kejriwal Vidyapeeth
65	Anwasha Chakraborty	Bankura Banga Vidyalaya
66	Shreyan Dasgupta	St. Montfort Senior Secondary School
67	Ritesh Pal	Chandernagore Sri Aurobindo Vidyamandir
68	Rishik Ghosh	DAV Model School Kharagpur
69	Souradip Das	Bodhicariya Senior Secondary School
70	Soham Pandit	Hem Sheela Model School, Durgapur
71	Aniruddha Chakrabarti	Don Bosco School, Park Circus
72	Sayari Parui	Carmel School
73	Saikat Biswas	New Alipore Multipurpose School
74	Piul Das	Delhi Public School, Siliguri
75	Ritam Bag	Shyampur High School
76	Debasmita Akhuli	Bankura Banga Vidyalaya
77	Suprabha Adak	Sarada Vidyamandir (HS)
78	Mritunjay Chandra	Balarampur Phool Chand High School (HS)
79	Swaraj Pradhan	Garh Haripur G N High School (HS)
80	Kartick Gorai	Nikunjapur HS School



Sl. No.	Name of the scholars	Present Institution
81	Neelkanth Basu	Delhi Public School, Ruby Park
82	Namrata Mondal	Bankura Banga Vidyalay
83	Swarnadeep Mandal	MDB DAV Public School, Bankura
84	Shibam Mondal	Narendrapur Ramakrishna Mission Vidyalaya
85	Tanmoy Pati	Sonarpur Vidyapith
86	Preeti Khanra	Joteghanashyam Nilmoni High School (HS)
87	Riddhit Pal	Katwa Kashiram Das Institution
88	Golam Masud Biswas	Sujapur High School
89	Priyanshu Sekhar De	Aditya Academy Secondary, Barasat
90	Anusmita Santra	Bagnan Adarsha Balika Vidyalaya
91	Sreejan Mondal	AGPN Convent And Eklabya Residential School
92	Anik Acharya	Ramakrishna Mission Boys Home High School
93	Prasun Ghosh	Belda Gangadhar Academy
94	Ankita Chatterjee	DAV Model School
95	Souvik Sarkar	Kolaghat Thermal Power Plant High School
96	Samudrika Bhattacharjee	Delhi Public School Ruby Park
97	Sagar Ghosh	Midnapore Collegiate School
98	Swikriti Das Biswas	South Point High School
99	Sagnik Ghosh	Springdale High School
100	Subhajit Bej	Egra Jhatulal High School
101	Tanusha Paine	Patha Bhavan
102	Sparsha Sengupta	Delhi Public School Ruby Park, Kolkata
103	Soumita Sadhukhan	Gokhale Memorial Girls School
104	Souradip Patra	Vidyasagar Shishu Niketan
105	Ayan Bain	Delhi World Public School, Kalyani
106	Anirban Roy	Kalyani Public School
107	Dishani Hajra	Pathfinder Higher Secondary Public School
108	Rajarshi Mondal	Pathfinder Higher Secondary Public School
109	Abhranil Barik	Jhargram Kumud Kumari Institution





Sl. No.	Name of the scholars	Present Institution
110	Harsha Adhikary	Hindmotor Education Centre
111	Priyadarshini Kar	Hem Sheela Model School, Durgapur
112	Hirakjyoti Roy	Nava Nalanda High School, HS, Kolkata
113	Parnava Samanta	Bagnan High School, H.S.
114	Soman Modak	Purv International School, Durgapur
115	Avijit Jana	Panskura Bradley Birt High School
116	Md Sarwar Imtiaz	Narhatta GS High School
117	Akshit Prasad	North Point Sr. Secondary Boarding School, Rajarhat
118	Sayan Bera	Karkai Vivekananda Vidyapith (HS)
119	Ayushi Kundu	St Xavier's School, Burdwan
120	Promit Ghosh	Gobardanga Khantura High School H.S.
121	Puskal Patra	Ramakrishna Mission Vidyalaya, Narendrapur
122	Debraj Hazra	Burdwan Municipal High School
123	Tathagata Sarkar	Bongaon High School
124	Rakesh Mondal	Fatepur Sreenath Institution
125	Sagnik Mukhopadhaya	Burdwan Model School
126	Soham Bandyopadhyay	St. Xavier's Institution
127	Anshu Saha	Krishnagar Collegiate School
128	Mayukh Saha	Kalyani Public School
129	Pratyush Kumar Dey	Katwa Kashiram Das Institution
130	Sonal Burnwal	B.D.M. International
131	Bibrita Pramanik	Vidyasagar Vidyapith Girls High School
132	Debmalya Bagchi	Hariyana Vidya Mandir
133	Ananya Kumbhakar	Beliatore High School H.S.
134	Deepra Maity	Rammohan Mission High School
135	Sampriti Bhowmik	Joteghanashyam Nilmoni High School
136	Trishit Roy	Mahesh Sri Ramakrishna Ashram Vidyalaya H.S
137	Swapnendu Mallik	Bangalpur U.C. High School
138	Dibyendu Biswas	Katwa Kashiram Das Institution



Sl. No.	Name of the scholars	Present Institution
139	Shinjini Saha	Auxilium Convent School
140	Krish Majhi	Gayeshpur Netaji Vidyamandir
141	Surjendu Bikas Jana	Hariyana Vidya Mandir
142	Shithan Roy	Don Bosco School, Bandel
143	Avikshit Mandal Maiti	DPS Ruby Park
144	Arindrajit Das	Garden High School
145	Arghadip Dey	Mahesh Sri Ramkrishna Ashram Vidyalaya H.S.
146	Sk Saeed Wasif	Burdwan Municipal High School
147	Sudarshan Mondal	Burdwan Model School
148	Anubhab Das	Bagnabarh High School
149	Shuvadip Das	Bamundiha High School H.S
150	Ujani Saha	Ramakrishna Vivekananda Mission Vidyabhawan, H.S. Unit
151	Sujay Ghosh	Balurghat L.M.A.U. Vidyalaya
152	Ritobrata Das	Howrah Zilla School
153	Anubhab Sarkar	Gobardanga Khantura High School
154	Sourasish Mitra	Chakdaha Ramlal Academy
155	Debsankar Santra	Sarada Vidyamandir (HS)
156	Arkaprava Jana	Ramakrishna Mission Vidyalaya Narendrapur
157	Anirban Pal	Ramakrishna Mission Vidyalaya Narendrapur
158	Jishnu Ghosh	South Point High School
159	Birendra Prasad Ghanta	Dakshin Anukha Mokshada Vidyabhaban
160	Sutantra Mondal	Bolpur High School
161	Sidhartha Mondal	Palashdiha High School (H.S)
162	Jishnu Ghosh	Mahesh Sri Ramkrishna Ashram Vidyalaya
163	Tishya Das Dolui	Birla High School
164	Ritam Manna	Bankura Zilla School
165	Rishita Goswami	Delhi Public School Ruby Park, Kolkata
166	Anindya Sundar Ghosh	Mahesh Sri Ramkrishna Ashram Vidyalaya (H.S.)
167	Kumaresh Saha	Radhamohanpur Vivekananda High School



Sl. No.	Name of the scholars	Present Institution
168	Debdatta Dam	Vision International School
169	Somak Kundu Chowdhury	Ramakrishna Mission Vidyalaya Narendrapur
170	Junaid Siddique	Swami Vivekananda Academy For Educational Excellence
171	Hriddeh Roy	Ramakrishna Mission Boys Home High School (HS), Rahara
172	Kuntal Choudhury	Bhatar M P High School
173	Dhruba Ghosh	Badla High School
174	Agnik Majumder	Ramakrishna Mission Vidyalaya, Narendrapur
175	Anindita Ghosh	K.T.P.P. High School
176	Arka Narayan Maulik	St. Xavier's Collegiate School
177	Aratrika Roy	Delhi Public School, Ruby Park
178	Suchismita Bandyopadhyay	Gokhale Memorial Girls School
179	Lisa Nandy	Bhatar M.P. High School
180	Sanhita Dash	Baita Mahendranath High School
181	Arunya Guha	La Martiniere For Boys
182	Avipsit Paul	Baranagore Ramakrishna Mission Ashrama High School (HS)
183	Archisman Mukherjee	Calcutta Boys School
184	Arundhati Kundu	Gokhale Memorial Girls School
185	Subham Ghosh	Chandrakona Jirat High School H.S
186	Aaranyak Ray	Delhi Public School, Ruby Park
187	Abir Dey	Ramakrishna Mission Vidyalaya Narendrapur
188	Anish Barui	Narendrapur R K Mission Vidyalaya
189	Arnab Bandyopadhyay	Raiganj Coronation High School
190	Swastik Saha	The Modern Academy
191	Debabrata Mandal	Kushbasan High School (HS)
192	Samyaraj Pal	Bholananda National Vidyalaya
193	Joydip Pal	Memari V. M Institution Unit-1
194	Anusha Mandal	La Martiniere For Girls
195	Samriddha Marick	Apeejay School, Salt Lake
196	Deepon Pal	Burdwan Model School



197	Aarya Chakrabarty	Bhavans Gangabux Kanoria Vidyamandir
198	Pranjol Mukhopadhyay	Hem Sheela Model School, Durgapur
199	Ananya Biswas	Maharaja Nripendra Narayan High School (HS)
200	Sourasish Bhattacharjee	Baranagore Ramakrishna Mission Ashrama High School (H.S)
201	Atmadeep Roy	B E College Model School
202	Saikat Kumar Khatua	Kolaghat Thermal Power Plant High School
203	Ayandeep Sengupta	Mahesh Sri Ramakrishna Ashram Vidyalaya H.S.
204	Koustav Dey	Sudhir Memorial Institute
205	Saikrishna Sahoo	Hem Sheela Model School, Durgapur
206	Priyanka Das	Contai Public School
207	Ritujeet Sarkar	South Point High School
208	Arya Karati	St. Xavier's Collegiate School
209	Rudraneel Das	Ramakrishna Mission Vidyalaya Narendrapur

### List of JBNSTS Junior Encouragement Awardees: 2023 batch

Sl. No.	Name of the Awardees	Present Institution
1	Samriddha Dutta	Chandernagore Sri Aurobindo Vidyamandir
2	Subhadeep Mondal	Gobardanga Khantura High School H.S.
3	Souhardya Pal	Ramakrishna Mission Vidyalaya, Narendrapur
4	Sk Arman	Budge Budge P. K. High School H.S.
5	Samya Chakraborty	Hariyana Vidya Mandir
6	Parambrata Chattopadhyaya	Saidabad Manindra Chandra Vidyapith
7	Prithvijit Nandy	Delhi Public School, Ruby Park
8	Uddhab Gupta	Santinagar High School HS
9	Ipshit Chakraborty	Hem Sheela Model School
10	Anubhu Mukherjee	Don Bosco School Liluah
11	Debamit Bandyopadhyay	Kalyani Public School
12	Bidhan Manna	Hoomgarh Chandabila High School
13	Mainak Nayek	Pahalanpur High School
14	Arunabha Dutta	St Lukes Day School



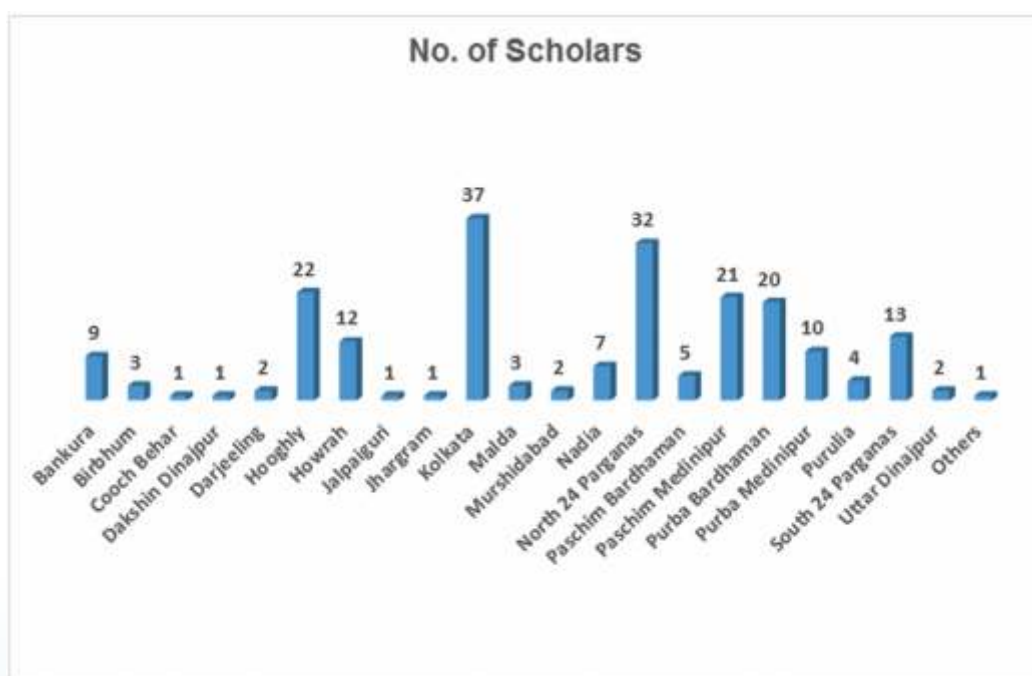
Sl. No.	Name of the Awardees	Present Institution
15	Deb Kumar Misra	Narhatta Gopeswar Satiar High School (H.S)
16	Shinjan Goswami	Burdwan Model School
17	Ramasish Manna	Mahesh Sri Ramakrishna Ashram Vidyalaya H.S.
18	Sayon Dev Dey	Kirnahar Shiv Chandra High School H.S.
19	Shovan Nayek	Bagnan High School
20	Diganta Biswas	St. Xavier's Institution
21	Subham Chandra	Midnapore Sri Ramakrishna Mission Vidyabhaban
22	Surjyadip Guha Roy	Chandernagore Sri Aurobindo Vidyamandir
23	Sambit Adak	Dumdum Sree Arabinda Vidyamandir Govt. Spons. H.S. School
24	Sagnik Sahoo	Contai High School
25	Ayandwip Purkait	Raidighi Srifaltala C K High School HS
26	Deepanjan Mondal	Ramakrishna Mission Vidyapith, Purulia
27	Swastik Kundu	Atreyee D.A.V. Public School
28	Debajyoti Chakraborty	Howrah Vivekananda Institution
29	Samanway Sarkar	Duttapukur Mahesh Vidyapith
30	Souhridd Khanra	Ramakrishna Mission Vidyabhaban H.S
31	Ribhu Sinhamahapatra	Simlapal Madan Mohon High School
32	Arka Mehatari	Manisha International School
33	Abid Chowdhury	BK.T.P.P Prabir Sengupta Vidyalaya
34	Sarit Patra	Howrah Zilla School
35	Subhrajyoti Mallick	Pathfinder Higher Secondary Public School
36	Archisman Das	South Point High School
37	Satyaki Dutta	The Future Foundation School
38	Arkasoudipto Mandal	Narayana, New Town
39	Anurag Bhunia	Apeejay School, Park Street Kolkata
40	Aranyo Ray	Jadavpur Vidyapith
41	Amanat Siddique	Saifee Golden Jubilee English Public School
42	Rahuldeb Chakraborty	Ramkrishna Mission Vidyabhaban
43	Rajdeep Biswas	MDB DAV Public School





Sl. No.	Name of the Awardees	Present Institution
44	Subhrangsu Ghosh	Memari V.M Institution Unit-1
45	Vinayak Senapati	Rohini CRD High School H.S.
46	Sthitadhee Das	Ramkrishna Mission Vidyalaya
47	Abhiraj Dey	Gitaram Gurukul
48	Aahel Paul	Bhavans Gangabux Kanoria Vidyamandir
49	Tamoghna Dhar	St. Lawrence High School
50	Soumyadeep Majee	Raghunathpur G.D. Lang Institution
51	Swastik Saha	South Point High School

### District wise analysis of Junior Scholars for the year 2023



### School awards for the year 2023

Award for Best School	Special Award for District Schools
<b>Ramakrishna Mission Vidyalaya, Narendrapur</b>	<ul style="list-style-type: none"> <li>Delhi Public School, Ruby Park, Kolkata</li> <li>South Point High School, Kolkata</li> <li>Mahesh Sri Ramkrishna Ashram Vidyalaya (H.S.), Hooghly</li> </ul>



## Exploring the myriad avenues of science mentoring workshops

Nurturing programs are an exceptional premise to expose the budding talents to diverse plethora of transnational topics and domains of science. This year JBNSTS organized two programs for our junior scholars and Bigyani Kanya Medha Britti Awardees of 2022 batch in the institute's campus. They are talented boys and girls studying science in the higher secondary standard throughout West Bengal. The deliberations made by acclaimed scientists, science practitioners and research professionals of repute provided an intellectually vibrant learning environment of supportive learning for our scholars and awardees. The interaction comprised of compelling and exciting queries about Astrophysics, Biomedical & Tissue Engineering, Data Science, Artificial Intelligence, Machine Learning, Cyber Security along with the classical theoretical concepts like Fractals, Critical Points, Science of Spectroscopy, Drug Discovery and Drug design, Statistical Sample survey model which braces the interdisciplinary philosophy of science and added to the potency of the students with significant content knowledge which is never possible in the regular contours of existing school curricula. Furthermore, the students had partaken in hands-on scientific experiments sessions at the sophisticated modern laboratories of JBNSTS which provided them with in-depth practical knowledge about the modern research technology and knowledge related to intricate experimental activities in subjects like Physical Sciences, Biological Sciences and Biotechnology. An outline of some of the topics discussed is laid below.

Name of the Experts	Title/ Topic of lecture
<b>Prof. Partha Pratim Majumder</b> National Science Chair, Government of India	Science is Logical, Science is Fun, Science is Exciting, Science is Useful
<b>Dr. Biswarup Mukhopadhyaya</b> IISER, Kolkata	Symmetry as a guiding principle in Physics
<b>Dr. Swagatam Das</b> Electronics and Communication Sciences Unit ISI, Kolkata	Learning - based Artificial Intelligence: A Bird's Eye View
<b>Prof. Ranjan Ganguly</b> Department of Power Engineering, Jadavpur University	Pursuing research goals beyond the boundaries of the Discipline
<b>Dr. Subhajit Bandyopadhyay</b> Department of Chemical Sciences IISER, Kolkata	Chemistry: The Central Science in solving Global Problem
<b>Dr. Arnab Sen</b> Indian Association for the Cultivation of Science	From Fractals to critical points



Name of the Experts	Title/ Topic of lecture
<b>Dr. Sandeep Sengupta</b> Founder / Director, ISOAH; CISA	Cyber security hygiene and career options in this field
<b>Dr. Achintya Singha</b> Physical Sciences, Bose Institute, Kolkata	Raman Spectroscopy and its applications
<b>Dr. Koushik Dutta</b> Dept. of Physical Sciences IISER, Kolkata	Before Big Bang
<b>Dr. Partha Chakrabarti</b> Senior Principal Scientist Cell Biology & Physiology, IICB	Bias and Noise in Medicine: Case of Diabetes





ANNUAL REPORT 2023

# **JBNSTS JUNIOR BIGYANI KANYA MEDHA BRITTI PROGRAM**

Nurturing girl students  
in STEM at the age when  
they are very young



## Junior Bigyani Kanya Medha Britti

Advancing gender equity in science education for young girls

### Origin of the program

STEM education which stands for Science, Technology, Engineering and Mathematics has emerged as a powerful tool in transforming the lives of girls in India. This comprehensive approach to education equips young girls with necessary skills and knowledge to navigate the increasingly complex and technology driven world. By encouraging girls to pursue STEM subjects, India is nurturing a generation of talented and empowered women who will play a pivotal role in shaping the future of the nation.

STEM education for girls in India is crucial, as it offers them with equal opportunities to excel in fields traditionally dominated by men. Moreover, STEM education prepares girls to meet the demands of rapidly evolving job market, where proficiency in these areas are sought after. Thus it is extremely important to empower them with problem solving and critical thinking skills, thereby fostering their creativity and innovation. To achieve a scalable impact in the sphere of gender inclusivity in science education, JBNSTS with its phenomenal credentials formulated a remarkable initiative named Junior Bigyani Kanya Medha Britti in the year 2020. The Department of Science & Technology and Biotechnology, Government of West Bengal is the support for this endeavor.

### Major outcomes of the program

- ❖ Rooted to the philosophy of inclusivity and equity, this program aims to provide a vibrant platform to the young girl students studying science in plus two levels in West Bengal and leverage their potent skills to attain pinnacle in their academic career.
- ❖ Providing financial benefits to the Junior Bigyani Kanya Medha Britti awardees through the means of scholarships and book grants which support their academic endeavor.
- ❖ Regular enrichment programs, diverse workshops, interactive seminars along with exposure to quality experiment based training in JBNSTS state-of-the-art laboratory facilities are organized under the mentorship of acclaimed experts and esteemed science professionals which is not feasible in their existing school curricula.
- ❖ This program focuses on creating a scientific temper which empowers the girl students to be confident and motivating them to explore solutions to real-life, challenging problems of the society.



## Identification of Junior Bigyani Kanya Medha Britti Awardees – 2023 Batch

**Process of selection:** The Junior Bigyani Kanya Medha Britti awardees are identified through the Junior Talent Search Test which is a bi-phased examination.

### Determinant factors of eligibility

- ❖ The applicants must have secured at least 75 per cent marks or equivalent CGPA in their qualifying examination, from any government recognised board namely, WBBSE, ICSE, CBSE etc.
- ❖ The aspirants must be studying in class XI in science stream (with at least 3 subjects from Physics, Chemistry, Mathematics, Biology, Statistics, Electronics, Computer Science) in any school in West Bengal.
- ❖ Qualified candidates in written examination of Junior Talent Search Test shall appear in the interview at JBNSTS and final selection will be made thereafter.

### Glimpse of financial benefits for our awardees

**Details of Scholarship:** The JBNSTS Junior Bigyani Kanya Medha Britti awardees are awarded with scholarship valued Rs. 1,250/- per month for two consecutive years till completion of higher secondary studies.

**Book Grant:** In addition to the scholarship, all the awardees are entitled to receive Rs. 2,500/- as Annual Book Grant for two subsequent years.





