

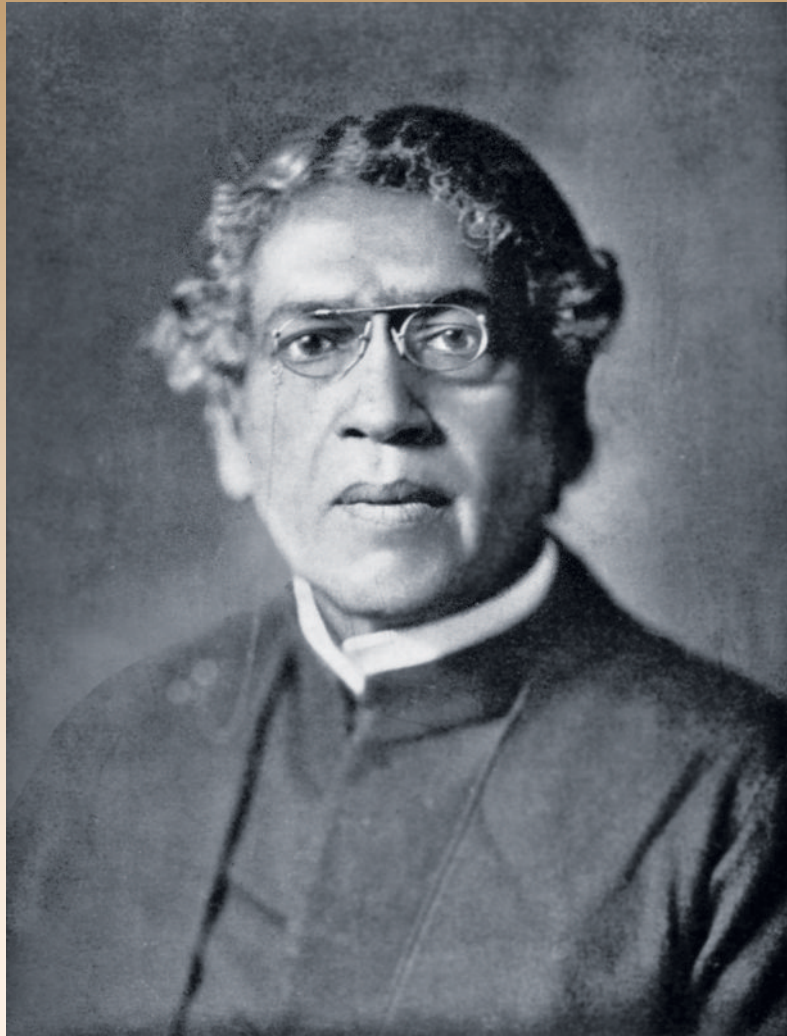
In pursuit of Excellence  
Since 1960

# Annual Report

## 2022



**Jagadis Bose National Science Talent Search**



A failure! Yes, but not ignoble nor altogether futile. And through Michael Faraday Heinrich Rudolf Hertz witnessing this struggle, the son learned to look on success or failure as one, and to realize that some defeat may be greater than victory. To me his life has been one of blessing, and daily thanksgiving. Nevertheless everyone had said that he had wrecked his life, which was meant for greater things. Few realize that out of the skeletons of myriad lives have been built vast continents. And it is on the wreck of a life like his, and of many such lives, that will be built the greater India yet to be. We do not know why it should be so; but we do know that the Earth-Mother is always calling for sacrifice.

*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  
Jadvpur 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 and Founder Director,  
National Institute of Biomedical Genomics  
Netaji Subhas Sanatorium (2nd Floor)  
Kalyani -741251, Dist. Nadia

**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  
وزیراعلیٰ مغربی بنگال  
CHIEF MINISTER, WEST BENGAL

16<sup>th</sup> January, 2023

### MESSAGE

I am happy to know that **Jagadis Bose National Science Talent Search (JBNSTS)** will organize their **Annual Award Ceremony** at Derozio Hall, Presidency University, Kolkata, on 28<sup>th</sup> January, 2023 and will felicitate young scholars and budding scientific talents in the programme, identified in collaboration with the Department of Science & Technology and Biotechnology, Govt. of West Bengal. It is particularly heartening to note that the event will also recognize and felicitate bright and talented girl students, who have shown the promise to excel in the field of science.

The development of scientific temper and attitude in students and helping them realize and fulfill their scientific potential are essential components of human resource development. Jagadis Bose National Science Talent Search, by identifying, motivating and nurturing young scientific minds, has been fulfilling this national objective with a lot of zeal, sincerity and dedication over the years. My heartiest congratulations to the entire team of JBNSTS for their exceptional service to society; I wish the organization even greater success in their future endeavours.