## List of JBNSTS Junior Bigyani Kanya Medha Britti Awardees – 2023 Batch

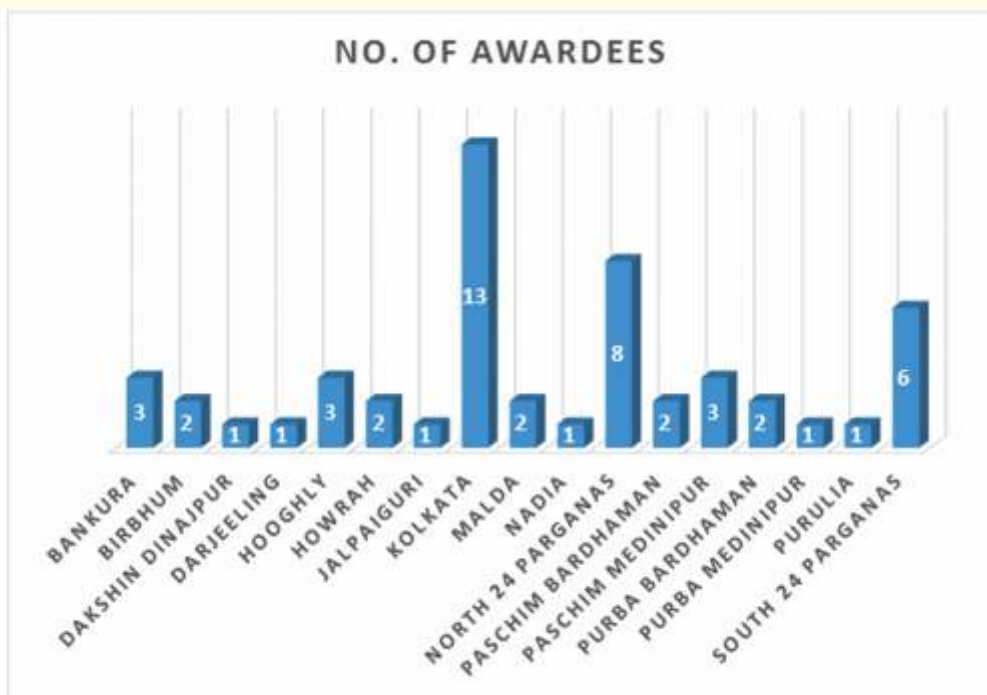
Sl. No.	Name of the Awardees	Present Institute
1	Aditi Sarkar	Techno India Group Public School
2	Debangi Chakraborty	Sushila Birla Girls School
3	Ahana Chakraborty	Gokhale Memorial Girls School
4	Krittika Sinha	La Martiniere For Girls
5	Shreyi Bhattacharjee	South Point High School
6	Sampurna Bhakta	K.T.P.P. High School (H.S)
7	Aishi Bhakta	Sabang Saradamoyee H.S School
8	Rishita Bhattacharya	Delhi Public School, Ruby Park, Kolkata
9	Animikha Chowdhury	Vivekananda Mission Joka
10	Nazma Khatun	Burdwan Harisava Hindu Girls High School
11	Nabanita Mahato	Bankura Banga Vidyalaya
12	Shreyashi Ghosh	Jote Arapur P.N.High School HS
13	Sristi Chakraborti	Patha Bhavan
14	Mary Biswas	Auxilium Convent School, Bandel
15	Oishani Das	Bhavans Gangabux Kanoria Vidyamandir
16	Niharika Kar	Delhi Public School Ruby Park, Kolkata
17	Ankita Maity	Sonamui Fathe Singh Nahar High School
18	Chandrama Ghosal	Techno India Group Public School
19	Sanjukta Adhikary	Garden High School
20	Tanika Ray	Chakdaha Ramlal Academy
21	Manaswita Das	Katwa D.D.C.Girls H.S. School
22	Anwesha Das	Sudhir Memorial Institute
23	Shubhangana Nath	Delhi Public School Ruby Park, Kolkata
24	Ahana De	Changdoba High School( H.S)
25	Annika Saha	DAV Model School Durgapur
26	Sneha Dutta	Agrasain Balika Siksha Sadan
27	Himangi Naskar	Delhi Public School Ruby Park Kolkata



Sl. No.	Name of the Awardees	Present Institute
28	Sristi Chattopadhyay	Chandernagore Banga Vidyalaya
29	Sanchaita Banerjee	Calcutta Public School Bidhan Park
30	Ananya Ghoshal	Taldangra Fulmati High School
31	Riddhimita Nath	Naihati Narendra Vidyaniketan
32	Anusha Roy	South Point High School
33	Samrin Akhtar	Katwa DDC Girls HS School
34	Abhipsa Majhi	Hariyana Vidya Mandir
35	Priyanka Mandal	Sarada Vidyamandir H.S.
36	Udita Bardhan	Kaligati Smriti Nari Siksha Niketan
37	Shreya Barui	Bankura Mission Girls High School
38	Adriza Bhowmik	Jalchak N N Vidyayatan
39	Aarushi Bhunia	Our Lady Queen of The Missions School, Saltlake
40	Trinanjana Datta	Jadavpur Vidyapith
41	Suvaly Dey	Delhi Public School, Ruby Park, Kolkata
42	Riddhi Senapati	South Point High School
43	Aindrila Panda	Sundarban Adarsha Vidyamandir
44	Adrita Biswas	Morning Bells Academy High School
45	Afreen Chowdhury	Usha Martin School
46	Debodyuti Roy	Delhi Public School, Ruby Park, Kolkata
47	Sitama Bandyopadhyay	St. Josephs Convent Chandannagar
48	Anushka De	Delhi Public School Siliguri
49	Suhita Das	Delhi Public School Ruby Park Kolkata
50	Alivia Das	Sarada Vidyamandir
51	Sriparna Mondal	Pansuli High School H.S
52	Sharanya Chatterjee	Hirendra Leela Patranavis School



## District-wise distribution of Junior Bigyani Kanya Medha Britti Awardees for the year 2023



**Best school award 2023  
Delhi Public School,  
Ruby Park, Kolkata**





ANNUAL REPORT 2023

# JBNSTS VIDYASAGAR STATE SCIENCE OLYMPIAD

A gateway to excellence  
in the horizon of school  
education in West Bengal





## Vidyasagar State Science Olympiad

Competitive platform to achieve academic goals in science

### Preamble

The principles of identification, nurturing and motivation of the brightest young minds are embedded in the functionality of JBNSTS since inception. Recently, the institute embarked on a new program namely, State Science Olympiad under the financial patronage of School Education Department, Government of West Bengal. The program was conceptualized to commemorate the bicentennial year of Pandit Iswar Chandra Vidyasagar, the legendary social reformer.

The students of class IX are of special significance as it is the period when students get preliminary exposure to the advanced level of every spectrum of science, be it Physical Sciences (Physics and Chemistry of the materials), Life Sciences (Biology of living beings) or Mathematical Sciences. If step taken to develop rational mind and scientific aptitude for students of this level, it will enrich human resources in the field of science and technology and strengthen the contribution of our State to the global level.

### Major fulcrum of the program

- Identification of talented science students (class IX) of West Bengal.
- To expose the young minds to the diverse fields of science and technology.
- To motivate the young students by arranging science workshops and seminars and providing a platform to interact with eminent scientists and technologists.
- To encourage and inculcate the creative aptitude in the students towards science by nurturing their innovative ideas.

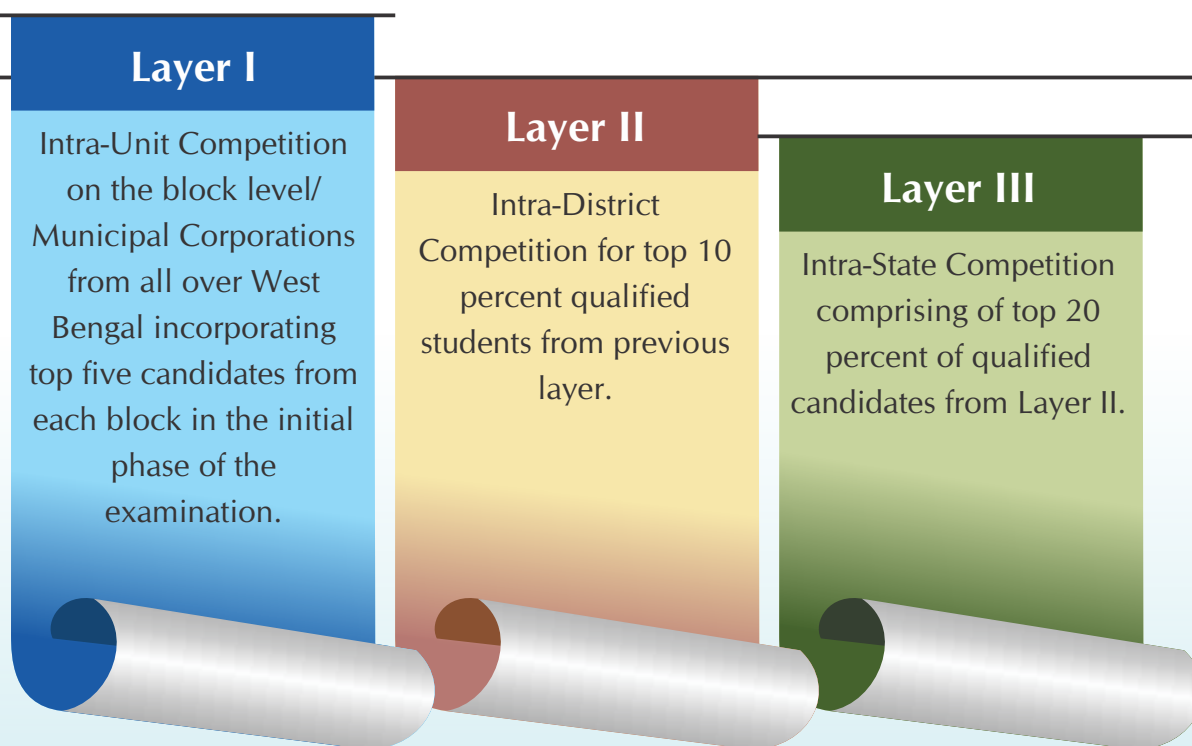


## Eligibility criteria

- The Vidyasagar State Science Olympiad incorporates all government aided, government recognised and sponsored schools under the ambit of West Bengal Board of Secondary Education.
- Top five (05) students studying in IX standard in any schools affiliated by West Bengal Board of Secondary Education, having nominated by the head of the institution based on their academic performance in class VIII final examination were eligible to appear for the first level of the examination.

## Structure of the Science Olympiad examination - 2023

A three-tier examination system has been designed by JBNSTS to extract and identify pre-madhyamik science students (students of class IX) from all corners of West Bengal. Early identification and nurturing through proper pedagogy, in turn will help us to tap the talent and modulate his/ her career path towards science and technology and enrich their in-depth scientific understanding which in turn will be beneficial to strengthen the pool of human resources of our state in science and technology. Constituted upon the West Bengal Board of Secondary Education mandated syllabus related to Physical Sciences, Life Sciences and Mathematics, this examination screens incumbents in three different layers/ phases as mentioned below.





First Layer	
<b>Intra Unit Competition</b> Top 5 students of class IX of a school	<b>Examination pattern:</b> Question type: MCQ Subjects: Physical Sciences, Life Sciences, Mathematics.
Second Layer	
<b>Intra District Competition</b>	A test will be conducted for the top 10% qualified students from first level of all blocks of a district. Each district of West Bengal will be covered and finally top 20% students from each district will be qualified for the third layer of examination. <b>Examination pattern:</b> Question type: MCQ Subjects: Physical Sciences, Life Sciences, Mathematics.
Third Layer	
<b>Intra State Competition</b>	A test will be conducted among top 20% qualified students from second level of all districts of our state and finally top 100 students from all over West Bengal will be selected. <b>Examination pattern:</b> Question type: Subjective Subjects: Physical Sciences, Life Sciences, Mathematics

### Factsheet of JBNSTS Vidyasagar State Science Olympiad 2023

Subsequent phases of the examination	Total no. of examination centers	Dates of examination	Total no. of candidates
Layer – I	389	07 May 2023	35,176
Layer – II	26	23 July, 2023	3311
Layer – III	23	10 September, 2023	637

## Details of award to be availed

<b>Layer I Intra - Unit Competition</b>	<ul style="list-style-type: none"> <li>• Top three (03) candidates from each unit would be awarded with one time Book Grant amounting to Rs. 1000/-.</li> </ul>
<b>Layer II Intra District Competition</b>	<ul style="list-style-type: none"> <li>• Top ten students from each district shall be entitled to receive one time Book Grant worth Rs. 2000/-.</li> </ul>
<b>Layer III Intra State Competition</b>	<ul style="list-style-type: none"> <li>• Top 100 candidates from all over West Bengal selected as JBNSTS Science Olympiad Scholarship awardees would be provided with scholarship worth Rs. 1000/- per month and book grant of Rs. 2500/- for two years.</li> </ul>





## Merit List of JBNSTS Vidyasagar State Science Olympiad scholars (rank-wise) – 2023

Name of the Scholars	School Name	District
Rebanta Sanyal	Ramakrishna Mission Vidyalaya (English Medium), Higher Secondary, Narendrapur, Kolkata, W.B.	South 24 Parganas
Arka Bhattacharya	Ramakrishna Mission Vidyalaya (English Medium), Higher Secondary, Narendrapur, Kolkata, W.B.	South 24 Parganas
Ankan Mandal	Taki Ramakrishna Mission High School	North 24 Parganas
Antarik Giri	Contai High School	Purba Medinipur
Aryan Gupta	Naihati Narendra Vidyaniketan	Barrackpur
Soumyajyoti Choudhury	Ramakrishna Mission Vidyalaya (English Medium), Higher Secondary, Narendrapur, Kolkata, W.B.	South 24 Parganas
Aishiki Das	Maynaguri Girls' High School (XI-XII)	Jalpaiguri
Projjal Das	Santipur Municipal High School	Nadia
Sourav Ghosh	Krishnagar Collegiate School	Nadia
Rupan Barman	Jenkins School, Cooch Behar	Coochbehar
Parambrata Mondal	Burdwan Municipal High School	Purba Bardhaman
Adrija Mandal	Rajkumari Santanamoyee Girls' High School	Purba Medinipur
Anunoy Chatterjee	Kamarpukur Ramakrishna Mission M.P. School	Hooghly
Sourin Ray	Amarargarh High School	Purba Bardhaman
Dibyayan Mandal	Ramakrishna Mission Vidyalaya (English Medium), Higher Secondary, Narendrapur, Kolkata, W.B.	South 24 Parganas
Mrinoy Basak	Kaliyaganj Sarala Sundari High School (H.S)	Uttar Dinajpur
Anubhab Das	B .E .College Model School	Howrah
Arighna Ghosh	Nabadwip Bakultala High School	Nadia
Srija Das	Telenipara Bhadreswar Girls' High School	Hooghly
Krishanu Karmakar	Mitrapur Anchal High School (H.S)	Birbhum
Mohul Mukherjee	Bankura Zilla School	Bankura
Souptik Mukherjee	Kangsabati Sishu Vidyalaya (H.S)	Bankura





Name of the Scholars	School Name	District
Amogh Roy	Chinsurah Deshbandhu Memorial High School (H.S.)	Hooghly
Anish Haldar	Krishnagar Collegiate School	Nadia
Sagnik Saha	Birbhum Zilla School	Birbhum
Soham Santra	Mahishadal Raj High School	Purba Medinipur
Swapnadip Kundu	Mahishadal Raj High School	Purba Medinipur
Adrita Sarkar	Raiganj Coronation High School	Uttar Dinajpur
Mrigakshi Raha	Radharani Nari Sikshamandir	Nadia
Souvik Sarkar	Tehatta High School	Nadia
Raktim Biswas	Tehatta High School	Nadia
Suddhasattwa Das	Kharar Sri Aurobindo Vidyamandir	Paschim Medinipur
Thoibi Mukherjee	Asansol Umarani Gorai Mahila Kalyan Girls' High School (H.S)	Paschim Bardhaman
Tunir Mondal	Baranagore Ramakrishna Mission Ashrama High School	Barrackpur
Diptanshu Roy	Jodhpur Park Boys School	Kolkata
Soumya Pal	Bishnupur High School	Bankura
Rudranil Masanta	Gorasole Muralidhar High School	Bankura
Sannidhya Sarkar	Gazole H.N.M. High School (H.S)	Maldah
Ankush Garai	Baranagore Ramakrishna Mission Ashrama High School	Barrackpur
Kushankur Biswas	Tehatta High School	Nadia
Soumyadip Das	Rajbalhat High School	Hooghly
Soumadeep Kansabanik	Mahesh Sri Ramkrishna Ashram Vidyalaya	Hooghly
Nayim Rahaman	Bansihari High School	Dakshin Dinajpur
Sk Nafisa Sultana	Samsabad Dhanyakhola Vidyapith (H.S.)	Purba Medinipur
Sanskriti Mandal	Malda Girls' High School	Maldah
Biswendu Maity	R.K.Mission Vidyapith - Beng (H.S.)	Puruliya
Arpan Jana	Panskura Bradley Birt High School	Purba Medinipur
Swarnadeep Ghosh	Sonamukhi Byomsankar High School	Bankura
Soumik Pal	Bishnupur High School	Bankura



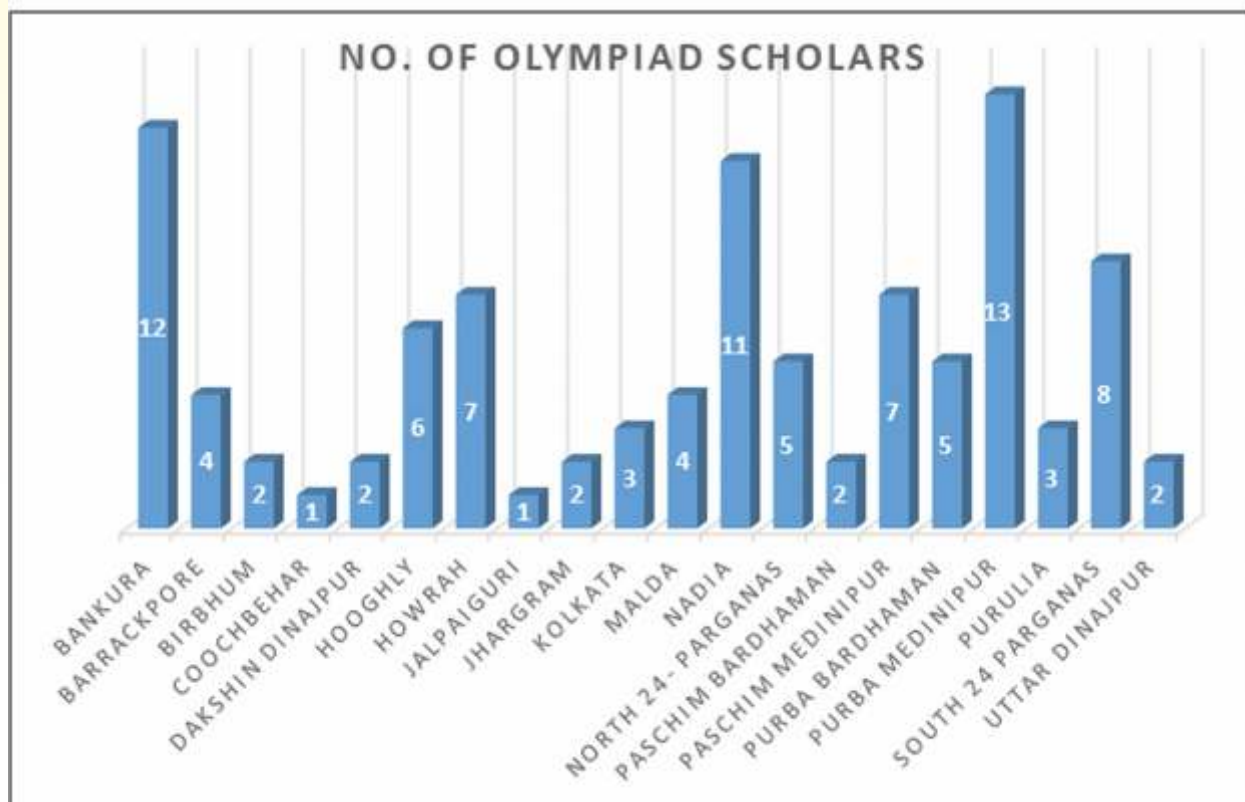
Name of the Scholars	School Name	District
Rohan Dey	Susundighi H.P. High School	Purba Bardhaman
Tathagata Dey	Kharika Bhimarjun Mahakul S.C. High School	Jhargram
Soumya Khan	R.K.Mission Vidyapith -Beng (H.S.)	Puruliya
Pradipta Biswas	Nebadhai High School	North 24 Parganas
Shalmali Dey	Sri Ramakrishna Saradapeeth Girls' High School (H.S.)	Jhargram
Aranyasom Kar	Ramakrishna Mission Vidyabhavan (H.S)	Paschim Medinipur
Udita Roy	Belda Pravati Balika Vidyapith	Paschim Medinipur
Abhraneel Mondal	Tamluk Hamilton High School	Purba Medinipur
Nilambar Haldar	R.K.Mission Vidyapith -Beng (H.S.).	Puruliya
Swagnik Kar	Simlapal Madan Mohan High School	Bankura
Swastik Sarkar	B .E .College Model School	Howrah
Rajdeep Patra	Asansol R.K. Mission High School	Paschim Bardhaman
Aritra Saha	Ramakrishna Mission Vivekananda Vidyamandir	Maldah
Soumyadip Pramanik	Tamluk Hamilton High School	Purba Medinipur
Nivedita Mandal	Basirhat Hari Mohon Dalal Girls' High School	North 24 Parganas
Kuntal Raj Mondal	Gobardanga Khantura High School	North 24 Parganas
Arkabrata Das	Balurghat High School	Dakshin Dinajpur
Hena Mondal	Kulpi Janapriya High School (H.S)	South 24 Parganas
Rohit Ghara	Raghnathbari Ramtarak High School	Purba Medinipur
Ishani Chakraborty	Kotulpur Saroj Basini Balika Vidyalaya	Bankura
Arindam Ghosh	Bagnan High School	Howrah
Shreyan Chatterjee	New Andul H.C. School	Howrah
Kushal Mondal	Hantal Bishalakshi High School	Howrah
Atif Hossain	Krishnagar Collegiate School	Nadia
Soham Sahu	Kangsabati Sishu Vidyalaya. (H.S)	Bankura
Swapnil Das	Naikuri Thakurdas Institution	Purba Medinipur
Abhirup Mahapatra	Ghatal Vidyasagar High School	Paschim Medinipur



Name of the Scholars	School Name	District
Sayantan Biswas	Bhatpara Amarkrishna Pathsala (H.S.)	Barrackpur
Sujan Chakraborty	Katwa Kashiram Das Institution	Purba Bardhaman
Sampad Das	Joynagar Naskarpur F.C. High School	Howrah
Arindam Debnath	Nagarukhra High School	Nadia
Jisan Ahmed	Kulpi Janapriya High School (H.S)	South 24 Parganas
Soubhik Paramanik	Bankura Zilla School	Bankura
Debanik Mal	Vidyasagar Vidyapith, Midnapore	Paschim Medinipur
Avik Purkait	Gujarpur Shibgonj Bishalakshmi High School	Howrah
Archita Roy	Vidyasagar Vidyapith Girls High School (H.S)	Paschim Medinipur
Ritam Dey	Patha Bhavan	Kolkata
Anusimita Khan	Bhogpur K.M. High School	Purba Medinipur
Srijan Sam	Shashpur D.N.S Institution	Bankura
Srijon Hazra	Government Sponsored Multipurpose (Boys) Taki House	Kolkata
Chowdhury Md Asif	Kamarpukur Ramkrishna Mission M.P. School	Hooghly
Sayak Patra	Ramakrishna Mission Vidyalaya (Bengali Medium), Narendrapur, Kolkata, W.B.	South 24 Parganas
Jeetshikhar Ghorai	Dhanyasri K.C. High School (H.S.)	Purba Medinipur
Dip Chowdhury	Jhankra High School	Paschim Medinipur
Debasmita Mistry	Harindanga High School	South 24 Parganas
Reeka Pal	Burdwan Harisava Hindu Girls' High School	Purba Bardhaman
Snehashis Mondal	Mamudpur Madhyamik Jatiya Siksha Pratisthan (H.S.)	North 24 Parganas
Tathagata Mandal	Baga High School	Bankura
Pronay Mandal	Fulia Sikshaniketan	Nadia
Arnab Das	Joynagar High School	Purba Medinipur
Dhritiman Chowdhury	Ramakrishna Mission Vivekananda Vidyamandir	Maldah



## Academic district-wise distribution of State Science Olympiads – 2023



### Nurturing program for our Olympiad scholars

JBNSTS organized a nurturing program for the recently qualified Olympiad scholars from March 27 – 31, 2023. The program aimed to develop the intellectual acumen of the Olympiad scholars to participate in the national as well as international standard Olympiads. The experts motivated the young minds for partaking in national & international level examinations through conducive atmosphere of active knowledge sharing sessions. Furthermore, the discussion created awareness about the various competitive exams available for students and means of preparation by the students to face the challenges of the complexity of interdisciplinary perspective of different science topics and subjects along with training them with updated information. JBNSTS provided the Olympiad awardees with immense knowledge to perceive science education from a competitive perspective. The synergistic sessions on a wide range of science subjects can enable students to understand their skills and know how to progress effectively. Specifics of the program is laid below.



Speaker	Topic of the lecture
<b>Dr. Dilip Kumar Maity</b> Outstanding Scientist, Bhabha Atomic Research Centre and Senior Professor & Associate Dean, Homi Bhabha National Institute, Training School Complex, Mumbai	International Olympiads and National Standard Examination
<b>Dr. Samir Kumar Pal</b> Professor, Department of Chemical, Biological & Macromolecular Sciences, S. N. Bose National Centre for Basic Sciences, JD Block, Sector III, Salt Lake, Kolkata - 700 098	Cross – Disciplinary Research for Our Country
<b>Dr. Prithwijiit De</b> Associate Professor, National Coordinator, Mathematical Olympiad Programme, Homi Bhabha Centre for Science Education, Tata Institute of Fundamental Research, Mumbai	An Invitation to The Indian Mathematical Olympiad
<b>Dr. Mridul Nandi</b> Professor-in-Charge, Applied Statistics Division, Indian Statistical Institute, Kolkata	Thought Provoking Mathematical Problems
<b>Mr. Anindya De</b> Teacher, Hindu School, Kolkata	The International Olympiad Movement
<b>Dr. Indrani Das Sen</b> Scientific Officer Homi Bhabha Centre for Science Education Tata Institute of Fundamental Research, Mumbai	ICHO Today
<b>Dr. Kolahal Bhattacharya</b> Assistant Professor St. Xavier's College, Kolkata	Tuning into Physics Olympiads
<b>Mr. Bidyut Ghosh</b> Teacher Kuchiakol R. B. Institution, Bankura	Glimpse of Astronomy Olympiad with Some Problems
<b>Dr. Bhupati Chakrabarti</b> Former Associate Professor & Head, Dept. of Physics, City College, Kolkata	Physics
<b>Dr. Subhojit Sen</b> Assistant Professor UM-DAE Centre for Excellence in Basic Sciences, University of Mumbai, Mumbai	The Importance of Experimental Biology in Olympiads
<b>Dr. Mrinal Nandi</b> Assistant Professor, Department of Statistics, West Bengal State University, Barasat, North 24 Parganas	Mathematics
<b>Dr. Debasis Jana</b> HOD & Associate Professor, Department of Chemistry, RKM Vidyamandira, Belur Math, Howrah	Chemistry





" The beauty of research is that you never know where it's going to lead. "

**Richard Roberts**  
(Nobel Prize winner in Physiology/  
Medicine, 1993)



ANNUAL REPORT 2023

# JBNSTS WEST BENGAL DISTRICT SCHOOL PROGRAM

Best practices in science  
education to add value  
for sustainability



## West Bengal District School Program

Inculcate, propagate and disseminate scientific temper in the society

### Perspective

The importance of science and technology in education highlights how science education taps into the natural curiosity of children, creating a positive and engaging learning experience. It emphasizes that science education goes beyond text books, inspiring students to explore and discover the world around them actively. Scientific concepts, in the modern world, must be presented in an engaging manner so that the learners in their middle school curriculum can enjoy the learning to build on their confidence and creativity in the ever changing dynamic society. The middle school years particularly the grades 8 and 9 are a time of cognitive development of a student and may also be denoted as a pivotal time in developing their perception, understanding as well as enthusiasm for science.

Ever since its origin, the West Bengal District School Program supported by the Department of Higher Education, Government of West Bengal has played a significant role in creating a conducive learning environment wherein district school students from all across the state and remote areas can engage in science practices in the form of innovative teaching learning methods and experimental activities in the well-equipped JBNSTS laboratories to solve real-life problems and develop a scientific temper at an early age.



## Principles of the program

- The program supports diverse learners effectively, thereby dealing with the gender equity concerns, models a multidisciplinary approach to learning and motivates to be a lifelong learner of science.
- Being aligned to the disciplinary core subject matters pertaining to science subjects and ideas and practices, this initiative fosters the development of a scientific mindset and a broad cognition of nature of science.
- Nurturing the curiosity of learners about the natural world along with opportunities to engage in varied science practices.
- Engaging the pupils in multiple laboratory activities in consonance to the basic concepts of science education which inculcate the joy of learning science from a tender age which is never possible in regular school curricula.
- Incorporate group learning experiences in science education and encourage the development of critical thinking, communication skills, interpersonal skills and sharing of knowledge and results with peers.

## Standardized procedure of nurturing the young talents – students in class VIII

### Phase I

(5 day Residential Workshop on School curriculum)

Theoretical lectures on key topics of science complimented with motivational content and demonstration.

Hands-on experiments and laboratory activities in physical sciences and life sciences.

Co-curricular activities to increase social awareness and self-expression & communication skills

Visit to science and technological museums to expose them to creative ideas





## Standardized procedure of nurturing the young talents – students in class IX

### Phase II

(5 day Advanced Residential Science Workshop)

Creative learning experiences to solve science and mathematical problems.

Outdoor science activities (Sky watching, Biodiversity and Ecological Studies).

Guided projects on Alternate Energy, Solar Cell, wise usage of water, electricity and natural resources.

Interactive sessions, quizzes regarding contemporary issues like Climate Change, Water scarcity etc.







## Pictorial snippets of theoretical sessions & experiments for the students

<b>Physical Sciences</b>	<ul style="list-style-type: none"><li>❖ Solar Energy in daily life</li><li>❖ Night sky viewing by telescope</li><li>❖ Archimedes Principle</li><li>❖ Momentum &amp; Conservation</li><li>❖ Creation of color using primary colors</li><li>❖ Effect of air pressure and height on a free moving pendulum</li><li>❖ Bernouli's Principle</li><li>❖ Principles of Sports Science</li><li>❖ Making of pin-hole camera, microscope with single lens</li><li>❖ Reflection, Refraction, and total Internal Reflection</li><li>❖ Gravitational force, earth's rotation and spin motor of cricket ball</li><li>❖ Understanding Energy</li><li>❖ Preparation of colour using various chemical reactions</li><li>❖ Impact of heat and pressure on reactions</li><li>❖ Experiments on electric current</li><li>❖ Experiments on catalysts and indicators</li><li>❖ Acid-Base-indicators</li><li>❖ Impact of reactions</li></ul>
<b>Mathematics</b>	<ul style="list-style-type: none"><li>❖ Finding the Area of Quadrilateral and Square Root Algorithm</li><li>❖ Area of polygon in term of rectangle, square, hexagon and octagon inscribed in a circle</li><li>❖ System of Real Numbers</li><li>❖ Geometrical Riders in the fold of word problem</li><li>❖ The reformation geometry using quadrants, plotting coordinates and finding equation for coordinates.</li><li>❖ Properties of triangle and its characteristics.</li><li>❖ Fractioning of quadratic function and Method of solving quadratic equation</li></ul>



### Life Sciences

- ❖ BMI & Body Temperature Mapping
- ❖ Plants Pigments
- ❖ Audiovisual exposure to the process of digestion with the experimentation of carbohydrate.
- ❖ Determination of Pulse Rate
- ❖ Identification of cell, plant tissue
- ❖ Food Adulteration
- ❖ Identification of starch
- ❖ Microbial Activity
- ❖ Distribution of acids in our alimentary canal
- ❖ Nuances of Microbiology
- ❖ DNA structure and the application of DNA
- ❖ Origin of Life
- ❖ Local Biodiversity
- ❖ Health, Hygiene & Menstrual Cycle
- ❖ Our Environment: We are in a state of War
- ❖ Microbes and Microscopy
- ❖ Origami representation of DNA double helix structure
- ❖ Foldscope preparation and demonstration



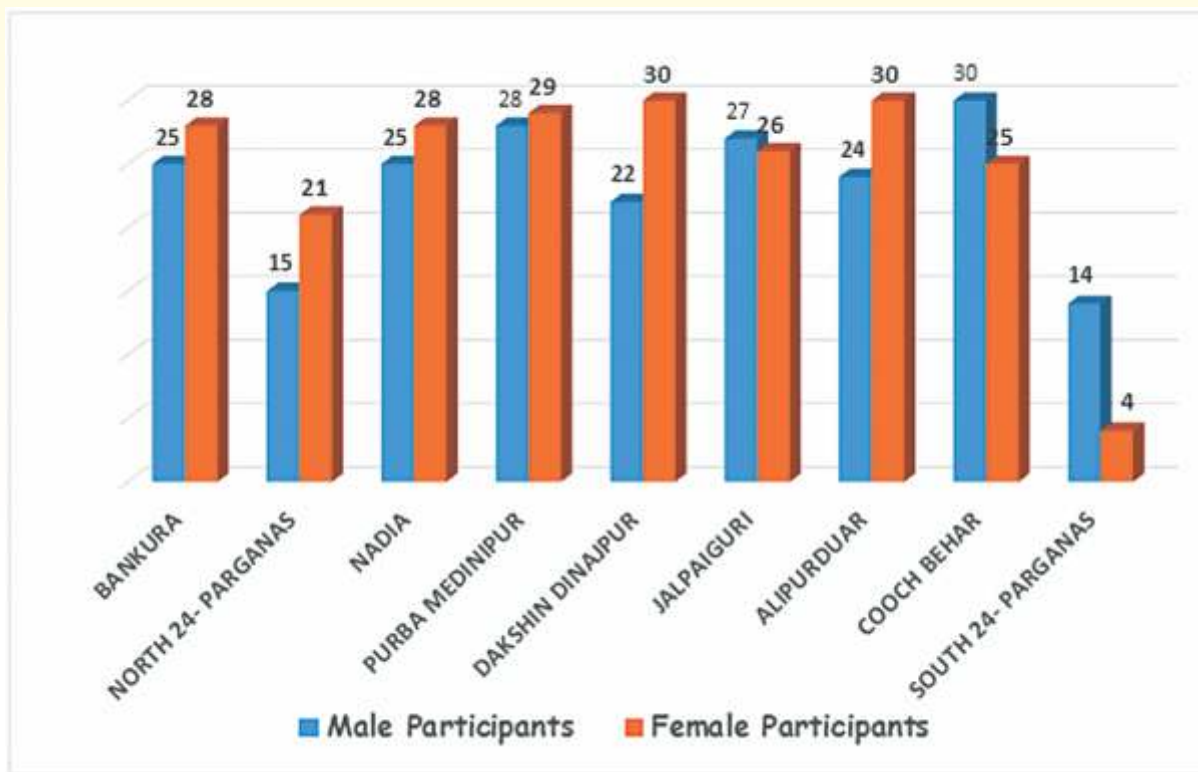


## Comprehensive list of schools vis-à-vis districts for all the programs held in 2023

Name of the participating institutions	District	Total no. of participating students
• Mahishadal Gayeswari Girls' High School	Purba Medinipur	58
• Byabattarhat Adarsha High School (H.S)		
• Geonkhali High School (H.S)		
• Aranghata Girl's High School, Nadia	Nadia	54
• Bankimnagar Adarsha Vidyapith, Nadia		
• Bishnupur High School, Nadia		
• Saluipahari High School	Bankura	54
• Bansidi High School (HS)		
• Haludkanali SC High School		
• Krishnanagar Jatindra Kiran High School		
• Gopal Nagar Haripada Institution	North 24 Parganas	36
• Basirhat H. M. D. Girls' High School		
• Debnagar Mokshada Dinda H.S. School	South 24 Parganas	18
• Patiram High School	Dakshin Dinajpur	52
• Balurghat Girls High School		
• Gangarampur High School		
• Maynaguri Road High School	Jalpaiguri	53
• Nagrakata High School (XII)		
• Deogaon High School (H.S.)	Alipurduar	54
• Sukanta High School		
• Shikarpur High School (H.S.)	Cooch Behar	55
• Chamta Desbandhu Vidyalaya (H.S.)		



## Gender distribution of the participants (2023-2024 batch)



## List of facilitators / Mentors

The unswerving and continual support of the following eminent resource persons throughout the year have added to the academic potency of the pupils.

- ❖ Prof. (Dr.) Maitree Bhattacharyya, Director, JBNSTS
- ❖ Dr. Abhishek Mukherjee, Maulana Azad College, Kolkata
- ❖ Dr. Arati Mukhopadhyay, Howrah Jogesh Chandra Girls' School
- ❖ Dr. Arindam Bhattacharyya, University of Calcutta, Kolkata
- ❖ Dr. Paromita Roy, Deputy Director, JBNSTS
- ❖ Dr. Soumyaditya Sutradhar, Asst. Prof, Jadavpur University
- ❖ Dr. Pijush Basak, Junior Scientific Officer, JBNSTS
- ❖ Dr. Shampa Dutta, Project Staff; JBNSTS
- ❖ Dr. Arnab Pramanik, Scientific Staff, JBNSTS
- ❖ Dr. Punarbasu Chowdhury, University of Calcutta
- ❖ Mr. Siddhratha Sankar Chattopadhyay, Former Teacher - Bidhanagar Govt. High School
- ❖ Mr. Amit Sadhukhan, Naihati Narendra Vidyaniketan



- ❖ Ms. Anupama Sengupta, Jadavpur Sammilita Balika Vidyalaya, Kolkata
- ❖ Ms. Chaitali Mukherjee, Santoshpur Rishi Aurobindo Girls' School, Kolkata
- ❖ Ms. Smita Nandi, Art Teacher, Ashok Hall, Kolkata
- ❖ Prof. Goutam Basu, Bose Institute, Kolkata
- ❖ Mr. Abdul Halim, Shri Ramkrishna Ashram Institute
- ❖ Dr. Sanchari Chattopadhyay, JBNSTS
- ❖ Shri Arup Sengupta, Garfa DNM High School, Kolkata
- ❖ Shri Milan Chandra Gain, Uttar Rabindranagar Vivekananda (H.S)







- ❖ Shri Pintu Kr. Sinha, Katwa K.D.I, Purba Bardhaman
- ❖ Shri Saptarshi Mondal, Tangrakhali P.S.P High School (H.S)
- ❖ Shri Subir Bhattacharya, Dum Dum Kishore Bharati School, Kolkata
- ❖ Dr. Subhankar Ghosh, St. Xavier's College, Kolkata
- ❖ Ms Sharmistha Bhattacharya, Ananda Ashram Balika Vidyapith
- ❖ Shri. Partha Pratim Roy, Senior Faculty, South Point High School, Kolkata
- ❖ Dr. Subir Chandra DasGupta, Maulana Azad College (Retd.)
- ❖ Dr. Pubali Dhar, Calcutta University, Kolkata
- ❖ Mr. Jibesh Bhattacharyya, Garfa DNM High School, Kolkata
- ❖ Shri. Dipankar Karmakar, The Heritage School
- ❖ Ms. Soma Roy, Orator, Kolkata



An exposure to climate change and biodiversity



ANNUAL REPORT 2023

# JBNSTS TALENT ENRICHMENT PROGRAM

Exposing the student scientists  
to the pioneering Research and  
Academic Institutes of India



## Talent Enrichment Program

Quality experiential learning for the brilliant minds

### Inception

JBNSTS is known for its academic platform which potentially inspires a student to learn, develop, promote innovation and invention and to inform and disseminate and translate the knowledge for nation building and solving practical, real-life problems of the mankind. Amongst a repertoire of commendable academic initiatives, the Talent Enrichment program deserves special mention which is supported by the Department of Science & Technology and Biotechnology, Government of West Bengal enabling the talented student scientists of the state to create interdisciplinary connections to the scaffold of STEM education and research. This program exposes the students to be exposed to the larger scientific community, innovative ideas and the vast infrastructure of research laboratory.

### Essential components of this program

The model or process of conducting the Talent Enrichment program is elucidated below.

<b>Educational Visits</b>	Introduction to quality research and practical exposure to emerging research ideas and technologies in STEM rather than confining them only in the classroom mandated curricula.
<b>Interaction with the renowned scientists and researchers</b>	A platform of vibrant interactions with the nation's legendary scientists, technologists, researchers which motivates the students with glimpses of their significant contribution towards science.
<b>Hollistic training and mentoring</b>	Orientation and mentoring lectures are being organised regularly along with interactions and workshops for plus two level students to ignite their mind for research and development out of their text books.
<b>Sustanibility goals to improve our world</b>	Programs are organised to motivate the students for the sustainability journey towards the global goals, to conserve the nature, to maintain the ecosystem and to explore useful resources.

## Successful actions programs for the year 2023

### Academic visits to the Premier Institutes of India

This academic tour organized visits of the talented student scientists of West Bengal to nationally acclaimed science, technical and medical institutes, to expose them to the nation's scientific community. Two separate academic tours were conducted by JBNSTS to New Delhi and Bangalore respectively. The substantial number of the participants were the students of current and preceding batch of JBNSTS senior scholars and Bigyani Kanya Medha Britti awardees.

Through visit to laboratory units of institutes of national importance, the students were imparted with precious lectures by renowned scientists, phenomenal experimental demonstrations in the sophisticated laboratory facilities of the institutes in Bangalore and New Delhi. The practical experiences in esteemed institutes of both the places rendered to our scholars comprised on topics on Textile and Fiber Engineering, Robotics Technology, Molecular Medicine, Bioinformatics, Proteomics, Artificial Intelligence, to name a few.

Furthermore, application of Computational Genomics in cancer research, interactive sessions pertaining to string theory, black holes, as well as their relationship with topics in cosmology and particle physics provided an overview of the recent developments and open challenges in these fields of fundamental physics while at the same time encouraging the participation of students in areas of Physical Biology, Biophysics etc. The process of sharing academic excellence between some of our former scholars- a Bhatnagar and Infosys awardee and other renowned scientists with the scholars facilitated building of academic network on a large scale, exposure to complex and intricate topics of basic and applied sciences. A brief







profile of institutions visited and activities performed in Bangalore and New Delhi is enumerated below.

### Program in New Delhi:

This program was immensely supported by Institute of Genomics and Integrative Biology, New Delhi and it was an outstanding gesture on their part that they provided their guest house for our scholars and staffs.

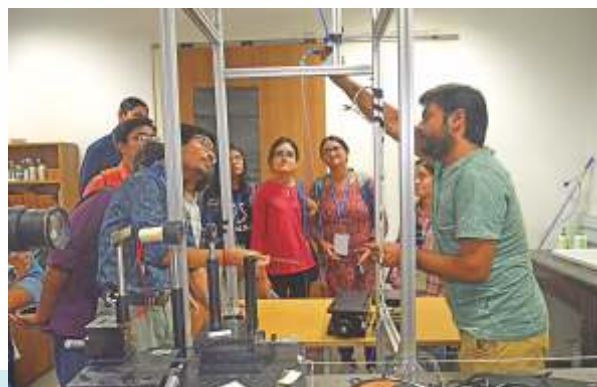
Institute	Speaker/Facilitator	Title/ Topic
Jawaharlal Nehru University, Delhi	<b>Prof. (Dr.) Sobhan Sen</b> School of Physical Sciences	<i>"Utility of Fluorescence Spectroscopy and Microscopy in Biology and Chemistry : A Primer."</i>
Indian Institute of Technology, Delhi	<b>Prof. Abhijit Majumdar</b> Dept. of Textile and Fiber Engineering	<i>"BODY ARMOUR: Materials, Design and Technology"</i>
	<b>Prof. Anant Jain</b> Dept. of Electrical Engineering	<i>"EEG Based Upper-Limb Mapping and Kinematics Parameter estimation"</i>
	<b>Prof. S.K. Saha</b> Mechanical Engineering Dept.	<i>"IHFC Way and RuTAG (Refreshing Learning Technique)"</i>
Indian Statistical Institute (ISI), Delhi	<b>Professor Rahul Roy</b> <b>Professor Soham Sarkar</b>	<i>How one uses Statistics and probability in Gene sequencing</i>
Indraprastha Institute of Information Technology Delhi (IIIT-Delhi)	<b>Dr. Sanat K Biswas</b>	<i>"AI/ML Applications in Space"</i>
	<b>Prof. Ganesh Bagler</b> Computational Biology and Computer Science	<i>Artificial Intelligence Driven Culinary Creativity</i>
CSIR-Institute of Genomics & Integrative Biology (IGIB) – Delhi	<b>Dr. Rakesh Sharma,</b> Chief Scientist	<i>"Metagenomics - Unraveling the Mystery of the Microbial World"</i>
	<b>Dr. Nabeel Ahmed</b>	<i>Nanopore Sequencing</i>
	<b>Mr. Praveen Gupta,</b> Premas Life Sciences, MD & CEO at the Premas Life Sciences (PLS)	<i>Entrepreneurial journey</i>
Inter University Accelerator Centre	<b>S. Ohja,</b> Scientist G	<i>Pelletron Accelerator Facility</i>
TERI School of Advanced Studies	<b>Col. B Venkat</b> Registrar	<i>Sustainability Development in the medical field</i>
All India Institute of Medical Sciences, New Delhi	<b>Dr. SVS Deo</b> Department of Surgical Oncology	<i>The prospect of robots replacing surgeons in future</i>



## Program in Bangalore

This program was supported by Indian Academy of Sciences who housed our scholars and staffs at their Jalahalli campus, West Bengalore.

Institute/ Organizations visited	Speaker/ Facilitator	Title/ Topic/ Department
National Centre for Biological Sciences	Prof. Uma Ramakrishnan & Dr. Sabarinathan Radhakrishnan	<b>Genetics &amp; Development Computational Cancer Genomics</b>
International Centre for Theoretical Sciences	Prof. Subhro Bhattacharjee	<b>Condensed Matter Physics: Strongly Correlated Systems</b>
	Prof. Rajesh Gopakumar	<b>Quantum Field Theory and String Theory</b>
	Prof. Akshit Goyal	<b>Ecology and Evolution, Physical Biology</b>
Indian Academy of Science	Prof. K. Geetharani	<b>Inorganic and Physical Chemistry</b>
Indian Institute of Science	Prof. Sourav Ganguly	<b>Centre for Earth Sciences</b>
	Prof. Govindaraju M	<b>Molecular Biophysics Unit</b>
	Prof. Kumaravel Somasundaram	<b>Department of Microbiology and Cell Biology</b>
	Prof. Sumanta Bagchi	<b>Centre for Ecological Science</b>
Microsoft	Mr. Amit Sharma	<b>AI based computer applications and new era research avenues</b>
	Dr. Niraj Kayal (Bhatnagar Awardee)	
	Mr. Mohit Jain	
	Mr. Monojit Choudhury	
	Ms. Tanuja Ganu	





## Those Who Make us Proud – Program for our Senior Scholars & Senior Bigyani Kanya Medha Britti Awardees

Those Who make us Proud is an exceptional platform wherein the JBNSTS scholars engage in interactive sessions with the stalwarts of different disciplines of science and society. The scholars also participate in creative exchanges over transdisciplinary field of STEM that promotes scientific, artistic, technological, communicational and expressive orientation in their academic careers. This year, a program was held on the first two days of the month of July, 2023 for our senior scholars and Bigyani Kanya Medha Britti Awardees. The symposia provided our scholars with the opportunity to learn science in a creative and investigative manner, as well as to exercise new ideas in data collection and interpretation while presented with complex and competing scientific issues pertaining to *Cancer Therapeutics, Neurosciences, Bio-diversity*, amongst several others. Snapshot of the seminar is laid below.