I also take this opportunity in conveying my heartiest greetings and best wishes to all the young talents and awardees of the programme and in wishing the function all success.

  
(Mamata Banerjee)

**Prof. (Dr.) Maitree Bhattacharyya**  
Director  
Jagadis Bose National Science Talent Search  
1300, Rajdanga Main Road  
Kasba, Kolkata - 700 107

Nabanna, West Bengal Secretariat, Howrah - 711 102  
West Bengal, India

Tel : + 91-33-22145555, + 91-33-22143101  
Fax : + 91-33-22144046, + 91-33-22143528



**We are just an advanced breed of monkeys on a minor planet of a very average star. But we can understand the Universe. That makes us something very special. –**

**Stephen Hawking**



### Chairman's message to the new awardees

It gives me great pleasure to pen a few words for this Annual Report of JBNSTS. Thanks to the continuing support from the Government of West Bengal, JBNSTS has been able to expand its activities by offering scholarships for students at different levels and also encourage girls to pursue careers in Science, Technology, and Medicine through the Bigyani Kanya Medha Brittis. The awareness and interest among the students about the selection tests is reflected in their ever-growing scale. With impressive zeal, everyone in JBNSTS through their collective efficiency conduct this major activity smoothly every year. In addition, there are many other programs ranging over Workshops for scholars for talent enrichment, teachers' training, Laboratory facilities for the curious, State Science Olympiads, etc. in which JBNSTS has been playing a significant role.

Our State is known across the country (and indeed all over the world) for research of the highest standard. Research Institutes covet students from this State, who very often bring laurels to the institutions through their success. JBNSTS feels proud for identifying these sharp minds, some from remote areas, and nurturing them to rewarding and productive careers.

Needless to stress, the Scholarship identifies the talented young. As is to be expected, their number will be limited. So far, JBNSTS has striven hard to maintain the highest standard to avoid dilution of the quality. I do hope that in the years ahead we will continue to spot the students firmly at the top bracket. Our programs will be able to bring out their best through monitoring and guidance.

In the coming years we hope that a larger number female students will be identified and encouraged to choose a career in Science, Technology or Medicine. JBNSTS through its many programs will continue to attract talented students from all corners of the State to its many programs and through them to a fruitful and challenging career at the forefront of research.

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



The reward of the young scientist is the emotional thrill of being the first person in the history of the world to see something or to understand something. Nothing can compare with that experience.

Cecilia Payne-Gaposchkin





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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, Prof. Suman Chakraborty, 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 63<sup>rd</sup> year of existence. This year, we are deeply grateful for the presence of Shri Bratya Basu, Honourable Minister in charge for gracing this occasion. Sir, your inspiring presence in the midst of all of us shall motivate our young scholars to walk the path of science with vigor and virtuosity. With the inspiration of our Honorable Chief Minister Smt. Mamata Banerjee, JBNSTS has rose to an admirable echelon by formulating multitude of programs/ initiatives, socially integrating unique initiatives and scholarship schemes. Our Chief Minister has taken active interest in the activities of our institute since assuming her office. We humbly thank Chief Minister Smt. Mamata Banerjee for her unwavering leadership which acts as a support and guidance for all of us.

I am elated to meet all the new batch of scholars, awardees who have been christened as JBNSTS scholars of the batch of 2022 and inducted in the hall of fame of our acclaimed institute. The preceding two years snatched the joy and celebration of organizing the Annual Award Ceremony on regular mode of discourse due to adversarial situation arising from the pandemic. Thus this time it is a sense of déjà vu which has gripped all of us by welcoming all of you to the ceremonial occasion of the award program, thereby witnessing the vibrant interaction with all of you, being able to coronate you through physical mode of convocation. This year we have identified around 400 young scholars and awardees from as many as 13,000 students from all across our state. I would take this opportunity to congratulate the young student scientists who have risen and motivated themselves to meticulously qualifying the successive rounds of the talent search examination and established themselves to pursue science in the new millennium.

On a global perspective, the participation in STEM Education and Research is debilitated and therefore this is an opportunity for all of you to bloom in the vast trajectory of science and



JBNSTS shall always provide the foundational premise to realize your goals. I am certain that not only will you attain professional excellence in your academic career but also enrich the global science fraternity through innovation, invention and exploration of science which will open up vast horizons for all of you that had hitherto remained unexplored.

In 2022, we have initiated Vidyasagar State Science Olympiad, a three-tier examination which has been a new entrant in our repertoire of programs and initiatives. West Bengal till date did not produce any state science Olympiad towards the school students of state board. JBNSTS under the auspices of School Education Department, Secondary Branch, Government of West Bengal conducted the first edition of the examination. The major thrust area of this initiative is to expose the class IX students of West Bengal to learn to take challenges in the field of science from an early age and enhance their innate aptitude. They would have a greater exposure to pursue science and solve the problems of science in-depth. The tri-layered examination conducted in 2022 translated to selection of 100 students who would be nurtured to participate in national science Olympiad and other competitive examinations. The support of School Education Department, Government of West Bengal in discharging the entire proceedings deserves special mention.