Title/ Topic of discourse	Speakers / Mentor
Progresses in Cancer Research : A Bouquet of Stories	<b>Prof. Partha P. Majumder</b> National Science Chair, Govt. of India
Yes, YOU can save a life - Just BE FAST!	<b>Dr. Ananya Sengupta</b> Institute of Neurosciences, Kolkata
Stress-Eustress-Distress & Effective Time Management skills	<b>Dr. Ranjan Bhattacharyya</b> Consultant Neuropsychiatrist
Computational Complexity	<b>Dr. Neeraj Kayal</b> - Bhatnagar Awardee (JBNSTS Sr. Scholar – batch of 1996) Principal Researcher, Microsoft Research Laboratory, Bengaluru
Indian Antarctic Mission - Retrospect & Prospect	<b>Dr. Punarbasu Chaudhuri</b> Department of Environmental Science University of Calcutta, Kolkata





## Sky watching: Orientation on Astrophysics and Astronomy

Appreciating the enthusiasm of our scholars in fields like Astrophysics and Astronomy as a Talent Enrichment Program was organized this year at Deul Park, West Bardhaman, in the month of February (25–27), 2023. The night sky is a wonderful resource and the scholars were enthralled to observe the vastness of the dark sky and to make a connection with the larger world beyond our planet's atmosphere. They learned the usage of telescope under the mentorship of experts of the domain and observed five bright planets, Mercury, Venus, Mars, Jupiter, Saturn with unaided eye. Below is a list of the program's highlights.

Lecture Session	Practical hands-on session
<b>Introduction to Observational Astronomy</b>	Introduction to telescopes and mounts, cell phone applications for sky watching & using them.
<b>The Celestial Coordinate System</b>	Naked eye observation "Introduction to the Sky" (how to start, identifying the visible Constellations, stars, etc.)
<b>Introduction to The Virtual Sky</b>	Naked eye observation & using the telescope to observe bright objects, etc.
	Observation of some early morning constellations
	Solar Observation

## Love for Physics: A journey through the series of the wonders

A seminar titled Love for Physics devoted to the series of lectures at JBNSTS from September 29, 2023 to October 1st, 2023. The program was marked by vibrant and stimulating academic discourses on areas of High Energy Physics, Quantum Mechanics, Quantum Computing, Dimensions of Space/ Time, and historically important theories, such as Newtonian gravity along with deep and profound insightful deliberation on epistemological, ideological and axiological bases of practicing science in the modern society. Snippets of the entire program is mentioned below.



Title of the lecture	Mentors
Special Theory of Relativity	<b>Prof. Soumitra Sen Gupta &amp; Prof. Sumanta Chakraborty</b> Indian Association for the Cultivation of Science, Kolkata
Statistical Mechanics	<b>Prof. Ananda Dasgupta &amp; Prof. Kaushik Dutta</b> Indian Institute of Science and Educational Research, Kolkata
Ethics of Science and Technology	<b>Prof. Ayush Gupta</b> Homi Bhabha Centre of Science Education, Mumbai
Largest machines to detect the smallest particles	<b>Prof. Sunanda Banerjee</b> Indian Association for the Cultivation of Science
	<b>Prof. Satyaki Bhattacharya</b> Saha Institute of Nuclear Physics, Kolkata
Landmark experiments in Quantum Mechanics	<b>Prof. Kavita Dorai</b> Indian Institute of Science and Educational Research- Mohali, Punjab

### One-day seminar by Dr. Ajit Roy for our senior scholars and awardees

A phenomenal lecture was organized for our senior scholars and senior Bigyani Kanya Medha Britti awardees by Dr. Ajit K Roy, a very renowned and internationally reputed scientist who is a Principal Materials Research Engineer at the Nanoelectronic Materials Branch, the Materials and Manufacturing Directorate of the US Air Force Research Laboratory (AFRL). The exciting lecture of Dr. Roy motivated and inspired the brilliant scholars to build up their career in material and nanocomposite research. The interactive session entailed over judicious application of nanostructure design and fabrication and composite material development to solve myriad problems of the contemporary world.





## Memoirs of delightful trip down the memory lane

ছোট থেকে বড় হয়েছি AIIMS Delhi, IIT Delhi 'র মত দেশের সেরা শিক্ষা প্রতিষ্ঠানগুলির গল্প শুনে। JBNSTS এর দৌলতে এই পীঠস্থান গুলিতে প্রবেশ করতে পারব ভারতীয় বিজ্ঞানদের প্রথিতযশদের সাথে সাক্ষাৎ করতে — এ স্বপ্ন বুনিয়ে বিগদ দুমাস ধরে। আধুনিক বিজ্ঞান এক মহাসাগর, যার বাপ্টা এসে লেগেছিল আমার gray mater এ। দিল্লীতে কাটানো এক একটি দিন হয়ে উঠেছিল এক একটি Quest of Knowledge - জ্ঞানের রাজ্যে অভিযান।

অস্কাগার লুর্থন (২৩.০৮.২০২৩) আমাদের প্রথম গন্তব্য ছিল National Institute of Immunology (NII), মানবদেহের Defense Ministry যে অতি বিপুল এবং অনেকটা রহস্যের। সে 'Enigma Code' Decipher করতে NII তে চলে মহাযজ্ঞ। Covid facility থেকে শুরু করে x-ray crystallography, central instrument facility কিংবা electron microscope, flow cytometry মানবদেহের arsenal এর একেকটি চাবি চাক্ষুষ করলাম, বলা ভালো লুঠ করলাম — জ্ঞানের লুঠ, যত পারো কুড়িয়ে নাও। জানলাম কিভাবে বিশ্লেষিত হয় quaternary structure of protein, বিশ্বত্রাস covid genome এর sequencing, দেখা যায় দৃষ্টির অতীতকে electron এর মহাপ্রলয় ঘটিয়ে। এ যেন এক সমুদ্র থেকে অন্য সমুদ্রে পাড়ি। নিজেকে মনে হচ্ছিলো চাঁদের পাহাড়ের শংকর। অচেনাকে চেনা, অদেখাকে দেখা, অজানা কে জানার আনন্দে হলাম উত্তাল। Lunch এর সময়ে সাক্ষাৎ হল NII এর Director স্যার এর সঙ্গে। শিহরিত হলাম, সমৃদ্ধ হলাম। এতো বড় মাপের বিজ্ঞানীর সাহচর্যে।

পরবর্তী গন্তব্য Jawarharlal Nehru University (JNU), যার Campus এর বিরাটত্ব ও শ্যামলিমা, প্লেন থেকেই আমাদের মুগ্ধ করেছিল। এখন চোখের সামনে পেলাম তাকে। School of Life Sciences এ দেখলাম বইয়ে পড়া, centrifuge, Gamma radiation Centre, Biosafety cabinet, flowcytometer কে। পুঁথি পড়ে পাওয়া চোদ্দ আনা সম্পূর্ণ হলো, বাস্তবদর্শনে। “সামোসা” তে কামড় বসিয়ে, পাড়ি দিলাম School of Physical Sciences এ, জানলাম Microbiology তে বহুল ব্যবহৃত Fluorescent Microscope ও fluorescence spectroscopy সম্পর্কে।







আমি যন্ত্র তুমি যন্ত্রী (২৪.০৮.২০২৩) IIT Delhi তে গিয়ে জানলাম শরীরের বাইরের সুরক্ষা বিষয়ে। Bullet-proof jacket এর session ছিল চিত্তাকর্ষক। দেখলাম কিভাবে হাত ধরাধরি করে চলছে Medical sciences এবং Mechanical engineering - cardiac surgery' র stent, hip protection, dental implant, এমনকি human patient simulator যার জলজ্যাস্ত নিদর্শন। Robotics এর বিভিন্ন দিক সম্বন্ধে জানলাম পরবর্তী session এ। এরপর এসে পৌঁছলাম IIT Delhi তথাপ্রযুক্তির স্বর্গরাজ্যে। অতল হতে অন্তরীক্ষ কৃত্রিম বুদ্ধিমত্তার অবাধ গতিবিধি আমায় অবাক করল। IIT র উদ্যোগে শুধুমাত্র JBNSTS পড়ুয়াদের জন্য আয়োজিত হয় এক Challenge..... এক Presentation Contest. টানটান উত্তেজনার মধ্যে এক বিদগ্ধ শ্রোতৃমণ্ডলীর সামনে present করার সেই অভিজ্ঞতা তুলনাহীন।

স্বপ্ন হলো সত্যি (২৮.০৮.২০২৩) ডাক্তারি পড়ুয়া হিসাবে দীর্ঘদিনের স্বপ্ন ছিল AIIMS দিল্লিতে পা রাখার। JBNSTS সেই সাধও পূর্ণ করেছে। নতজানু হলাম ভারতীয় চিকিৎসা বিজ্ঞানের এই তীর্থক্ষেত্রে এসে, AIIMS এর ঘন্টা দুয়ের ওই সফর হয়তো আমার গোটা ছাত্র জীবনের পাথেয় হয়ে থাকবে। যেমন JBNSTS হয়ে থাকবে সে পথের আলোকবর্তিকা হয়ে। JBNSTS আয়োজিত TEP আমাদের ছাত্র জীবনের এক অবিস্মরণীয় অভিজ্ঞতা, এ যেন Alice এর wonderland কিংবা সব পেয়েছির দেশ। JBNSTS এর থেকে পেয়েছি প্রথম Scholar হওয়ার পরিচয় তারাই দিলেন সর্বভারতীয় ক্ষেত্রে বিচরণের প্রথম সুযোগ। জগদীশচন্দ্র বসু “ভাগীরথীর উৎস সন্ধান” এ বেরিয়েছিলেন, তারই পুণ্য নামাঙ্কিত এই প্রতিষ্ঠান আমাদের talent, potential কে খাতার পাতা থেকে বাস্তবের মাটিতে এনেছে এবং ভগীরথের মতোই পথ দেখাচ্ছে নিরন্তর। আমার জীবনের ‘প্রথম’ অনেক কিছুতেই তাই JBNSTS এর ছাপ অলংকৃত হয়ে রইল।

*Ananya Saha*

Sr. Scholar (2021 batch)

These seven days in Delhi Talent enrichment program have been transformative. They ignited my passion for science, broadened my horizons, and introduced me to a world of possibilities. I return not as an individual but as a member of a scientific family, ready to contribute my drop to the vast ocean of knowledge.

*Indrajit Das*

Sr. Scholar (2021 batch)

This Bangalore- TEP trip was not solely about scientific enlightenment. It was a unique blend of academia and vibrant social interactions. Amidst the quest for knowledge, we forged meaningful friendships across diverse academic disciplines. Our shared passion for science served as a common thread that brought us together, transcending boundaries and fostering a sense of unity.

*Nilanjana Ghosh*

Sr. Scholar (2022 batch)

The key learning was that science is indivisible and cannot be approached by only studying and limiting oneself to one's specific branch/subject. Today no research performed is singular and always requires knowledge and hands from various subjects. Science is the entire tree having leaves of every shade of green-yellow and even buds, flowers, bark, roots and without a single of these, the tree won't be able to grow and survive.

*Suagata Ghosh*

Sr. Scholar (2021 batch)









ANNUAL REPORT 2023

# BIOTECHNOLOGY INITIATIVE FOR HIGH SCHOOL STUDENTS IN WEST BENGAL

Exploring Microbiology,  
Biotechnology and Genetics  
in the state-of-the-art  
facilities of JBNSTS





## Biotechnology for Student Scientists

Heralding upon a new era in biological sciences

### Perspective

Biotechnology is one of the important research and application areas where modern scientific facilities demand extensive hands-on training and innovative thoughts to solve socio-economic problems. The existing high school mandated framework or syllabus is characterized by malady in the form of a dearth in demonstration of the latest techniques along with practical oriented complexities towards understanding the subject. Since our high school students are the future human resources, a thorough understanding and established position in biotechnology are the pre-requisites for a fulfilling career path. Thus, from a pedagogical and didactical perspective, the high school students must learn societal implications of this subject.

JBNSTS initiated this unique program under the auspices of the Department of Science and Technology & Biotechnology, Government of West Bengal in 2017 rendering exposure to critical practical laboratory practices applicable in plant science, animal science, drug and medicine research, clinical diagnostics and more. Since its inception, the program has attracted the attention of the students and teachers whose vibrant participation has made this endeavor a success.



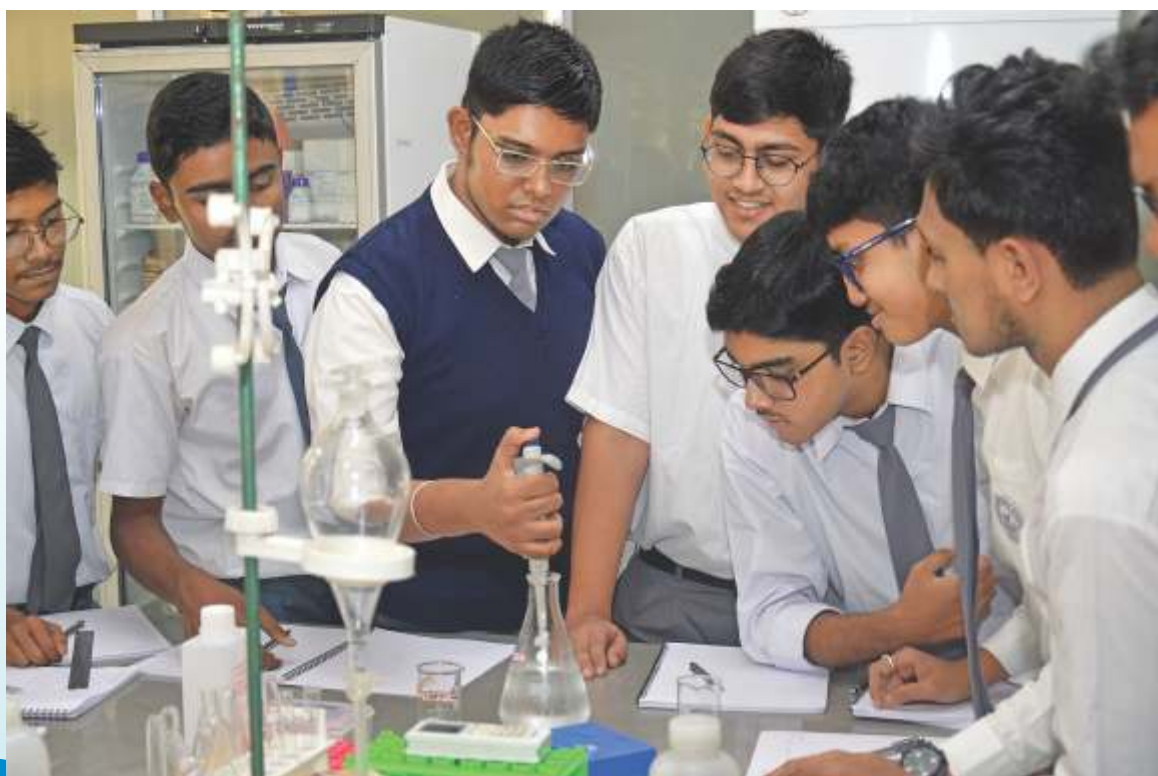


## Pedagogy for future citizens

Biotechnology Laboratory was established in JBNSTS to expose the high school students with basic training in modern Biological Sciences and Biotechnology. The introduction to Biotechnology highlights how key ideas from subjects like Biology, Chemistry, Physics and Mathematics may be applied in an integrated way to solve real-life problems. Another novel aspect of this Biotechnology Laboratory is that the students will learn both the applications and the use of latest laboratory equipment. The information thus obtained empowers the students and enable them with expansive comprehension of biotechnology, so that they can explore the solutions pertaining to upcoming challenges in the domain of biological sciences.

## Objectives

- ❖ To support the high school students for a better exposure to the world of innovation and subsequent understanding of biotechnological research and cutting edge technology.
- ❖ To mentor the students to develop creativity and skill over biological topics and issues.
- ❖ Making them familiar with several modern biotechnological tools and molecular mechanisms to facilitate their further course of learning in biological sciences.
- ❖ Exposure to hands-on experiments and research and providing the students with new thoughts and ideas and providing them with an analytical outlook for decision making in the ever-changing environment for proper placement in their academic careers.
- ❖ To motivate the participating students for Biotechnology research and development.





## Brief account of Biotechnology programs – 2023

JBNSTS houses the finest laboratory facilities with the latest equipment to work on the exciting aspects of advanced biological sciences through facilitators who are committed to decipher to every incumbents during their process of learning. The workshops held in JBNSTS Rosalind Franklin Biotechnology Laboratory provided the end users with a unique learning experience in a real-life environment. The workshops meted out good opportunity to the students and teachers of the participating schools from all across our state to learn the latest techniques through technical exposure based on activities like sample analysis, usage of spectrophotometer and spectrofluorometer, PCR application, data acquisition, interpretation of investigation findings, presentation of research thereby invoking the inter-disciplinary feature of the subject which is beyond the contours of regular school curricula of high school standard. All the technical and theoretical sessions organized by JBNSTS enhanced the participants' opportunities for growth in their academic career to uphold their interest in the subject and its manifold tributaries and keep them motivated and engaged.

### Experiments performed in the Biotechnology workshops

- ❖ Sterilization and Disinfection
- ❖ Preparation of culture media: Solid media and Liquid media
- ❖ Inoculation procedure: Streak plate and Pour plate technique
- ❖ Microbiological media preparation





- ❖ Microscopic examinations of different microbes
- ❖ Bacterial shape, Gram staining procedure
- ❖ Bacterial Growth Curve using spectrophotometry
- ❖ DNA Isolation from Bacterial sample
- ❖ Estimation and purity of DNA by spectrophotometry
- ❖ Gel Electrophoresis of bacterial Genomic DNA and application of PCR
- ❖ Human blood group determination
- ❖ Polymerase Chain Reaction (PCR) of a bacteria specific gene
- ❖ Spectrofluorometric estimation of chlorophylls
- ❖ Use of spectrophotometer for quantitative analysis of food adulteration
- ❖ Restriction digestion of DNA sample

### Snapshot of lecture sessions

- ✓ Introduction to Microbiology and Biotechnology
- ✓ Application of technology and improving the Quality of Life
- ✓ Biotechnological applications in our daily life
- ✓ History and development of Biotechnology
- ✓ Sterilization procedures: importance
- ✓ Genetic Engineering and gene cloning
- ✓ Biosafety protocols
- ✓ Fundamentals of biological macromolecules
- ✓ Plant Biotechnology and application
- ✓ Concept of ABO blood grouping system
- ✓ Polymerase chain reaction basic steps and working principle
- ✓ Restriction Endonuclease: definition and applications in biotechnology
- ✓ Principle and application of a Spectrophotometer and Spectrofluorometer

### List of participating schools in Biotechnology programs: year 2023

- ❖ Santoshpur Rishi Aurobindo Balika Vidyapith, Kolkata
- ❖ Kamala Girls' School, Kolkata
- ❖ Jodhpur Park Girls' High School, Kolkata
- ❖ Binodini Girls' High School, Kolkata
- ❖ Jadavpur Vidyapith, Kolkata





- ❖ Garia Harimati Devi Uchcha Balika Vidyalaya
- ❖ Netaji Nagar Balika Vidya Mandir
- ❖ Sakhawat Memorial Govt. Girls' High School, Kolkata
- ❖ Jadavpur N K Pal Adarsha Sikhayatan, Kolkata
- ❖ Gandhi Colony Madhyamik Vidyalaya (H.S.)
- ❖ Chittaranjan High School
- ❖ Muralidhar Girls' School (H.S.)
- ❖ Basirhat Town High School
- ❖ Taldi Surabala Sikshayatan for Girls (H.S.)
- ❖ Kamala Chatterjee School for Girls'
- ❖ Netaji Nagar Vidya Mandir
- ❖ Taki House Govt. Sponsored Girls' High School
- ❖ Dum Dum Kishore Bharati High School
- ❖ Baranagar Rajkumari Memorial Girls' High School
- ❖ Ballygunge Government High School, Kolkata
- ❖ Jodhpur Park Boys School, Kolkata







ANNUAL REPORT 2023

# JBNSTS TEACHERS' TRAINING PROGRAM

Innovative teaching-learning  
methods to build scientific  
temper among the students



## Teachers' Training Program

Creating novel educational praxis for science educators

### Preamble

The JBNSTS Teachers' Training Program provides sustained professional development to the teaching facilitators to utilize their existing skills and knowledge for integration of dynamic science teaching modules for secondary and high school students. In science education, the prime concern has been a significant gap that separates the curricula objectives and their implementation through a host of activities like classroom practices, experimental learning and continual assessments.

The Teachers Training Program is a futuristic initiative of JBNSTS supported by Department of Science & Technology and Biotechnology, Government of West Bengal which aims to strengthen the teaching skills amongst teachers for better comprehension of the science subjects and imparting the same to the learners/pupils. The program appreciates interdisciplinary facet of Science and technology and judicious application of the same in the existing middle and high school curriculum thus ensuring a positive impact in the career of a science teacher thereby marking excellence recognized with professional qualification.





## Objective of the program

- To develop scientific aptitude among teachers/ students through making connection between educational concepts and real world applications.
- Imparting the teachers of unique pedagogical content and introducing the teachers of our state to experimental/ research-based teaching so that they could educate the students to grasp the topic correctly.
- This program pledges to improve the quality and standard of scientific teaching along with opportunities to connect with several accomplished academic professionals in science through multitude of orientation programs, symposia, workshops etc.
- To involve them into design experiments/ activities based study module so that they can implement these in their classroom teaching thus ensuring the teachers gaining career progression of a science educator by building up to the existing skills as a teacher.
- To introduce the teachers to experimental/ research based teaching by designing and developing of ICT based scientific training aids and kits for science education for the benefit of the students along with educating them about research methods used in life/ respective subjects/ disciplines to produce new knowledge.

## Significance/ outcome of JBNSTS Teachers Training Program

The training could help make a paradigm shift in science teaching for middle/ high school teachers.

These trained teachers may assume the role of resource persons in their schools and could propagate the novel teaching methodology to their peers.

Ideas percolated from the teachers to the students shall motivate students to pursue career in science along with addressing pertinent issues relating attention deficiency, misconception towards scientific perception, dropout from school (due to lack of motivation) etc.

This program envisage an overall knowledge upgradation of the teachers in middle and high school framework of education in West Bengal.



## Outline of the Teachers' Training Program – Year 2023

### Schematic flow of the program

Methodology (for each workshop on each subject)						
	Session – 1	Session – 2	Session – 3	Session – 4	Session – 5	Session – 6
Day – 1	Inaugural Lecture	Discussion on specific areas of existing classroom teaching for better understanding by students	Lunch & Interactions	Post-lunch session		
Day – 2	Demonstrative Lecture Session – 1	Demonstrative Lecture Session – 2		● Development of scientific tools/ experiment based modules. ● Encourage teachers to teach using advanced teaching aid. ● Need-based demonstrative lecture modules to be developed under the mentorship of the experts/ facilitators.		
Day – 3	Demonstrative Lecture Session – 3	Lecture on Scientific Awareness & Scientific Building				
Day – 4	Demonstrative Lecture Session – 4	❖ Presentation and demonstration of the modules developed by the participating teachers.				





The teachers training programs are designed to enhance the professional practice of our teachers, faculties of our state. The programs undertaken this year were able to accelerate the growth of the science teachers, thus creating a rewarding and sustaining professional environment. By supporting teacher collaboration, innovation and inquiry, the workshops



have led a direct impact on the student learning and development. The subjects-specific sessions aimed at training teachers from all over West Bengal delved into exploring of unique teaching concepts including demonstration of experiments of varying complexity using tools and models routinely available in the classroom and hands-on, activity-based experiences. By developing innovative teaching modules through an interdisciplinary approach to science or teaching using the latest ICT techniques such as PowerPoint presentations, audio-visual, multimedia, etc., the outcome of such sessions would be enhancement of first-hand knowledge of the students and better understanding of the practical aspects of the science subjects to solve real-life problems of the society. From deliverance of unique Teaching Learning Methodology (TLMs) resources to providing the participating teachers access to sophisticated JBNSTS laboratories, the programs enabled them with a solid foundation with regard to academic delivery along with appreciation towards students' academic, social, emotional needs and development.

## Highlights of the Programs

Duration of the workshop	Total no. of participating teachers from all across West Bengal	Participating Districts
9 <sup>th</sup> - 11 <sup>th</sup> January, 2023	60	Birbhum, Howrah
25 <sup>th</sup> – 28 <sup>th</sup> April, 2023	52	Burdwan, Bankura, Nadia
21 <sup>st</sup> - 24 <sup>th</sup> June, 2023	56	Purba Medinipur, Paschim Medinipur
18 <sup>th</sup> - 21 <sup>st</sup> July, 2023	54	Purba Medinipur, Paschim Medinipur, Hooghly
1 <sup>st</sup> - 2 <sup>nd</sup> August, 2023	53	Bankura, Barrackpore, East Medinipur, Hooghly, Kolkata, Murshidabad , Nadia, North 24 Parganas, South 24 Parganas
19 <sup>th</sup> - 22 <sup>nd</sup> September, 2023	94	North 24 Parganas, South 24 Parganas, Kolkata
9 <sup>th</sup> – 12 <sup>th</sup> October, 2023	84	North 24 Parganas, South 24 Parganas, Kolkata



## Snapshot of resource persons/ facilitators for this year

Name of the Experts	Affiliation
Prof. (Dr.) Maitree Bhattacharyya	Director, JBNSTS
Dr. Abhijit Kar	Scientific Officer, JBNSTS
Dr. Smarajit Manna	Student Advisor, JBNSTS
Dr. Sutapa Sanyal	Assistant Professor, Krishnagar Govt. College
Sri Surajit Roy	Additional Director, School Education Department, Govt. of West Bengal
Prof. Aloka Guha	Chairperson, Ministry of Social Justice & Empowerment, Government of India
Dr. Niladri Banerjee	Loughborough University, UK
Dr. Sanatan Chattopadhyay	University of Calcutta, Kolkata
Dr. Dhruvajyoti Chattopadhyay	Vice Chancellor, Sister Nivedita University, Kolkata
Dr. Subhash Chandra Samanta	Medinipur College
Dr. Ripon Paul	Chakdaha Ramlal Academy, Nadia
Dr. Gopal Chandra Ghosh	Rishi Bankim Chandra College, North 24- Parganas
Dr. Debabrata Majumder	Raja Rammohan Roy Mahavidyalaya (Retd.) Hooghly
Dr. Partha Mahata	Jadavpur University/Siuri Vidyasagar
Dr. Abhishek Basu	Behala College, Kolkata
Dr. Rajib Mukherjee	Krishnath College, Murshidabad
Dr. Ratan Sarkar	Prabhat Kumar College, Contai
Dr. Somnath Bhattacharyya	Consultant Environmental Scientist
Sri Haraprosad Mondal	Regional Institute of Printing Technology, Kolkata
Dr. Partha Karmakar	Deputy Secretary, Academic, W.B.B.S.E, Kolkata
Dr. Farookh Rahaman	Jadavpur University, Kolkata
Dr. Aweek Samanta	Prabhat Kumar College, Contai
Dr. Santanu Raut	Mathabhanga College, Coochbehar
Dr. Partha Deb Ghosh	Kalyani University, Kalyani
Dr. Uttam Ghosh	University of Calcutta, Kolkata
Dr. Sayan Das	Muragachha Govt. College

## Royal Society of Chemistry Professional Development Program for Science Teachers

Royal Society of Chemistry is an acclaimed organization of advancing excellence in the chemical sciences which aims to enhance the skills and knowledge of science teachers' in chemistry. JBNSTS, organized science faculty development programs collaborated with Royal Society of Chemistry, India chapter and Indian Institute of Science Education & Research, Kolkata over a workshop which was held in JBNSTS campus during (01-02) August, 2023 which was participated by several science teachers of class VI to XII standard from all across West Bengal. The academic discourses provided the participating teachers new tools for delivering, engaging and effective science lessons. By the end of the training modules, the teachers were able to extend their repertoire of teaching techniques, to plan a lesson using active learning strategies, to use diagnostic questions to challenge common misconceptions and to use a range of learning techniques to teach abstract ideas and much more. Expert interactions, hands-on learning facilities at JBNSTS laboratories, accessing the resources of Royal Society of Chemistry, yielded the participants a great success and created an interactive group in digital media for continuous development of their profession.





**“ One of the great things about science is that we can disagree vehemently about things but we can have a reasoned debate and in the end the facts will win”**

**Richard Roberts**  
(Nobel Prize winner in Physiology/  
Medicine, 1993)





ANNUAL REPORT 2023

# **Sensitization cum Orientation & Training Program of Teachers on Inclusive Education for The Children with Special Needs**

Inclusive education for  
sustainability goal of  
school education



## Teachers' Sensitization cum Orientation & Training Program on Inclusive Education for the Children with Special Needs

### Perspective

A child is the world's treasure. Every child deserves special attention and care for upbringing. In this context, supporting students in their learning through the use of an inclusive curriculum and guidance has been proven very effective. Now with the Right to Education Act in place, it has become imperative for most children with special needs to be mainstream, and not kept in ghettos of 'special schools'. This has resulted in the possibility of each teacher being required to facilitate the learning of either, a mentally challenged child, or a child with hearing impairment, or with disability in learning alongside the children they are used to teach. The integration of CwSN into regular classrooms can be an enormous responsibility for our school systems. Paperwork in one form or another such as individual education plans along with frequent meetings that incorporates the student, staff, and

parents are also parts of the daily duties and responsibilities that schools should perform in order to educate the various classifications of students with special needs. In this way, no child feels awkward and segregated and is liable to contribute to the learning process in his or her own way.

In this regard, a Teachers' Sensitization cum Orientation & Training Program on Inclusive Education for the Children with Special Needs (CwSN) has been planned for the teachers of Primary & Secondary Schools, Upper Primary, Higher Secondary framework along with Sahayak, Sahayikas of Shishu Shiksha Kendra (SSK) and Madhyamik Shiksha Kendra (MSK) of Govt. of West Bengal. JBNSTS is conducting this program with active support from the School Education Department, Govt. of West Bengal. This will educate at least two teachers from each school to handle CwSN.



*Welcome address by Prof. Maitree Bhattacharya, Director, JBNSTS, Kolkata*

## A schematic flow of 3 days Program Module for the schools under Govt. of West Bengal

	Session-I	Session-II	Session-III	
<b>DAY 1</b>	<p><b>Introduction to Inclusive Education</b></p> <ul style="list-style-type: none"> <li>● Identifying socio-cultural challenges such as Family environment, Personal Factors, Social Factors that influence learning</li> <li>● Identifying the Diversities and Individual differences between students</li> <li>● Identifying the concept of inclusive education</li> <li>❖ Understanding the importance of curriculum adaptation of inclusive education as a strategy to increase participation of students with disabilities in learning process.</li> <li>❖ Teaching learning process in an inclusive setting &amp; Principles of Inclusive teaching learning process.</li> <li>❖ Universal Design for Learning in Inclusive Setup</li> <li>❖ Implementation of UDL in Classroom</li> </ul>	<p><b>Gender Diversity in Inclusive Education</b></p> <ul style="list-style-type: none"> <li>● Understanding the basics of gender discrimination and its existence in society and school</li> <li>● Understanding the effect of gender roles that may affect the career choices</li> <li>● Psychological implication of the imposed gender roles and its discrimination on the individual</li> <li>● Common signs of school problems</li> <li>● Principles of Universal Design for Learning</li> </ul>	<b>Lunch Break</b>	<p><b>Inclusion of Children from Educationally backward classes</b></p> <ul style="list-style-type: none"> <li>● Understanding the existence of prejudice and discrimination faced by the students coming from educationally backward classes</li> <li>● Identifying the types of exclusion, the students face in their everyday life and in school premises as well</li> <li>● Understanding the impact of discrimination on the physical and mental health of the children</li> <li>● Implications of labeling the Child</li> </ul>



DAY 2

### **Inclusion of Children with special needs in the classroom I (for students dealing with Visual and Hearing Impairments, Students with Physical, Cognitive and Intellectual Disabilities)**

- Understanding the needs of **visually impaired** students (by adapting specific approaches: learning through non-visual modes such as touching, listening, smelling and tasting)
- Understanding the needs of the students with **hearing impairments** (by adapting specific approaches: using different senses such as gestures, body language, expressions, lip reading as mediums of learning, Using assistive devices such as hearing aid, loop system)
- Understanding the needs of students with **Physical, Cognitive and Intellectual Disabilities** by providing a supportive and welcoming environment through Inclusive Education by sensitizing other students and creating a sense of responsibility in them.

### **Inclusion of Children with special needs in the classroom II (Acts, Provisions, facilities available for students with special needs)**

- Understanding the type of challenges that children with special needs face in their everyday life and in school as well
- Understanding the acts and provisions for the children with special needs in the country.
- Understanding the role of teachers for dealing with students with special needs in heterogeneous classroom environment
- Understanding the psychological impact of exclusion on students with special needs

Lunch Break

### **Inclusion in Practice: Provisions and Applications**

- Accepting inclusion in education in order to combat gender discrimination, class discrimination
- Understanding the measures and approaches to eliminate discrimination in school as well as in the society
- Creating barrier-free environment in school
- Awareness regarding Myths and Realities and capacity building of the CwSN



DAY 3

### Continuous Comprehensive Evaluation in Inclusive Education system

- Identifying what the students already knows by focusing on his/her abilities, strengths and needs.
- Recognizing different learning styles as children can respond in variety of ways.
- Encouraging cooperative learning activities where every student is seen as an equal in human.
- Evaluation Strategies Based on Universal Design for Learning.

### Solutions to some of the Concerns faced by teachers while adapting Inclusive Education

- Identifying some common problems faced by teachers while adapting Inclusive Education by detailed explanation
- Addressing diversities in learning styles, with case studies and activities.
- Development of Teaching Plan.

Lunch Break

### Some tips for Planning Continuous Comprehensive Evaluation in an Inclusive Classroom

- Advisories and written guidelines to be given to the teachers on the handling of these CwSN, in the classroom and beyond.
- Discussion followed by wrapping up the session, conclusion and feedback.



Introduction session by Dr. Abhijit Kar, Scientific Officer, JBNSTS, Kolkata & Nodal Officer, Training Program on Inclusive Education

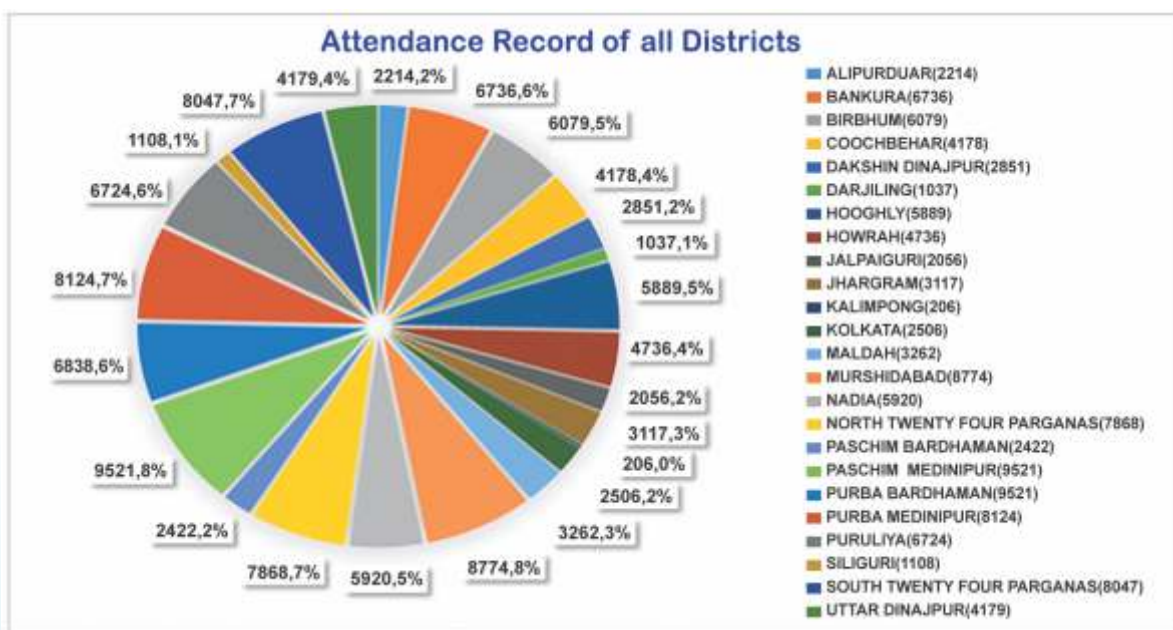


## Present Status of the Program:

Phase-1 of the program was conducted during May- July 2022. Participants (2 numbers from each school) from all 5 different categories of schools (WB Govt/ WB Govt. sponsored), i.e. Primary, Upper Primary, Secondary & Higher Secondary, SSK, and MSK have been registered through JBNSTS digital platform. For smooth transmission of the program, participants consisting of 24 educational districts of West Bengal were divided into three different slots, comprising of 8 districts under each slot. The sensitization program was conducted during (14-17) July, (20– 22) July, and (27-29) July 2022, through online mode.

### Participants statistics in a nutshell

Total number of (primary + upper primary + secondary & higher secondary + SSK + MSK) schools	81201
Total number of educational districts	24
No of teachers targeted (@ 2participants from each school)	162402
Total registered participants	144770



The phase – 2 program is presently underway. This program is being conducted through the online platform of JBNSTS and the participants are getting scope to interact with the resource persons for the better understanding of their roles and responsibilities on handling the CwSN. Each group will consist of approximately 200 participants and the teachers will be divided into almost 700 groups.

## Tentative session plan for phase - 2

	Session I	Session II	Session III	
DAY 1	How to screen and identify different disabilities – a detailed approach with case studies and guidelines	Cause prevention and referral services for different disabilities : part-1	Lunch Break	
DAY 2	Importance of TLM, assistive & adaptive devices in the inclusive classroom	Understanding of the importance of curriculum adaptation in inclusive education		Cause prevention and referral services for different disabilities part-2
DAY 3	Concession, Benefits & schemes for children with disabilities.	Addressing Mental Health issues in the inclusive classroom.		Universal Design for Learning based lesson plan for inclusive education
			Presentation of success stories of persons with disabilities.	

### Resource Person Mentoring Camp

Phase -2 of this training program has been planned to be conducted for three days (for each group of participants) and the program topics were thoughtfully distributed in 9 different sessions across these three days. This training program has been planned to be organised through online mode through live interactive classes. In order to conduct the second phase of the CwSN training program through online live interactive classes, it was necessary to have a pool of resource persons for taking the classes online.

In this connection, a 2-day Resource Person Generation Camp on “Inclusive Education for CwSN” was organized at JBNSTS during (11-12) May, 2023. Several highly renowned speakers in this field were invited as mentors to train the mentee resources persons required for the phase 2 of the program. Different eminent resource persons from different district and different organization, having valid RCI (Rehabilitation Council of India) number were applied through the web portal and participated in the camp. The program in this **Resource Person Generation Camp** was scheduled with nine sessions and a



Lecture session during workshop by Prof. Bishnupada Nanda



panel discussion. Two parallel sessions were organized due to large number of participation. A panel of Master Resource Persons discussed the objective and program planning of this CwSN program for the phase-2 and accordingly trained the participating resource persons. During workshop their interaction and suggestion helped us to improve content and deliverable of this training program. After completion of the lecture session, there was a panel discussion session on the 2nd day (12.05.2023) for concluding the outcome of the camp.



Further, during June-July 2023, these trained resource persons were requested for delivering their preparedness of acting as resource persons for this CwSN training program (phase-2) through online mode. Based on their demonstration a final list of future resource persons was selected for this phase-2 of the CwSN training program. The program details are given below.

Total applied for Resource person (through Google form)	128
Total Participants for Resource Person	105
Total number of resource persons selected for the second phase	79

Speakers	Title/Topic
<b>Dr. Parimal Bera</b> National Institute for Empowerment of Persons with Multiple Intellectual Disabilities (NIEPMD), Kolkata	How to screen and identify different disabilities – A detailed approach with case studies & guidelines
<b>Prof (Dr.) Bishnupada Nanda</b> Department of Education, Jadavpur University, Kolkata	Cause, prevention & referral services for different disabilities – Part 1 & Part 2
<b>Dr. Ratan Sarkar</b> Head of the Department of Education, PK College, Contai	Concession, Benefits & Schemes for children with disabilities
<b>Ms. Lipika Bhattacharyya</b> Senior Consultant in Special Education	Importance of TLM, assistive & adaptive devices in the inclusive classroom Presentation of Success stories of persons with disabilities
<b>Prof (Dr.) Mallika Banerjee</b> Professor and Dean, Techno India University, (Ex-professor, University of Calcutta and Emeritus Professor, Sarojini Naidu College and State University)	Addressing Mental health issues in the inclusive classroom including therapeutic issues
<b>Dr. Anamika Sinha</b> Director, Manovikas Kendra, Kolkata	Understanding of the importance of curriculum adaptation in inclusive education



Glimpses of Resource Person Generation Camp on  
 “Inclusive Education for CwSN” held on 11-12<sup>th</sup> May, 2023 at JBNSTS

			
A two days' "Resource Person mentoring Camp on Inclusive Education for CwSN" (For Phase - 2 of the ongoing CwSN program) Date: 11 <sup>th</sup> & 12 <sup>th</sup> May, 2023			
Venue: Jagadis Bose National Science Talent Search, 1300, Rajdanga Main Road, Kasba, Kolkata-700107, West Bengal, India			
Program Schedule			
Day - 1 (11 <sup>th</sup> May, 2023) (Thursday)			
Registration & Breakfast 8:30 a.m.- 9:30 a.m.			
Welcome Address 9:30 a.m.- 10:00 a.m.		Prof. (Dr.) Maitree Bhattacharya, Director, JBNSTS, Kolkata	
Introduction & Program Overview 10:00 a.m.		Dr. Abhijit Kar, Scientific Officer, JBNSTS, Kolkata & Nodal Officer, Training Program on Inclusive Education	
Parallel Session			
Group-1 (Place: Auditorium)		Group-2 (Place: 3 <sup>rd</sup> Floor Hall)	
10:00 a.m.- 11:30 a.m.	Dr. Parimal Bera, Lecturer in Special Education, NIEPID, RCK	10:00 a.m.- 11:30 a.m.	Prof. Mallika Banerjee Professor & Dean Techno India University
11:30 a.m.- 11:45 a.m.	Tea Break	11:30 a.m.- 11:45 a.m.	Tea Break
11:45 a.m.- 1:15 p.m.	Prof. Bishnupada Nanda, Department of Education, Jadavpur University	11:45 a.m.- 1:15 p.m.	Dr. Ratan Sarkar, Lecturer in Special Education & Head, Department of Education, Prabhat Kumar College
1:15 p.m.- 2 p.m.	Lunch Break	1:15 p.m.- 2 p.m.	Lunch Break
2:00 p.m.- 3:30 p.m.	Prof. Bishnupada Nanda, Department of Education, Jadavpur University	2:00 p.m.- 3:30 p.m.	Ms. Lipika Bhattacharjee, Senior Consultant, Special Education
3:30 p.m.- 5:00 p.m.	Prof. Mallika Banerjee Professor & Dean Techno India University	3:30 p.m.- 5:00 p.m.	Dr. Parimal Bera, Lecturer in Special Education, NIEPID, RCK
5:00 p.m.- 5:15 p.m.	Tea Break & Attendance	5:00 p.m.- 5:15 p.m.	Tea Break & Attendance
5:15 p.m.- 6:45 p.m.	Dr. Ratan Sarkar, Lecturer in Special Education & Head, Department of Education, Prabhat Kumar College	2:30 p.m.- 3:30 p.m.	Ms. Lipika Bhattacharjee, Senior Consultant, Special Education
	Concession, Benefits & Schemes for children with disabilities		Presentation of success stories of persons with disabilities



Day - 2 (12 <sup>th</sup> May, 2023) (Friday)					
9:00 a.m.- 10:00 a.m.	Registration & Breakfast				
<b>Parallel Session</b>					
<b>Group-1 (Place: Auditorium)</b>			<b>Group-2 (Place: 3<sup>rd</sup> Floor Hall)</b>		
10:00 a.m. - 11:30 a.m.	Dr. Anamika Sinha, Director, Manovikas Kendra	Understanding of the importance of curriculum adaptation in inclusive education	10:00 a.m. - 11:30 a.m.	Prof. Bishnupada Nanda, Department of Education, Jadavpur University	Cause, prevention and referral services for different disabilities - part 1
11:30 a.m. - 11:45 a.m.	Tea Break		11:30 a.m. - 11:45 a.m.	Tea Break	
11:45 a.m.- 1:15 p.m.	Ms. Lipika Bhattacharjee, Senior Consultant, Special Education	Importance of TLM, assistive & adaptive devices in the inclusive classroom	11:45 a.m.- 1:15 p.m.	Prof. Bishnupada Nanda, Department of Education, Jadavpur University	Cause, prevention and referral services for different disabilities - part 2
1:15 p.m.- 2 p.m.	Lunch Break		1:15 p.m.- 2 p.m.	Lunch Break	
2:00 p.m. - 3:30 p.m.	Dr. Parimal Bera, Lecturer in Special Education, NIEPID, RCK	Universal Design for Learning based lesson plan for inclusive education	2:00 p.m. - 3:30 p.m.	Dr. Anamika Sinha, Director, Manovikas Kendra	Understanding of the importance of curriculum adaptation in inclusive education
3:30 p.m. - 5:00 p.m.	Ms. Lipika Bhattacharjee, Senior Consultant, Special Education	Presentation of success stories of persons with disabilities	3:30 p.m. - 5:00 p.m.	Dr. Parimal Bera, Lecturer in Special Education, NIEPID, RCK	Universal Design for Learning based lesson plan for inclusive education
5:00 p.m. - 5:15 p.m.	Tea Break		5:00 p.m. - 5:15 p.m.	Tea Break	
5:15 p.m. - 6:45 p.m.	Panel Discussion & Vote of Thanks		5:15 p.m. - 6:45 p.m.	Panel Discussion & Vote of Thanks	



▶ Lecture session during workshop by  
**Dr. Parimal Bera**

Lecture session during workshop by  
**Dr. Ratan Sarkar** ▶



▶ Lecture session during workshop by  
**Prof. (Dr.) Mallika Banerjee**



## Annual Award Ceremony 2022

### Recognition and honoring the attainment of significant educational milestone

In an academic institution such as JBNSTS, the annual award program is no doubt the most awaited event in the academic calendar of the institute since it marks the culmination of the journey of accomplishing excellence in science by the student scientists during the entire span of the year. Each year, JBNSTS welcomes a group of bright, vibrant youngsters from all across West Bengal in the presence of distinguished personalities.