With great modesty, I mention here that we have initiated the Teachers' Sensitization cum Orientation & Training Program on Inclusive Education for Children with Special Needs under the sponsorship of School Education Department, Government of West Bengal. This is an important step in achieving quality education for the pupils with special needs throughout West Bengal. For inclusion, a sufficient number of oriented and well-trained and prepared teachers are required. Teachers should be oriented on policies and practices that promote the right of individuals with disabilities to participate in the practices of inclusive education.

I am happy to mention that in 2015 our Honourable Chief Minister visited our campus and expressed the idea of creation of an innovation Centre in the existing edifice of the institute. A brainchild of our Chief Minister a significant achievement with regard to extension activities of the institute is the setting up of the annex building which is now complete. This extended new academic block caters primarily to the academic needs of students from different districts of West Bengal who would be mentored with innovative ideas in modernized classrooms, laboratories and other necessary academic infrastructures.

Science education is a collaborative effort involving dedicated teachers and motivated students. Today, the role of JBNSTS is to motivate and empower the students to be lifelong learners, critical thinkers, and productive members of this globally interconnected society. Over the last six decades, JBNSTS has stretched its wings beyond it's the common nurturing programs, scholarships by offering a suitable environment for our pupils' multifaceted development. Students are encouraged to channel their potential in the quest of excellence.

While academic success of our scholars and awardees is our primary goal, we are also committed to preparing them to be socially relevant and contribute to the cause of nation in the



discipline of science. Throughout the pandemic, we continued our online academic process to ensure that our students', scholars and Bigyani Kanyas, future and careers were not jeopardized. As soon as the situation stabilized, we began to hold conduct programs regularly in offline mode in a stepwise manner. The under representation of girls in science education and research still remains a grave concern in the academia. The Senior and Junior Bigyani Kanya Medha Britti programs serves for the purpose of Gender equality and the empowerment of girls for making a crucial contribution in the STEM education and research. Both the programs in higher secondary and undergraduate level respectively strive for equal access to and participation in science, technology and innovation for women and girls of all ages is imperative for achieving gender equality and the empowerment of women and girls in the global science arena.

A string of academic programs including District School Program, Talent Enrichment Program, Teachers Training Program, Biotechnology program for High School Students etc. are the regular programs undertaken by our institute. In this endeavor of ours, involvement of the Department of Higher Education (Social Education branch) and Department of Science and Technology and Biotechnology, Government of West Bengal is solicited. The residential scheme of learning in the district school program, lent a congenial learning environment for the pupils residing in various districts of our state who belong to a heterogeneous socio-economic regional and cultural background. The hands-on learning methods equips the students with required skillset to judiciously apply science in daily lives thereby learning the practice of science to solve practical problems of life and society. You would be happy to know that a sizable number of research scholars, science aspirants, students have undertaken short term projects under the aegis of our institute. Experienced mentors and faculty members of JBNSTS have motivated the young minds by utilising our state-of-the-art laboratory facilities and other academic arrangements.

Throughout the year, my colleagues' dedication has been a testimony of the organizational perspective, and their presence has been invaluable in creating and upholding the values that our beloved institution stands for. In spite of hurdles and limitations, the teamwork is a mirror reflection of who we are as a vibrant workforce and what we profess to be in the days to come. 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 in the global STEM education and research. I wish all the students a very happy beginning of their career and hope to extend the JBNSTS family with the support of parents, alumni and other academic bodies with whom we collaborate.

Thank you once again...

**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 on Inclusive Education for the Children with Special Needs.
- Teachers' Training Program
- Talent Enrichment Program
- Biotechnology Program for Students
- JBNSTS- Vigyan Prasar Initiative
- Vidyasagar State Science Olympiad



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



OUR JBNSTS TEAM



Mr. Sudip Das



Mr. Ranjit Kumar Mallik



Ms. Puspa Biswas



Ms. Sweta Chakraborty



Dr. Sunandana Mandal



Dr. Shampa Dutta



JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH



Dr. Turban Kar



Dr. Atanu Jana



Ms. Shrayasi Chatterjee



Ms. Prakriti Saha



Mr. Debmalaya Chowdhury



Mr. Subhadeep Banerjee



Mr. Biswatosh Saha



Ms. Angana Bhattacharya



Mr. Suman Mondal



Mr. Gourab Das



Ms. Oliviya Das



Mr. Sushabhan Deb





Mr. Mahadev Das



Mr. Sukanta Manna



Mr. Debnarayan Mukherjee



Ms. Paromita Majumdar

Every brilliant experiment, like every great work of art, starts with an act of imagination.