The 63<sup>rd</sup> edition of Annual Award Ceremony was held on 28 January, 2023 at Derozio Hall, Presidency University, Kolkata. Sri. Bratya Basu, Hon'ble Minister-in-Charge of the Department of School Education & Higher Education, Govt. of West Bengal had consented to assume the position of chief guest and graced the ceremony. The entire program was bifurcated into two halves. The first being academic session where, Prof. Suman Chakraborty, the Infosys awardee for the year 2022, delivered an outstanding lecture to ignite the minds of the young talented students which reflected upon the interdisciplinary aspect of science education. In his enlightening deliberation titled “**Democratizing the Right to Good Health – Science touches Society**”, the eminent scientist also dwelled on the dynamic patterns of STEM education. In the awards distribution, chapter, JBNSTS welcomed Sri. Bratya Basu, who along with other dignitaries, namely, Prof. (Dr.) Amitava Raychaudhuri, Prof. (Dr.) Dhruvajyoti Chattopadhyay and Prof. Suman Chakraborty inaugurated the ceremony. Thereafter, in his address towards the scholars, awardees, teachers and parents, the Honb'le Minister acknowledged





the remarkable progress of JBNSTS over the years into being identified as one of the premier organizations in science education. Sri Bratya Basu reiterated the steadfast support of the Government of West Bengal towards JBNSTS in the continual journey as an institution in the academic ecosystem of the state.

The trail of proceedings was initiated by Prof. (Dr.) Maitree Bhattacharyya, the director of JBNSTS who cited the message from our Honb'le Chief Minister, Mamata Banerjee before the audience and esteemed dignitaries. The award distribution session was pulsating with energy and enthusiasm as the 400 odd young scholars and awardees made their way to the dais to receive their respective scholarship certificates from the dignitaries. In the presidential lecture, Prof. (Dr.) Amitava Raychaudhuri urged the scholars and awardees to build their careers upon the bedrock of the glorious educational lineage of JBNSTS that they have attained and demonstrate the worthiness of the honor thus received in areas of activities thus adhering to performing responsibilities towards the society and the nation. The top ten boys and top ten girls in the senior scholarship category were presented with advanced licensed software enabled laptops to facilitate their further academic pursuits in the domain of web-based science education. In the best school awards, South Point High School, Delhi Public School – Ruby Park, Ramakrishna Mission Ashrama, Narendrapur were presented with honors and trophies in Senior Scholarship, Junior Bigyani Kanya Medha Britti and Junior Scholarship categories respectively.







## Activity Calendar 2023

### JANUARY 2023

**January 9-11, 2023:** JBNSTS Teachers' Training Program for 60 middle & high school science teachers from different Govt. or Govt. aided schools of Howrah District, West Bengal.

**January 18, 2023:** Biotechnology [Hands-on Workshop] for 20 High School students of Taki Govt. Girls' High School, Kolkata.

**January 28, 2023:** 63<sup>rd</sup> Annual Award Ceremony for batch of Scholars and Awardees 2022 at Derozio Hall, Presidency University, Kolkata.

### February 2023

**February 4<sup>th</sup> and 5<sup>th</sup>, 2023:** Capacity Building Program for JBNSTS employees at Santiniketan, Birbhum.

**February 16, 2023:** Biotechnology [Hands-on Workshop] for 20 High School students of Santoshpur Rishi Aurobindo Balika Vidyapith.

**February 25-27, 2023:** ASTRONOMY CAMP & TRAINING ON SKY OBSERVATION

at Deul Park, West Bardhaman for 65 senior scholars & Senior Bigyani Kanya Medha Britti Awardees of 2020 & 2021 batches under the aegis of Talent Enrichment Program, JBNSTS in collaboration with Sky Watchers' Association, Dhakuria.

### March 2023

**March 27-31, 2023:** Nurturing Camp for the 200 scholars selected at state level through three tier Examination of Vidyasagar Science Olympiad, an initiative of School Education Department, Govt. of West Bengal and organized by JBNSTS.

### April 2023

**April 17-20, 2023:** Science Orientation Workshop for District Students' (WBDS) for 58 students of Geonkhali High School (H.S), Byabattarhat Adarsha High School (H.S) & Mahishadal Gayeswari Girls' High School of Purba Medinipur, West Bengal.

**April 25-28, 2023:** JBNSTS Teachers' Training Program for 54 middle & high school science teachers from different Govt. or Govt. aided schools of Bankura, Paschim Bardhaman & Nadia, West Bengal.



## May 2023

**May 7, 2023:** 1st layer examination of Vidyasagar Science Olympiad 2023, an initiative by School Education Department, Govt. of West Bengal and organized by JBNSTS for the selected students of class IX from each of the 519 unit of West Bengal. At 389 examination centres across the state **35,176** candidates applied in this examination.

**May 11-12, 2023:** A two-day Resource Person Mentoring Camp on Inclusive Education for Phase - 2 of the ongoing CwSN program with financial support from School Education Department, Govt. of West Bengal.

**May 15-19, 2023:** Science Orientation Workshop for District Students' (WBDS) for **54** students of class VIII of Bankimnagar Adarsha Vidyapith, Bishnupur High School & Aranghata Girls' High School of Nadia, West Bengal.

**May 22-25, 2023:** Nurture Program I for Junior Scholars and JBKMB Awardees of 2021 & 2022 Batch.

**May 29 - June 1, 2023:** Nurture Program II for Junior Scholars and JBKMB Awardees of 2021 & 2022 Batch.

## June 2023

**June 5-9, 2023:** Science Orientation Workshop for District Students' (WBDS) for **53** students of class VIII from Bansidi High School, Krishnanagar Jatindra Kiran High School (HS), Haludkanali S.C High School & Saluipahari High School of Bankura, West Bengal.

**June 12-16, 2023:** Science Orientation Workshop for District Students' (WBDS) for **53** students of class VIII from Basirhat P.C.M Girls' High School (H.S), Basirhat H.M.D. Girls' High School, Gopalnagar Haripada Institution of North 24 Parganas and Debnagar Mokshoda Dinda H.S. School of South 24 Parganas, West Bengal.

**June 21-24, 2023:** JBNSTS Teachers' Training Program for **57** middle & high school science teachers from different Govt. or Govt. aided schools of Purba Medinipur & Paschim Medinipur District, West Bengal.

## July 2023

**July 1-2, 2023:** A two-day Talent Enrichment Program "Those who make us proud" for Senior Scholars and Senior Bigyani Kanya Medha Britti Awardees of 2021 & 2022 Batch.

**July 4, 2023:** Biotechnology Hands-on Workshop for **24** High School students of Kamala Girls' School, Kolkata.

**July 17, 2023:** Commencement of Phase2 program of Teachers' Sensitization cum Orientation & Training Program on Inclusive Education for the Children with Special Needs (CwSN) for **144770** registered participants from 24 educational districts of West Bengal.



**July 18-21, 2023:** JBNSTS Teachers' Training Program for **58** middle & high school science teachers from different Govt. or Govt. aided schools of Purba Medinipur & Paschim Medinipur & Hooghly District, West Bengal.

**July 23, 2023:** 2<sup>nd</sup> layer examination of Vidyasagar Science Olympiad 2023, an initiative by School Education Department, Govt. of West Bengal and organized by JBNSTS for the students of class IX qualified from each of the 25 educational districts of West Bengal. At 26 examination centres across the state **3311** candidates appeared in this examination.

**July 26, 2023:** Biotechnology workshop [Hands-on experience] for the **28** high school students of Jodhpur Park Girls High School, Kolkata.

## August 2023

**August 1-2, 2023:** Royal Society of Chemistry Professional Development Programme for Science Teachers in collaboration with JBNSTS and IISER, Kolkata.

**August 11, 2023:** Biotechnology workshop [Hands-on experience] for the **24** high school students of Binodini Girls High School, Kolkata.

**August 20, 2023:** 64<sup>th</sup> Senior Talent Search Test 2023 held at 34 examination centres for **1572** candidates across West Bengal.

**August 20, 2023:** 9<sup>th</sup> Junior Talent Search Test 2023 held at 34 examination centres for **8720** candidates across West Bengal.

**August 23-29, 2023:** Talent Enrichment Program in Collaboration with CSIR Institute of Genomics and Integrative Biology (IGIB), New Delhi for Senior Scholars and SBKMB awardees of 2021 & 2022 Batches.

## September 2023

**September 10, 2023:** 3<sup>rd</sup> layer examination of Vidyasagar Science Olympiad 2023, an initiative by School Education Department, Govt. of West Bengal and organized by JBNSTS for the students of class IX qualified from each of the **24** educational districts of West Bengal. At 23 examination centres across the state **637** candidates appeared in this examination.

**September 14, 2023:** Biotechnology workshop [Hands-on experience] for the **21** high school students of Jadavpur Vidyapith, Kolkata.

**September 19-22, 2023:** JBNSTS Teachers' Training Program for **98** middle & high school science teachers from different Govt. or Govt. aided schools of North and South 24 Parganas District, West Bengal.

**September 30-October 01, 2023:** Talent Enrichment Program "Love for Physics" at JBNSTS for Senior Scholars and Senior Bigyani Kanya Medha Britti awardees of 2020, 2021 & 2022 batches.



## October 2023

**October 03-09, 2023:** Talent Enrichment Program in (collaboration) with Indian Academy of Sciences, Bangalore for Senior Scholars and SBKMB awardees of 2021 & 2022 Batches.

**October 07-08, 2023:** Interview for 327 candidates qualified from the 1<sup>st</sup> phase (Written Test) of Senior Talent Search Test 2023.

**October 09-12, 2023:** JBNSTS Teachers' Training Program for 87 middle & high school science teachers from different Govt. or Govt. aided schools of Kolkata, North and South 24 Parganas District, West Bengal.

## December 2023

**December 01 -03, 2023:** Scientific Creativity Test for the 142 candidates qualified from the interview phase of the Senior Talent Search Test 2023.

**December 08, 2023:** One-day seminar at JBNSTS on “AFRL overview and International Outreach” for Senior Scholars and SBKMB awardees.

**December 09-10, 2023:** Interview for 478 candidates qualified from the 1<sup>st</sup> phase (Written Test) of Junior Talent Search Test 2023.

**December 18, 2023:** Publication of final result of JTST & STST Examination 2023.

**December 19-22, 2023:** Science Orientation Workshop for District Students' (WBDS) for 52 students of class VIII from Patiram High School, Balurghat Girls' High School, Gangarampur High School, Dakshin Dinajpur, West Bengal.

“When the world is in  
trouble, chemistry comes to its  
rescue”

**Carolyn Bertozzi**  
(Nobel Prize winner in  
Chemistry, 2022)



## JBNSTS Scholars' Achievements

- ❖ **Dr. Neeraj Kayal**, a former Scholar of our institute (1996) and currently a researcher at Microsoft Research Lab, Bangalore was awarded with Shanti Swaroop Bhatnagar Prize for the year – 2022. He is also a recipient of the coveted Infosys Prize in the year 2021 in Mathematical Sciences for his outstanding contributions to Computational Complexity. It is a heartening initiative from Dr. Kayal, who donated a substantial portion of his Bhatnagar award money to his alma-mater, JBNSTS.



- ❖ **Nilanjan Ghosh**, a Senior Scholar of 2022 batch participated in the final round of the International Astronomy and Astrophysics competition, 2023 and obtained Bronze Honour. Nilanjan also secured Second Position in quiz Competition of World Space Week, 2022 organised by National Remote Sensing Centre, ISRO, Dept. of Space, Hyderabad. He was honored with a certificate along with a photo of GLSV MK-III (44 cm\*33 cm).
- ❖ **Debbani Patra**, a Junior and Senior Scholar in the years 2017 and 2019 respectively, obtained the first position in 3rd Year Part 1 MBBS Professional exam with Grand Honours (75%) in all the 4 subjects (Community Medicine, Forensic Medicine, Otorhinolaryngology and



Ophthalmology). She is also a recipient of Gold Medal in Community Medicine, ENT & Head and Neck Surgery and Forensic Medicine & Toxicology.

- ❖ **Nibedita Mukherjee**, a Senior Scholar of 2001, currently a senior lecturer in Brunel University London has been recently awarded with the British Ecological Society Engagement Award for her work with the United Nations Environment Programme since 2017.
- ❖ **Sautam Bhattacharya**, a Junior and Senior Scholar in the years 2017 and 2019 respectively, have been selected as Khorana Scholar 2023. He is one of the Doctors (medical student) from West Bengal to attain the scholarship. He is currently pursuing medicine in the Final year at IPGMER & SSKM Hospital.
- ❖ **Debopam Sil**, a Senior Scholar of 2019, has obtained the 1st position in Dr. C.S. Dawn memorial symposium for current undergraduate students, in January 2023; his topic being, Polycystic Ovarian Syndrome. A recipient of Dr. Tarun Banerjee medal for best undergraduate speaker, Debopam's paper titled "Hybrid Learning in Medical Curriculum: Perception of Medical students of a dedicated COVID Hospital in Eastern India" was accepted for publication in the Indian Journal of Public Health Research and Development (Jan-Mar 2024 issue). He also received certification in Basic Life Support at Aesculapia 2023, under supervision of Department of General Medicine, Medical College and Hospital, Kolkata.

**“Mathematics began to seem too much like puzzle solving. Physics is puzzle solving, too, but of puzzles created by nature, not by the mind of man.”**

**Maria Goeppert Mayer**  
(Nobel Prize winner in  
Physics, 1963)



ANNUAL REPORT 2023

# JBNSTS FUNDS AND ACCOUNTS

Investment in Science  
Education & Research :  
JBNSTS and Asset  
to the Society



## Financial Report 2022-23

JBNSTS is happy to report its financial progress during the Financial Year 2022-23. Significant receipts were from the Department of Higher Education, Government of West Bengal, Department of Science & Technology and Biotechnology, Government of West Bengal and Department of School Education, Government of West Bengal. The regular inflow of funds to the institution from multiple Government Departments reflects its image of high physical accountability of the expenditure.

The receipt from Department of Higher Education, Government of West Bengal for regular maintenance has been utilized to meet staff salaries and Office & Programme expenses. The funding in West Bengal Districts Scheme by Department of Higher Education Government of West Bengal helps us to conduct programs in remote village schools including Jungal Mahal and hill area. We have conducted various Science Workshops for more than 600 students of 30 schools from different districts of West Bengal during the year 2022-23.

The Department of Science & Technology and Biotechnology, Government of West Bengal also released funds for Junior Talent Search Programme and Junior Bigyani Kanya Medha Britti Programme, Senior Talent Search Programme, Senior Bigyani Kanya Medha Britti which have a great impact. 200 Junior Scholarships and 50 Junior Bigyani Kanya scholarships to 50 girl students have been awarded scholarship of Rs. 1,250/- per month with an annual book grant of Rs. 2,500/- each, Along with 50 Senior Scholars and 50 Senior Bigyani Kanya Medha Britti awardees received scholarship of Rs. 4,000/- per month with an annual book grant of Rs. 5,000/- each. Also 20 laptops for top 10 boys and top 10 girls here awarded during this financial year for top.

The School Education Department, Government of West Bengal also sanctioned their recurring grants for Vidyasagar Science Olympiad program for students of Class IX and Class X students and Sensitization cum orientation & training program of teachers for education of Children with Special Needs (CWSN).

At a glance the amounts received from different government departments are as follows:

<b>Financial years</b>	<b>2022-23</b>
<b>Department Higher Education, Government of West Bengal</b>	
For Salary & Maintenance	Rs. 2,05,88,005/-
<b>Department Science &amp; Technology and Biotechnology, Government of West Bengal</b>	
Senior Scholarship & Senior Bigyani Kannya Medha Britti	Rs. 2,92,70,000/-
Junior Scholarship & Junior Bigyani Kannya Medha Britti	Rs. 1,77,58,500/-
For Biotechnology Laboratory	Rs. 49,60,000/-
<b>Department of School Education, Government of West Bengal</b>	
Vidyasagar Science Olympiad program	Rs. 2,76,74,200/-
Child with Special Need programme (CWSN)	Rs. 25,00,000/-
<b>Vigyan Prasar, Department Science &amp; Technology, Government of India</b>	Rs. 24,77,001/-

### Donations for the year 2022-23

<b>Fund</b>	<b>Donor Name</b>	<b>Amount (Rs.)</b>
Development fund -corpus	Dr. Biswadeep Nag	Rs. 1,00,000/-
Development fund -corpus	Dr. Debades Bandhop[adhyay	Rs. 9,000/-
Laboratory fund -corpus	Dr. Niladri Banerjee	Rs. 3,500/-

The audited accounts of the institution are reported in the following pages.





**D. Niyogy & Co.**  
Chartered Accountants

## INDEPENDENT AUDITOR'S REPORT

**To the Management of Jagadis Bose National Science Talent Search**

### **Opinion**

We have audited the financial statements of Jagadis Bose National Science Talent Search (the society) which comprise the Balance Sheet as at 31st March, 2023, Income and Expenditure Statement and the Receipts & Payments Statement for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In our opinion and to the best of our information and according to the explanations given to us, the accompanying financial statements give a true and fair view of the financial position of the society as at 31st March, 2023, and of its financial performance and cash flows for the year then ended in accordance with the accounting principles generally accepted in India.

### **Basis for Opinion**

We conducted our audit in accordance with the Standards on Auditing (SAs) issued by ICAI. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are independent of the society in accordance with the ethical requirements that are relevant to our audit of the financial statements in India, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

### **Emphasis of Matter**

We draw attention to Point Number 4 in the Notes on Accounts, forming a part of the financial statements which reads as follows:

“The following Grant Unspent balances, included in Annexure D, forming a part of Financial Statements, are being carried forward in the books for more than 3 years. The Society has taken efforts to settle some other Unspent Balances during the reporting period but due to COVID restrictions the following unspent balances still remained outstanding as at 31.03.2023. The management estimates to spend the undermentioned unspent balances in FY 2023-24.



Sl. No.	Name of the Project	Unspent
1	DST - (WAST)	2,831.75
2	Maulana Abul Kalam Azad Instt. of Asian Studies (MAKAIAS) Dr. Paromita Roy	1,658.00
3	Ministry of North East Region (MDoNER)	1,200.75
4	Department of Science & Technology (DST)	47,293.05
5	Junior Talent Search Test (DHE - JTST)	24,46,458.00

It is advisable that the management of the reporting Society should take immediate steps to ascertain whether the Grant Overspent balances are at all recoverable or not and thereby should write off such irrecoverable balances immediately. Similarly, the Unspent Grant Balances if not verifiable or corresponding confirmations from respective Government Departments if cannot be obtained, shall be reviewed for write back after taking necessary approvals. It is worth mentioning that no interest has been provided in the accounts on such Unspent Grant balances.

Our opinion is not modified in respect of this matter.

#### **Responsibilities of Management and Those Charged with Governance for the Financial Statements**

Management is responsible for the preparation and fair presentation of the financial statements in accordance with the aforesaid generally accepted accounting principles in India, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error. In preparing the financial statements, management is responsible for assessing the society's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the society or to cease operations, or has no realistic alternative but to do so. Those charged with governance are responsible for overseeing the society's financial reporting process.

#### **Auditor's Responsibilities for the Audit of the Financial Statements**

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with generally accepted accounting principles in India will always detect a material misstatement when it exists.



Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

A further description of the auditor's responsibilities for the audit of the financial statements is located at ICAI website at: <https://www.icaai.org>. This description forms part of our auditor's report.

### **Report on Other Legal and Regulatory Requirements**

We report that:

- a. we have sought and obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purpose of our audit;
- b. the financial statements dealt with by this Report include the transactions related to foreign contribution received and utilised under the Foreign Contribution (Regulation) Act, 2010;
- c. in our opinion, proper books of account as required by law have been kept by the society so far as appears from our examination of those books;
- d. the Balance Sheet, the Statement of Income and Expenditure and Statement of Receipts & Payments Account, dealt with by this Report are in agreement with the books of account.

For and on behalf of,

**Date : 04.08.2023**  
**Place: Kolkata**

**D. Niyogy & Co.**  
**Chartered Accountants**  
**Firm Registration No.: 309133E**

**(CA. Dushmanta Niyogy)**  
**Proprietor,**  
**Membership No.: 016707**

**UDIN: 23016707BGXMEB5103**



## JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH

1300, RAJ DANGA MAIN ROAD, KASBA, KOLKATA - 700 107

### BALANCE SHEET AS ON 31ST MARCH, 2023

PREVIOUS YEAR ₹	DESCRIPTION	SCHEDULES	CURRENT YEAR ₹	
<b>SOURCES OF FUNDS</b>				
44,487,135.42	Land & Building Fund	A	52,010,585.42	
14,574,065.20	Movable Properties Fund	B	13,816,478.20	
58,082,661.10	Other Funds	C	63,772,101.84	
42,093,512.40	Unutilised Grants	D	49,645,234.86	
25,419,865.60	Current Liabilities	E	28,325,461.00	
437,924.00	Other Deposits	F	428,158.00	
<b>185,095,163.72</b>	<b>TOTAL</b>		<b>207,998,019.32</b>	
<b>APPLICATION OF FUNDS</b>				
44,487,135.42	Land & Building	G	52,010,585.42	
14,574,065.20	Movable Properties	G	13,816,478.20	
-	Land & Building Fund Investments	H	-	
-	Movable Properties Fund Investments	I	-	
88,219,271.00	Other Investments	J	106,266,072.00	
9,904,783.49	Loans & Advances	K	487,532.14	
27,909,908.61	Cash & Bank Balances	L	35,417,351.56	
<b>185,095,163.72</b>	<b>TOTAL</b>		<b>207,998,019.32</b>	
On behalf of the Governing Body		In terms of our report of even date attached herewith For <b>D. Niyogy &amp; Co.</b> Chartered Accountants FRN: 30133E		
<b>Prof (Dr.) Maitree Bhattacharyya</b> Director		<b>CA. Dushmanta Niyogy</b> Proprietor Membership No.: 016707 UDIN: 23016707BGXMEB5103		
Kolkata Date: 4th August, 2023				





**JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH**  
1300, RAJ DANGA MAIN ROAD, KASBA, KOLKATA - 700 107

**INCOME AND EXPENDITURE ACCOUNT FUNDS ACCOUNT FOR THE YEAR ENDED 31ST MARCH, 2023**

Previous Year	Particulars	Sch	Project / Program Activities	Scholars' Reserve Fund	Development Fund	Laboratory Fund	JBNSTS - Own Generation Fund	Staff Welfare & Medical Fund	Infrastructure Development Fund	Total
₹		₹	₹	₹	₹	₹	₹	₹	₹	₹
	<b>INCOME</b>									
	<b>General :</b>									
69,385,528.32	Grant-in-aid		97,118,625.46	-	-	-	-	-	-	97,118,625.46
10,000.00	Donations		-	-	109,000.00	3,500.00	-	-	-	112,500.00
5,086,504.92	Interest on Investments		-	857,146.10	961,019.91	103,909.77	2,872,568.55	76,914.62	83,237.05	4,954,796.00
703,529.00	Interest earned on Savings / Short-term Dep		31,155.00	283,689.00	412,513.00	-	206,852.00	-	-	934,209.00
1,550,421.00	Registration Fees (For Senior/Junior Talent		-	-	-	-	1,549,791.00	-	-	1,549,791.00
	- Search Tests)		-	-	-	-	-	-	-	-
	- Miscellaneous Other Receipts		-	-	13,201.74	-	-	-	-	13,201.74
	- Rent Earned		-	-	-	-	-	-	-	-
	- Accommodation		-	-	-	-	35,500.00	-	-	35,500.00
	- Liabilities Written Back		-	-	-	-	-	-	-	-
	- Overhead		-	-	-	-	188,100.00	-	-	188,100.00
<b>76,735,983.24</b>	<b>Total Income</b>	<b>(A)</b>	<b>97,149,780.46</b>	<b>1,140,835.10</b>	<b>1,495,734.65</b>	<b>107,409.77</b>	<b>4,852,811.55</b>	<b>76,914.62</b>	<b>83,237.05</b>	<b>104,906,723.20</b>
	<b>EXPENDITURES</b>									
	<b>General :</b>									
<b>74,381,896.32</b>	<b>Expenses</b>		96,063,358.46	212,000.00	-	-	961,524.00	52,468.00	-	<b>97,289,350.46</b>
	- Programme Expenses									
<b>74,381,896.32</b>	<b>Total Expenditure</b>	<b>(B)</b>	<b>96,063,358.46</b>	<b>212,000.00</b>	-	-	<b>961,524.00</b>	<b>52,468.00</b>	-	<b>97,289,350.46</b>
2,354,086.92	Surplus for the Year		1,086,422.00	928,835.10	1,495,734.65	107,409.77	3,891,287.55	24,446.62	83,237.05	7,617,372.74
	Less: Capital Expenses met out of Revenue Income									
	- Land & Building Fund									
<b>515,793.00</b>	<b>Movable Properties Fund</b>		1,086,422.00		<b>841,510.00</b>					<b>1,927,932.00</b>
<b>1,838,293.92</b>	<b>Net Surplus for the Year (A-B)</b>		-	<b>928,835.10</b>	<b>654,224.65</b>	<b>107,409.77</b>	<b>3,891,287.55</b>	<b>24,446.62</b>	<b>83,237.05</b>	<b>5,689,440.74</b>

In terms of our report of even date attached herewith

For D. Niyogy & Co.  
Chartered Accountants  
FRN: 30133E

Sd/-  
**CA. Dushmanta Niyogy**  
Proprietor  
Membership No.: 016707  
UDIN: 23016707BGXMEB5103

On behalf of the Governing Body

Sd/-  
**Prof. ( Dr. ) Maitree Bhattacharyya**  
Director

KOLKATA  
The 4th August, 2023



## JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH

1300, RAJ DANGA MAIN ROAD, KASBA, KOLKATA - 700 107

### RECEIPTS & PAYMENTS ACCOUNT FOR THE YEAR ENDED 31.03.2023

RECEIPTS	RS	PAYMENTS	RS
<b>Revenue Income</b>		<b>Revenue Payments</b>	
Grant-in Aid from Govt.	97,118,625.46	Establishment Expenses :	
Registration fee's received	1,549,791.00	Salaries & Wages	13,743,048.00
Income from Investments	5,889,005.00	Office and Administrative Expenses	7,339,400.12
Miscellaneous and other receipts	188,100.00	Project Programme Activities	
Liabilities written Back	-	Expenses funded by Govt.	74,980,910.34
Accommodation Income	35,500.00	Scholars Reserve Fund	-
Interest on SD Electricity	13,201.74	Expenses	212,000.00
		Development Fund	-
		Expenses	-
		JBNSTS Own Generation Fund	
		Expenses	961,524.00
		Staff Welfare & Medical Fund	
		Expenses	52,468.00
		Loss on Sale of/ Written Off :	
		Investment	-
		Fixed Assets	-
		Movable Properties	
<b>Capital Income</b>		<b>Capital Payments</b>	
Land & Building Fund :		Fixed Assets Additions	
Donations/Gifts	-	Land & Building (Purchase/Gift)	10,164,000.00
Government/Public Bodies Grants	10,164,000.00	Building (Construction Work in progress)	
Income from Investments	-	Electrical Installation & Equipment	232,880.00
Investments withdrawn	-	Furniture, Equipment	869,006.00
Movable Properties Fund :		Computers	671,821.00
Donations/Gifts	-	Electrical Equipment & Generator	154,225.00
Government/Public Bodies Grants	-	Medical Equipment, Instruments	-
Income from Investments	-	Laboratory Equipments	-
Investments withdrawn	-	Bicycles/Cycle-rikshaws	-
JBNSTS Own Fund :		Motor Cars, Jeeps, etc.	-
Other Investments withdrawn	-	Buses, Lorries, Tractors, etc.	-
Development fund Donation	112,500.00	Library Books	-
		Endow / Permanent Fund Investments	-
		Land & Building Fund Investments	-
		Movable Prop. Fund Investments	-
		Development Fund Investments	654,224.65
		Scholar Reserve Fund Investments	928,835.10
		Other Investments	17,229,034.87
Closing Unspent Grant	49,645,234.86	Opening Unspent Grant	42,093,512.40
Opening Grant Receivable	9,302,155.00	Closing Grant Receivable	87,317.92
Closing Sundry Deposits :		Opening Sundry Deposits :	
Caution Money	-	Caution Money	-
Students' Deposits	-	Students' Deposits	-
Security Deposits	428,158.00	Security Deposits	437,924.00
Loans & Advances :		Loans & Advances :	
Others	409,834.24	Electricity Deposit	-
Electricity Deposit	-	Others	193,919.95
Closing Current liabilities	28,325,461.00	Sundry Amount Receivable	-
		Opening Current Liabilities	25,419,865.00
<b>TOTAL</b>	<b>203,181,566.30</b>	<b>TOTAL</b>	<b>196,425,916.35</b>
Opening Balance	28,661,701.61	Closing Balance	35,417,351.56
<b>GRAND TOTAL</b>	<b>231,843,267.91</b>	<b>GRAND TOTAL</b>	<b>231,843,267.91</b>
Cash in Hand	27,466.00		
Cheques in Hand	-		
At Banks in SB & CD A/c	35,389,885.56		
<b>Total (Rs)</b>	<b>35,417,351.56</b>		

On behalf of the Governing Body

Sd/-

Prof. ( Dr. ) Maitree Bhattacharyya  
Director

For D. Niyogy & Co.  
Chartered Accountants  
FRN: 30133E

Sd/-

CA. Dushmanta Niyogy  
Proprietor

Membership No.: 016707

UDIN: 23016707BGXMEB5103

KOLKATA  
The 4th August, 2023

**JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH**

1300, RAJ DANGA MAIN ROAD, KASBA, KOLKATA - 700 107

**SCHEDULE - A : Land & Building Fund as at 31.03.2023**

<b>PARTICULARS</b>	<b>Land and Building Fund Rs.</b>
Credit Balance as at 01.04.2022	44,487,135.42
<b>ADD</b>	
Capital Grants	10,164,000.00
Development Fund (Out of Opening Balance)	-
Net Surplus as per I/E A/c (II)	
<b>A TOTAL Rs.</b>	<b>54,651,135.42</b>
<b>Less</b>	
Depreciation on Assets (Contra)	2,640,550.00
Transfer to different funds	
Net Deficit as per I/E A/c (II)	
<b>B Total Deduction Rs.</b>	<b>2,640,550.00</b>
Balance as at 31.03.2023 as per Balance Sheet (A-B) Rs.	<b>52,010,585.42</b>

**SCHEDULE - B : Movable Properties Fund as at 31.03.2023**

<b>PARTICULARS</b>	<b>Movable Properties Fund Rs.</b>
Credit Balance as at 01.04.2022	14,574,065.20
<b>ADD</b>	
Capital Grants	
Transfer From I/E A/c (II) for acquiring Capital Assets	1,927,932.00
Income from Investments	
Transfer from different funds	
Development Fund	-
Net Surplus as per I/E A/c (II)	
<b>A TOTAL Rs.</b>	<b>16,501,997.20</b>
<b>Less</b>	
Depreciation on Assets (Contra)	2,685,519.00
Transfer to different funds	
Net Deficit as per I/E A/c (II)	
<b>B Total Deduction Rs.</b>	<b>2,685,519.00</b>
Balance as at 31.03.2023 as per Balance Sheet (A-B) Rs.	<b>13,816,478.20</b>



**JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH**

1300, RAJ DANGA MAIN ROAD, KASBA, KOLKATA - 700 107

**SCHEDULE - C : OTHER FUNDS AS AT 31.03.2023**

PARTICULARS	Scholars Reserve Fund	Development Fund	Laboratory Funds	Special Reserve Fund	Contingency Fund	JBNSTS Own Generation Funds	Staff Welfare & Medical Funds	Infrastructure Development Funds	Retirement Benefit Fund
	₹	₹	₹	₹	₹	₹	₹	₹	₹
Credit Balance as at 01.04.2022	19,614,209.29	21,772,503.53	2,116,387.43	-	1,000,000.00	10,438,471.17	1,526,456.52	1,605,401.94	9,231.22
<b>ADD</b>									
Capital Grants									
Capital Donations									
(i.e. Corpus Donations) - Cash									
" - Kind									
" - Foreign Contribution									
Transfer From I/E A/c (II) for acquiring Capital Assets									
Transfer from different funds									
JBNSTS Own Generation Fund							100,000.00	100,000.00	
Net Surplus as per I/E A/c (II)	928,835.10	654,224.65	107,409.77			3,891,287.55	24,446.62	83,237.05	
<b>A TOTAL Rs.</b>	<b>20,543,044.39</b>	<b>22,426,728.18</b>	<b>2,223,797.20</b>	<b>-</b>	<b>1,000,000.00</b>	<b>14,329,758.72</b>	<b>1,650,903.14</b>	<b>1,788,638.99</b>	<b>9,231.22</b>
<b>Less</b>									
Transfer to different funds									
Out of Opening Balance									
Land & Building Fund									
Movable Properties Fund									
Out of Current Year									
Land & Building Fund									
Movable Properties Fund									
Staff Welfare & Medical Fund						100,000.00			
Infrastructure Development Fund						100,000.00			
Net Deficit as per I/E A/c (II)									
<b>B Total Deduction Rs.</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>200,000.00</b>	<b>-</b>	<b>-</b>	<b>-</b>
Balance as at 31.03.2023 as per Balance Sheet (A-B) Rs.	<b>20,543,044.39</b>	<b>22,426,728.18</b>	<b>2,223,797.20</b>	<b>-</b>	<b>1,000,000.00</b>	<b>14,129,758.72</b>	<b>1,650,903.14</b>	<b>1,788,638.99</b>	<b>9,231.22</b>





## JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH

1300, RAJ DANGA MAIN ROAD, KASBA, KOLKATA - 700 107

### SCHEDULE - D : UNUTILISED GRANT FOR THE YEAR ENDED 31ST MARCH, 2023

Particulars	Opening Unutilised Grant as on 01.04.22	Opening Grant Receivable	Grant-in-aid	Liabilities no longer required written back	Interest earned from Saving Bank Deposits	Total Income	Establishment as per Schedule M	Programme Expenses as per schedule N	Office Expenses as per schedule O	Capital Expenses met	Total Expenses	Over Expenditure/ Deficit	Closing Unutilised Grants as on 31.03.2023
	₹	₹	₹	₹	₹	₹	₹	₹	₹	₹	₹	₹	₹
Dept of Higher Edn. (DHE)- Maint. Grant West Bengal Distr. Scheme (WBDS)	6,133,623.45	20,588,005.00	1,172,640.00	-	26,721,628.45	13,743,048.00	66,703.00	7,339,400.12	154,225.00	21,303,376.12	5,418,252.33		
Junior Talent Search Test (DHE - JTST)	1,245,517.08	1,172,640.00	-	-	2,418,157.08	-	1,391,084.99	-	42,500.00	1,433,584.99	984,572.09		
Senior Talent Search Test (DST - JTST)	2,471,458.00	7,484,839.00	25,243,339.00	-	28,604,466.82	-	16,863,734.32	-	193,992.00	17,057,726.32	11,546,740.50		
Talent Enrichment Programme (DST - TEP)	3,183,134.00	17,900,000.00	-	-	21,083,134.00	-	18,336,286.90	-	-	18,336,286.90	2,746,847.10		
Teachers' Training Programme (DST - TTP)	7,022,181.00	-	-	-	7,022,181.00	-	619,877.25	-	-	619,877.25	6,402,303.75		
Bigyani Kanya Medha Britti (DST)	3,303,742.10	-	-	-	3,303,742.10	-	825,438.50	-	27,378.00	852,816.50	2,450,925.60		
State Science Fair 2019	1,062,756.00	6,501.00	11,370,000.00	-	12,432,756.00	-	11,286,312.00	-	105,394.00	11,391,706.00	1,041,050.00		
Biotechnology Laboratory (Dept. of Biotechnology)	-	-	-	-	-	-	-	-	-	-	6,501.00		
DST - (WAST)	2,831.75	929,572.08	4,960,000.00	-	4,030,427.92	-	1,595,543.00	-	-	1,595,543.00	2,434,884.92		
Child with Special Need (CWSN-DSE-WB)	4,751,850.00	-	2,500,000.00	-	2,500,000.00	-	835,746.00	-	-	835,746.00	1,864,254.00		
Vidyasagar Science Olympiad	1,658.00	27,674,200.00	-	-	32,426,050.00	-	20,794,304.00	-	-	400,807.00	11,230,939.00		
Maulana Abul Kalam Azad Instt. of Asian Studies (MAKAIAS) Dr. Paromita Roy	-	-	-	-	1,658.00	-	-	-	-	-	1,658.00		
RSSDI-Diabetis (Prof. Maitree Bhattacharyya)	25,178.00	-	-	-	25,178.00	-	-	-	-	-	25,178.00		
Indian Council of Medical Research (ICMR) Fellowship Grant Mr R. Pattanayak	81,762.00	-	-	-	81,762.00	-	-	-	-	-	81,762.00		
Ministry of North East Region (MDoNER) Department of Science & Technology (DST-SEATS)	108,311.75	64,627.00	-	-	108,311.75	-	107,111.00	-	-	107,111.00	1,200.75		
Department of Science & Technology (DST)	47,293.05	-	-	-	47,293.05	-	-	-	-	-	47,293.05		
Department of Science & Technology (DST-TTP)	1,086,928.80	9,850.89	-	-	1,118,083.80	-	-	-	-	-	1,118,083.80		
Talent Enrichment Programme (CSIR) Vigyan Prasar (VP)	-	5,322.00	-	-	5,322.00	31,155.00	-	-	-	-	9,850.89		
Vigyan Prasar (VP) 2020	719,320.60	-	1,676,575.00	-	2,395,895.60	-	2,233,769.38	-	-	162,126.00	2,395,895.38		0.22
Vigyan Sarvatra Pujataye (VP) Science & Engineering Research Bureau (SERB) u/ DST Dr. Pijush Basak	-	800,425.56	800,426.00	-	0.44	-	-	-	-	-	(0.44)		
<b>Total</b>	<b>42,093,512.40</b>	<b>9,302,155.00</b>	<b>113,885,185.00</b>	<b>-</b>	<b>146,795,015.76</b>	<b>13,743,048.00</b>	<b>74,980,910.34</b>	<b>7,339,400.12</b>	<b>1,086,422.00</b>	<b>97,149,780.46</b>	<b>87,317.92</b>	<b>49,645,234.86</b>	

Government of West Bengal

Other Organisations

Government of India



**JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH**  
1300, RAJ DANGA MAIN ROAD, KASBA, KOLKATA - 700 107

**SCHEDULE - E : CURRENT LIABILITIES AND PROVISION**

PREVIOUS YEAR		CURRENT YEAR
₹	Liabilities for :	₹
358,000.00	Scholarship	358,000.00
130,365.00	Book Grant	130,365.00
8,725,000.00	Bigyani Kanya Medha Brtti	8,123,000.00
-	Talent Enrichment Programme	
4,687,348.00	Junior Talent Search Test (DST, GOWB)	32,003.00
15,000.00	Best School Award	15,000.00
5,775.00	Development Fund Expenses (Biotech Lab)	5,775.00
316,134.00	Repair & Maintenance (General)	69,826.00
52,860.00	Contingency	960.00
1,696,178.00	Liab for JB Own Fund Exp	-
28,227.00	WBDS Programme Expenses	-
111,979.00	City Conveyance	-
318,301.00	Repair & Maintenance (Building)	132,759.00
173,443.00	Security Expenses	-
35,550.00	Cleaning Expnses	-
54,550.00	Electricity	-
122,900.00	Books & Journals	121,712.00
-	Advance Grant from DST,GOWB for Scholarship & Sc. W/s under JTST for next year	4,375,000.00
	Advance Grant from DSE,GOWB for CWSN	9,441,500.00
353,750.00	Interior Decorator & Renovation(Development fund)	353,750.00
4,760.00	P.TAX	-
80,254.00	TDS(Consultancy)	-
33,091.00	TDS (Contractors)	31,625.00
-	TDS(Staff)	
42,849.00	TDS (GST)	20,588.00
9,600.00	DST (SEATS) Expenses	9,600.00
20,456.00	DST (GOI) VSP Expenses	-
115,300.00	GPF Payable	-
82,530.00	Vidyasagar Science olympiad 2022	157,000.00
98,123.60	Vigyan Prasar expenses	20,456.00
5,138.00	CPF Payable	5,138.00
7,384,877.00	Senior Talent Search Test	4,563,877.00
357,527.00	Refundable to DST (SEATS), Govt. of India	357,527.00
<b>25,419,865.00</b>	<b>Total</b>	<b>28,325,461.00</b>

**SCHEDULE - "F" : OTHER DEPOSITS**

PREVIOUS YEAR		CURRENT YEAR
₹	Deposit for :	₹
-	Security Deposit by Electrical Contractor	-
437,924.00	Security Deposit by Civil Contractor	428,158.00
<b>437,924.00</b>	<b>Total</b>	<b>428,158.00</b>

## JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH

1300, RAJ DANGA MAIN ROAD, KASBA, KOLKATA - 700 107

### SCHEDULE - "G" : FIXED ASSETS AS AT 31.03.2023

Description of Assets	Written down values at 01.04.2022 Rs.	Addition During the Year Out of Revenue Income (Rs.)	From Capital Receipts* Rs.	Discarded, Transferred, Sold during the year (Rs.)#	Amount on which depreciation is charged (Rs.)	Rate of Depreciation	Depreciation for the year Rs.	Written down values at 31.03.2023 Rs.
<b>I. Land &amp; Buildings</b>								
1. Leasehold Land	2,075,669.00			-	2,075,669.00		-	2,075,669.00
2. Buildings	18,137,545.11	-	10,164,000.00	24,088,498.00	52,390,043.11	5%	2,619,502.00	49,770,541.11
3. Rain Water Harvesting System	41,502.65			-	41,502.65	5%	2,075.00	39,427.65
4. Mural	26,152.26			-	26,152.26	5%	1,308.00	24,844.26
5. Biotechnology Laboratory	117,768.40				117,768.40	15%	17,665.00	100,103.40
<b>TOTAL Rs.</b>	<b>20,398,637.42</b>	<b>-</b>	<b>10,164,000.00</b>	<b>24,088,498.00</b>	<b>54,651,135.42</b>		<b>2,640,550.00</b>	<b>52,010,585.42</b>
<b>II. Construction Work-in-Progress Rs.</b>								
1. Building (Innovation Centre)	24,088,498.00			(24,088,498.00)	-		-	-
<b>TOTAL LAND &amp; BUILDING Rs.</b>	<b>44,487,135.42</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>54,651,135.42</b>	<b>-</b>	<b>2,640,550.00</b>	<b>52,010,585.42</b>
<b>III. Movable Properties Furniture, Equipment, Plant etc.</b>								
1. Electrical Equipment	3,556,416.74	232,880.00			3,789,296.74	15%	568,395.00	3,220,901.74
2. Electrical Fittings	99,415.51				99,415.51	10%	9,942.00	89,473.51
3. Electrical Fittings funded by GoWB	92,218.25				92,218.25	10%	9,222.00	82,996.25
4. Furniture	2,649,964.78	869,006.00			3,518,970.78	10%	351,897.00	3,167,073.78
5. Office Equipment	137,672.24	154,225.00			291,897.24	15%	43,785.00	248,112.24
6. Science Indoor Exhibits	37,173.26				37,173.26	15%	5,576.00	31,597.26
7. Computer	398,889.42	426,712.00			825,601.42	40%	330,241.00	495,360.42
8. Laboratory Equipment	6,604,431.03				6,604,431.03	15%	990,665.00	5,613,766.03
9. Computer & Accessories funded by Govt Grant	607,535.24				607,535.24	40%	243,014.00	364,521.24
10. Printer/Scanner/Photocopier funded by GOWB	6,698.10	245,109.00			251,807.10	40%	100,723.00	151,084.10
11. Air Condition (Dormitory)	320,593.28				320,593.28	10%	32,059.00	288,534.28
<b>Assets out of SRF</b>								
1. Furniture	31,130.37				31,130.37	0%	-	31,130.37
2. Computer	4,992.46				4,992.46	0%	-	4,992.46
3. Electrical Equipment	17,213.84				17,213.84	0%	-	17,213.84
4. Electrical Fittings	6,320.68				6,320.68	0%	-	6,320.68
5. Office Equipment	3,400.00				3,400.00	0%	-	3,400.00
1. Air Condition (Dormitory)								
<b>TOTAL MOVABLE PROPERTIES Rs.</b>	<b>14,574,065.20</b>	<b>1,927,932.00</b>	<b>-</b>	<b>-</b>	<b>16,501,997.20</b>		<b>2,685,519.00</b>	<b>13,816,478.20</b>



## JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH

1300, RAJ DANGA MAIN ROAD, KASBA, KOLKATA - 700 107

### SCHEDULE H: LAND & BUILDING INVESTMENTS AS AT 31.03.2023

PREVIOUS YEAR Rs.	PARTICULARS	Land and Bldg Fund Investment Rs.
	A. FIXED / TERM DEPOSITS	
	<b>A TOTAL Rs.</b>	-
	B. OTHER DEPOSITS	
-	<b>B TOTAL Rs.</b>	-
	C. BALANCE IN SAVINGS BANK	
-	<b>C TOTAL Rs.</b>	-
-	Balance as at 31.03.2023 as per Balance Sheet (A to C) Rs.	-

### SCHEDULE I: MOVABLE PROPERTIES FUND INVESTMENTS AS AT 31.03.2023

PREVIOUS YEAR Rs.	PARTICULARS	Movable Properties Fund Investment Rs.
	A. FIXED / TERM DEPOSITS	
-	<b>A TOTAL Rs.</b>	-
	B. OTHER DEPOSITS	
-	<b>B TOTAL Rs.</b>	-
	C. BALANCE IN SAVINGS BANK	
-	<b>C TOTAL Rs.</b>	-
-	Balance as at 31.03.2023 as per Balance Sheet (A to C) Rs.	-



**JAGADISH BOSE NATIONAL SCIENCE TALENT SEARCH**

1300, RAJ DANGA MAIN ROAD, KASBA, KOLKATA - 700 107

**SCHEDULE - J: OTHER FUND INVESTMENTS AS AT 31.03.2023**

PREVIOUS YEAR	PARTICULARS	Total Other Fund Investments	Scholar Reserve Fund Investments	Development Fund Investments	Laboratory Fund	JB Own Fund Investments	Staff Welfare & Medical Fund	Infrastructure Fund Investments	Other Investments	Total
Rs.		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
			A	B	C	D	E	F	G	H=A+B+C+D+E+F+G
	-									
	A. FIXED / TERM DEPOSITS									
32,716,333.00	With State Bank of India, Kasba	34,325,196.00	15,826,351.72	17,001,205.08	1,098,076.93				399,562.27	34,325,196.00
1,100,000.00	With State Bank of India, Jeevan Deep	1,200,000.00	1,100,000.00						100,000.00	1,200,000.00
807,778.00	With State Bank of India, Salt Lake	1,311,684.00	1,311,684.00						-	1,311,684.00
51,521,160.00	With Punjab National Bank	67,355,192.00		1,281,609.66	1,125,720.27	14,129,758.72	1,650,903.14	1,788,638.99	47,378,561.22	67,355,192.00
30,000.00	With UCO Bank	30,000.00	30,000.00						-	30,000.00
2,044,000.00	With HDFC Bank	2,044,000.00		2,044,000.00					-	2,044,000.00
<b>88,219,271.00</b>	<b>A TOTAL</b>	<b>106,266,072.00</b>	<b>18,268,035.72</b>	<b>20,326,814.74</b>	<b>2,223,797.20</b>	<b>14,129,758.72</b>	<b>1,650,903.14</b>	<b>1,788,638.99</b>	<b>47,878,123.49</b>	<b>106,266,072.00</b>
	B. OTHER DEPOSITS									
	<b>B TOTAL</b>									
	C. BALANCE IN SAVINGS BANK									
5,786,678.75			2,275,008.67	2,099,913.44						4,374,922.11
<b>5,786,678.75</b>	<b>C TOTAL</b>		<b>2,275,008.67</b>	<b>2,099,913.44</b>						<b>4,374,922.11</b>
<b>94,005,949.75</b>	Balance as at 31.03.2023 as per Balance Sheet (A to B)	<b>106,266,072.00</b>		<b>22,426,728.18</b>	<b>2,223,797.20</b>	<b>14,129,758.72</b>	<b>1,650,903.14</b>	<b>1,788,638.99</b>	<b>47,878,123.49</b>	<b>110,640,994.11</b>



**JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH**  
**1300, RAJ DANGA MAIN ROAD, KASBA, KOLKATA - 700 107**

**SCHEDULE K: LOANS & ADVANCES AS AT 31.03.2023**

PREVIOUS YEAR		CURRENT YEAR	
		₹	₹
	<b>Security Deposits:</b>		
-	For Science City	13,500.00	
11,000.00	For Telephone	11,000.00	
181,794.27	For Electricity	<u>184,301.00</u>	208,801.00
	<b>Loans &amp; Advances:</b>		
2,550.00	For Advance against Tour/Program (Staff)	1,497.00	
1,877.95	For Advance for Postage	1,877.95	
46,595.00	For Advance to Suppliers	4,595.00	
-	GST Refund receivable	-	
358,811.27	Tax Deducted at Sources (Refundable)	<u>183,443.27</u>	191,413.22
	<b>Receivables (Grants):</b>		
	From Deptt of Science & Technology and Biotechnology, Govt of West Bengal (Biotechnology Laboratory)		-
	<b>Over Expenditure Receivables (Grants):</b>		
6,501.00	From Deptt of Higher Education, Govt of West Bengal	6,501.00	
5,322.00	From Govt. of India, Vigyan Prasar	5,322.00	
-	From Govt. of India, Vigyan Sarvatra Pujataye (VP)	(- 0.44)	
1,017.47	From Govt. of India, Science & Engineering Research Bureau (SERB)	1,017.47	
268,127.00	From Deptt. of Science & Technology (SEATS), Govt. of India	64,627.00	
9,850.89	From Council of Scientific & Industrial Research, Govt. of India	<u>9,850.89</u>	87,317.92
<b>893,446.85</b>	<b>Total</b>		<b>487,532.14</b>



## JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH

1300, RAJ DANGA MAIN ROAD, KASBA, KOLKATA - 700 107

### SCHEDULE L: CASH AND BANK BALANCES as at 31.03.2023

PREVIOUS YEAR		CURRENT YEAR	
		₹	₹
44,773.00	<b>a) Cash in hand (As physically verified)</b>		27,466.00
	<b>b) Cash at Bank : (Held in Savings Bank Accounts with)</b>		
1,141,779.80	State Bank of India,Kasba(GAP02-PR)	1,172,920.80	
66,758.28	State Bank of India,Kasba(GAP03-AK)	68,579.28	
2,392,323.75	State Bank of India,Kasba(GAP01-PB)	2,942,449.75	
2,079,786.39	State Bank of India, Kasba, (A/c No 10415825348)	2,275,008.67	
3,706,892.36	State Bank of India, Kasba, (A/c No 10415825360)	2,099,913.44	
1,496,195.06	State Bank of India, Kasba, (A/c No 10415825359)	2,204,386.28	
-	Axis Bank (A/c No. 922010039682264)	5,937,072.00	
16,197,433.95	Punjab National Bank, Bosepukur Rajdanga, (A/c No 5486)	17,752,975.32	
587,355.52	State Bank of India, Saltlake, (A/c No 10836429242)	<u>111,399.52</u>	34,564,705.06
	<b>c) Cash at Bank : (Held in Current Accounts with)</b>		
943,461.50	State Bank of India, Kasba, (CA-35061192770)	820,902.50	
-	State Bank of India, Kasba, (Current Account No. 33224282758)	<u>-</u>	820,902.50
	<b>d) Interest Accrued on Savings Bank Deposits</b>		
507.00	State Bank of India,Kasba(GAP02-PR)	521.00	
30.00	State Bank of India, Kasba(GAP03-AK)	31.00	
731.00	State Bank of India, Kasba(GAP01-PB)	773.00	
913.00	State Bank of India, Kasba, (A/c No 10415825348)	998.00	
1,640.00	State Bank of India, Kasba, (A/c No 10415825360)	926.00	
1,077.00	State Bank of India,Kasba, (A/c No 10415825359)	979.00	
44.00	State Bank of India, Salt Lake, (A/c No 10836429242)	50.00	4,278.00
28,661,701.61	<b>Total</b>		35,417,351.56



## JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH

1300, RAJ DANGA MAIN ROAD, KASBA, KOLKATA - 700 107

SCHEDULE - "M"

### ESTABLISHMENT

PREVIOUS YEAR		CURRENT YEAR
₹		₹
13,347,402.00	Salary & Allowances	13,743,048.00
-	Leave Salary	-
-	Contribution to Provident Fund (Office)	-
<b>13,347,402.00</b>	<b>TOTAL</b>	<b>13,743,048.00</b>
		SCHEDULE - "N"
	<b>PROGRAMME EXPENSES</b>	
PREVIOUS YEAR		CURRENT YEAR
₹		₹
	<b>I. Expenses funded by Deptt of Higher Education, Govt. of West Bengal</b>	
50,692.00	Annual Award Ceremony	-
19,563.00	Books & Journals	66,703.00
<b>70,255.00</b>	<b>Sub Total</b>	<b>66,703.00</b>
	<b>II. Expenses funded by Deptt of Higher Education, Govt. of West Bengal (WBDS)</b>	
-	Academic Meeting	-
1,266,428.00	Science /Advanced Science Workshop	1,433,584.99
<b>1,266,428.00</b>	<b>Sub Total</b>	<b>1,433,584.99</b>
	<b>III. Expenses under Govt. of West Bengal [DHE - Junior Talent Search Test (JTST)]</b>	
-	Awareness Programmes	-
-	Contingencies	25,000.00
-	Science Workshop	-
-	Talent Search Tests	-
-	<b>Sub Total</b>	<b>25,000.00</b>
	<b>IV. Expenses under Govt. of West Bengal [DST - Junior Talent Search Test (JTST)]</b>	
1,032,191.00	Annual award Ceremony	503,832.32
30,000.00	Best School Award	35,000.00
17,000.00	Encouragement award	425,000.00
1,182,500.00	Book Grant	1,462,500.00
7,025,000.00	Scholarship	7,498,000.00
7,500.00	Science Workshop	-
1,588,662.00	Talent Search Test	4,930,649.00
9,854.00	Awareness Programm	360,108.00
260,114.00	Teaching Aid	193,992.00
972,000.00	Remunerations	1,116,000.00
495,887.00	Contingencies	532,645.00
<b>12,620,708.00</b>	<b>Sub Total</b>	<b>17,057,726.32</b>





	<b>V. Expenses under Govt. of West Bengal [DST - Senior Talent Search Test (STST)]</b>	
1,309,000.00	Book Grant	1,075,000.00
1,388,100.00	Laptop Distribution to Scholars	1,567,417.00
11,280,000.00	Scholarship	10,896,000.00
2,011,217.00	Talent Search Test	4,797,869.90
<b>15,988,317.00</b>	<b>Sub total</b>	<b>18,336,286.90</b>
	<b>VI. Expenses under Govt. of West Bengal [DST - Teachers' Training Programme (TTP)]</b>	
23,289.00	Fooding, Lodging & Refreshment Expenses	260,505.50
279,900.00	Consumables	6,633.00
109,387.00	Honorarium to Resource Personnel	400,500.00
6,000.00	Meeting Expenses for Workshop Planning	157,178.00
105,000.00	Travel for Mentors & Participants	28,000.00
<b>523,576.00</b>	<b>Sub total</b>	<b>852,816.50</b>
	<b>VII. Expenses under Govt. of West Bengal [DST - Talent Enrichment Programme (TEP)]</b>	
-	Seminar & Workshops	438,957.25
180,000.00	Manpower costs	180,000.00
-	Visit to research & Sc. Establishment	-
-	Contingencies	920.00
<b>180,000.00</b>	<b>Sub total</b>	<b>619,877.25</b>
	<b>VIII. Expenses under Govt. of West Bengal [DST - Bigyani Kanya Medha Britti]</b>	
950,000.00	Book Grant	950,000.00
9,600,000.00	Scholarship	9,600,000.00
360,000.00	Manpower Costs	420,000.00
101,213.00	Workshop Expenses	316,312.00
-	Teaching Aids & Accessories	105,394.00
<b>11,011,213.00</b>	<b>Sub total</b>	<b>11,391,706.00</b>
	<b>IX. Expenses under Govt. of India [DST - SEATS]</b>	
-	Science Camps (INSPIRE)	-
<b>-</b>	<b>Sub total</b>	<b>-</b>
	<b>X. Expenses funded by Indian Council of Medical Research (ICMR)</b>	
-	Fellowship Stipend (Senior Research Fellow - Mr. Rudradip Pattanayak)	-
-	Contingencies	-
<b>-</b>	<b>Sub total</b>	<b>-</b>



## JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH

1300, RAJ DANGA MAIN ROAD, KASBA, KOLKATA - 700 107

### SCHEDULE - "O"

PREVIOUS YEAR		CURRENT YEAR
₹		₹
	<b>OFFICE &amp; ADMINISTRATIVE EXPENSES</b>	
75,457.10	Postage, Telegram & Telephone	101,233.90
41,300.00	Audit Fee	41,300.00
268,313.06	Contingency	215,902.21
461,315.00	Electricity	67,845.01
71,555.00	Printing & Stationery	187,432.00
721,907.00	City Conveyance	274,047.00
428,962.00	Property Tax	365,720.00
2,114.00	Pronouncement & Publicity	5,236.00
310,337.00	Repairs and Maintenance (Computer & other equipment)	467,919.00
544,944.00	Repairs and Maintenance (General)	583,281.00
1,901,725.00	Repairs and Maintenance (Building)	3,005,401.00
122,350.00	Legal and Filing Fees & Expenses	45,700.00
2,122,999.00	Security Expenses	1,309,135.00
530,788.00	Cleaning Expenses	454,667.00
900.00	Staff Welfare Expenses	10,831.00
363,120.00	Salary(Contractual)	357,975.00
<b>7,968,086.16</b>	<b>Sub total</b>	<b>7,493,625.12</b>
	<b>EXPENSES UNDER SCHOLARS' RESERVE FUND</b>	
Rs.		Rs.
192,000.00	Scholarship	192,000.00
20,000.00	Book Grant	20,000.00
-	Encouragement Award	-
<b>212,000.00</b>	<b>Sub total</b>	<b>212,000.00</b>
	<b>EXPENSES UNDER BIOTECHNOLOGY LABORATORY</b>	
Rs.		Rs.
948,667.00	Remuneration to Contractual Employees at Biotechnology Laboratory	778,709.00
25,960.00	Repair & Maintenance	265,173.00
21,808.00	Science Workshop Biotech Laboratory	113,108.00
12,359.00	Consumables Biotech Laboratory	438,553.00
<b>1,008,794.00</b>	<b>Sub total</b>	<b>1,595,543.00</b>



EXPENSES UNDER LABORATORY FUND		
Rs.		Rs.
-	Laboratory Fund Expenses	-
-	Repair & Maintanance	-
-		-
EXPENSES UNDER VIGYAN PRASAR		
Rs.		Rs.
31,988.32	Contingency	51,292.30
120,047.20	Honorarium	99,007.08
740,323.00	Manpower	910,000.00
60,000.00	Overhead	188,100.00
119,333.08	Science Workshop/seminar	609,045.00
61,558.00	Teaching & learning Aid	538,451.00
<b>1,133,249.60</b>	<b>Sub total</b>	<b>2,395,895.38</b>



## JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH

1300, RAJ DANGA MAIN ROAD, KASBA, KOLKATA - 700 107

SCHEDULE - "P"

### SIGNIFICANT ACCOUNTING POLICIES AND NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31ST MARCH, 2023

#### A. General Information

Jagadis Bose National Science Talent Search (JBNSTS) is an Autonomous Institution registered under the Societies Registration Act, 1860 with financial assistances of the Deptt. of Higher Education, Science & Technology and Biotechnology, Govt. of West Bengal. The Institute was promulgated in the year 1958 to mark the Birth Centenary Celebration of India's foremost modern Scientist, Acharya Jagadish Chandra Bose. JBNSTS is the nation's first science talent search organization and over the last few decades, has catapulted itself to turn out to be a premier Institute of Non-formal Science Education in the country. The Institute has been tirelessly engaged in selecting students with special aptitude for Science, guiding and helping them to comprehend its importance and in the process, building up the nation by developing its most precious resource – the human element.

#### B. Significant Accounting Policies

##### 1. Basis of Preparation of Financial Statements :

1.1. The financial statements are prepared on accrual basis under historical cost convention as per generally accepted accounting principles excepting employee benefits which are generally considered on cash basis.

##### 2. Revenue Recognition :

2.1. The Institute derives its revenues primarily from Grant-in-Aids, Donations, Registration and other Miscellaneous Fees from the participants to different Talent Search events and various Internal Resource Generation activities. Treatments as regards Grant-in-Aids are stated separately. Revenue / Income and Cost / Expenditure items are recognised on accrual basis. Revenue is recognised on completion of rendering of services and / or use of Society's resources by third parties.

2.2. Interest income from bank deposits is accrued using the effective interest method and as certified by the concerned bankers at the year-end in the relevant cases.

2.3. Interests earned on long / short term Investments and Savings Bank Deposits have been allocated proportionately to the respective Funds on the basis of their corresponding available investible surplus at the year-end, calculated after deducting the cash outflow towards the costs of the concerned Fixed Assets from the relevant Funds, except the following cases:

- a) As regards the Contingency Fund, due to the attainment of the stipulated limit specified thereunder.
- b) Interests on Long Term Investments and Savings Bank Deposits aggregating to Rs 76,007/= generated from investments made out of Foreign Contributions being

specific earnings of the Scholars' Reserve Fund and Development Fund, have been apportioned on the basis of respective balances of these Funds, worked out after charging off the related expenditures for the year from the corresponding Opening Balances standing at the commencement of the period under review.

### **3. Grants-in-Aid –**

- 3.1. Capital Grants are being recognized and credited to the Land & Building Fund or the Movable Properties Fund respectively on receipt of the Sanction Memo.
- 3.2. Grants for meeting revenue expenditures are treated as income of the year in which corresponding expense are made. However, Revenue Grants are recognized in books on actual Sanction.
- 3.3. Grants received in advance for activities to be performed / services to be rendered beyond the relevant financial period are reported as liabilities until all the conditions for revenue recognition are met.

### **4. Use of Estimates :**

The preparation of the Financial Statements in conformity with the Generally Accepted Accounting Principles in India requires the Management to make estimates and assumptions considered in the reported amounts of assets and liabilities (including contingent liabilities) on the date of the Financial Statements and the reported amounts of revenue and expenses during the reporting period. The Management believes that the estimates used in preparation of the Financial Statements are prudent and reasonable. Future results could differ due to these estimates and the differences between actual results and the estimates are recognized in the period in which the results are known / materialise.

### **5. Fixed Assets :**

- 5.1. All fixed assets other than land are stated at written down value without showing original cost and accumulated depreciation. Additions to Fixed Assets are stated at their original cost of acquisition (which includes direct expenditures incurred for acquisition or construction and/or installation of the assets and the share of indirect expenses comprised of attributable other costs including financial cost) and subsequent improvements thereto, as reduced by accumulated depreciation thereon and write down for impairment, if any. Direct costs are capitalised until fixed assets are put to use. Costs of assets not ready for use at the Balance Sheet date are disclosed under Capital Work-In-Progress. Capital gifts in kind are stated at gift deed value in the case of Land & Building and at market value in case of other Assets. Wherever market values are not available, the capital gift-in-kind items are stated at nominal values, as per standard accounting principles. The Society creates the related Fund Account by transfer of sums from Income & Expenditure Account in respect of Fixed Assets acquired out of Society's own funds and not covered by Capital Donations and / or Government Grants so as to exhibit the same balance under the Fixed Asset Account and the corresponding Fund Account.
- 5.2. However, Assets under Special Reserve Fund are stated at their respective costs of acquisitions less depreciation up to the date of considering the same as assets of the Institute.





No depreciation is charged on assets received under programs or other old and used assets taken into account under Special Reserve Fund.

- 5.3. Gains or losses arising from disposal / discard of fixed assets are measured as the difference between the net disposal proceeds and the carrying amount of the corresponding assets and are recognized in the Income & Expenditure Account, when the relevant asset is derecognized.

**6. Investments :**

Investments that are readily realisable and intended to be held for not more than a year are classified as Current Investments. All other investments are classified as Long-term Investments. Current Investments are carried at lower of cost and fair value determined on an individual investment basis. Long-term investments are carried at cost. Provision for diminution in the value of investments is made, if the impairment is not temporary in nature.

**7. Foreign Currency Transactions :**

Transactions executed in foreign currencies are normally recorded at the exchange rate prevailing on the date of related transactions as computed and credited to the earmarked account by the concerned bankers handling the same.

Assets purchased in foreign currency are to be recorded at cost, based on the exchange rate on the date of purchase.

**8. Land & Building Fund and Movable Properties Fund:**

Specific receipts and earnings from investments ear-marked for that purpose are credited to Land & Building and Movable Properties Funds and depreciation is set off against these funds.

**9. Other Funds :**

Other funds include Scholar Reserve Fund, Development Fund, Laboratory Fund, Special Reserve Fund, Contingency Funds, JBNSTS Own Generation Fund, Staff Welfare & Medical Fund, Infrastructure Fund and Retirement Benefit Fund. Surplus or deficit as generated from the activities are taken into the respective funds.

**10. Inter – Fund Transfers :**

Subject to the availability of adequate Surplus in the 'JBNSTS - Own Generation Fund', an amount of Rs. 1 Lac each is to be transferred at the end of each financial period in favour of the "Staff Welfare & Medical Fund" and "Infrastructure Development Fund" in order to strengthen the health of these Funds.

**11. Method of Charging Depreciation:**

Depreciation on Fixed Assets is provided on 'Written Down Value Method' at the rates and in the manner prescribed under Income Tax Act, 1961 as would be amended from time to time.

Full year's depreciation is charged on additions to fixed assets irrespective of the date of acquisition / installation. No Depreciation is charged on the fixed assets sold / discarded during the year. Depreciation on fixed assets is set off against corresponding funds and not charged to Income & Expenditure Account.

**12. Employee Benefits :**

- 12.1 Short Term Employee Benefit is recognized as expense in the Income & Expenditure Account of the year in which related service is rendered.
- 12.2 Post employment and other Long Term Employee Benefits are provided in the Accounts in the following manner:
- Gratuity - In view of the fact that, Gratuities and Pensions are being paid to the eligible retiring employees directly by the Government of West Bengal, provisions towards liabilities for the same are not being made in the accounts.
  - Leave encashment on termination of service - In accordance with Accounting Standard 15, as pronounced by the Institute of Chartered Accountants of India, on "Employee Benefits", since it is mandatory to provide for accrued liability, an Actuarial Valuation of the Society's Leave Encashment liability was made by LICI of Rs 71,19,964/- as on 31.03.2021, which has already been paid by the reporting society within FY 2021-22. The current service cost as estimated by LIC for the FY 2022-23 of Rs 9,61,524/- has been paid and debited in Income & Expenditure Account under JBNSTS Own Fund.
  - As recited in last year, all permanent employees (both academic and non-academic) of the Institute have been privileged with the General Provident Fund facilities with effect from 1<sup>st</sup> September, 2016 through the kind approval of the Accountant General (A & E), West Bengal to that effect. Since the Institution is being funded by the Department of Higher Education, Govt. of West Bengal since its inception in the year 1958, no provision towards Provident Fund dues has been made in the current year.

**13. Provisions, Contingent Liabilities and Contingent Assets :**

- 13.1. Provisions are recognized when there is a present legal or statutory obligation as a result of past events and where it is probable that there will be outflow of resources to settle a reliably estimable.
- 13.2 Contingent Liabilities are recognized only when there is a possible obligation arising from past events due to occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the Society or where any present obligation cannot be measured in terms of future outflow of resources or where a reliable estimate of the obligation cannot be made. Obligations are assessed on as going basis and only those having a largely probable outflow of resources are provided for.
- 13.3 Contingent Assets are neither recognized nor disclosed in the Financial Statements. Provisions, Contingent Liabilities and Contingent Assets are reviewed at each Balance Sheet date.

**C. Notes on Accounts**

1. That the Society during the relevant financial year 2022-23 has undertaken only those activities that have been specifically mentioned in their bye-laws and objectives for which it has been set up.



2. There are certain items of Fixed Assets, which have been purchased out of Grant-in-Aid in earlier years but which are no longer in use. These items of Fixed Assets are not included in Fixed Asset Register and are not readily marketable.
3. That the total loans and advances as on 31.03.2023 of Rs 4,87,532.14 (as per Schedule K, forming part of Balance Sheet) does not include any loans or advances for any business activities related to Micro-finance.
4. The following Grant Unspent balances, included in Annexure D, forming a part of Financial Statements, are being carried forward in the books for more than 3 years. The Society has taken efforts to settle some other Unspent Balances during the reporting period but due to COVID restrictions the following unspent balances still remained outstanding as at 31.03.2023. The management estimates to spend the undermentioned unspent balances in FY 2023-24.

Sl. No.	Name of the Project	Overspent	Unspent
1	DST - (WAST)		2,831.75
2	Maulana Abul Kalam Azad Instt. Of Asian Studies (MAKAIAS) Dr. Paromita Roy		1,658.00
3	Ministry of North East Region (MDoNER)		1,200.75
4	Department of Science & Technology ( DST )		47,293.05
7	Junior Talent Search Test (DHE - JTST)		24,46,458.00

5. The Society does not have share capital. Hence disclosure of Earnings per Share as per Accounting Standard 20 – Earnings per Share is not applicable to the Society.
6. All the figures have been denominated in Indian Rupee.
7. Schedules “A” to “P” form an integral part of the Financial Statements.
8. The previous year's figures have been regrouped / recast / rearranged, wherever considered necessary.

Dated: the 04<sup>th</sup> day of August, 2023

Place: Kolkata

On behalf of the Governing Body

Sd/-

**Prof. ( Dr. ) Maitree Bhattacharyya**  
( Director )

For, **D. Niyogy & Co.**  
Chartered Accountant Firm  
Firm Regn. No.: 30133E

Sd/-

**CA. Dushmanta Niyogy**  
Proprietor  
Membership No.: 016707  
UDIN: 23016707BGXMEB5103





Student scientists at JBNSTS during Talent Enrichment Program





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