**Jonah Lehrer**



Science means constantly walking a tightrope between blind faith and curiosity; between expertise and creativity; between bias and openness; between experience and epiphany; between ambition and passion; and between arrogance and conviction – in short, between and old today and a new tomorrow.

**Henrich Rohrer**



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# JBNSTS WEST BENGAL DISTRICT SCHOOL PROGRAM

Touching lives  
with science at a  
nascent stage



## West Bengal District School Program

Learning basics of science in state-of-the-art facilities

### Perspective

Science education is characterized by enquiry based learning in the form of activity-based experimental scheme of education. Logical persuasion, deductive method of learning methods engaging the students in science practices in the classroom forms the essence of science education which is in contrary to the rote scheme of learning. In 2000, JBNSTS had promulgated a unique initiative titled West Bengal District School Program for middle school science pupils of our state to teach them in the fundamentals of the subject in its nascent potential and providing a base towards advanced scheme of studies in science.

Since origin, thriving upon the support of Department of Higher Education, Government of West Bengal, the middle school students of our state are given an overview of physical science, mathematics, life sciences and environment sciences. In addition to the primary concepts and content areas, the students are to learn how scientific study works, why careful observation is necessary. The students spend significant time in the laboratory.

### Salient features of this program

- Science education leads to sustainability. This program addresses the frugalities of science curricula in the formative years of a student and designed unique methodology of nurturing the middle school students from all across the state.



- Deliberations on basic concept of STEM education to the students who are very young for the capacity building in science education.
- Integration of science experiments hailing from remote areas of our state to the mainstream and common platform of science.
- In this program, middle school pupils hailing from the rural and remote areas of the state are being provided with a congenial environment of value based knowledge of science through residential pattern at the institute's campus along with visit to science institutions, science museums which is clinical for developing scientific temper at an early age.
- The West Bengal district school programs in this year have gained impetus after resumption of academic activities in JBNSTS following the dreadful phase of the pandemic.
- The program establishes a connect between the book information to solving problems in the social life.

## Process of nurturing the young talents of West Bengal

The following standardised methodology indicates the innovative process of nurturing the students.

### Phase I

(5 day Residential Workshop on School curriculum)

Theoretical lectures on key topics of physical science, life sciences and mathematics presented with lively demonstration and one to one interactive mode

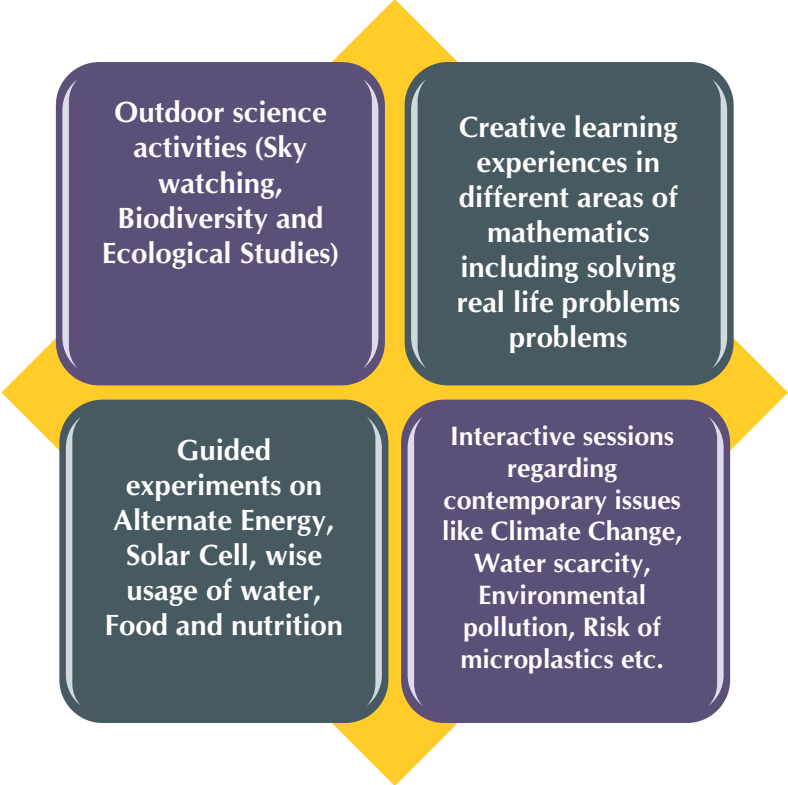
Hands-on experiments and laboratory activities

Co-curricular activities to increase social awareness, analytical skill, self-expression and communication skills

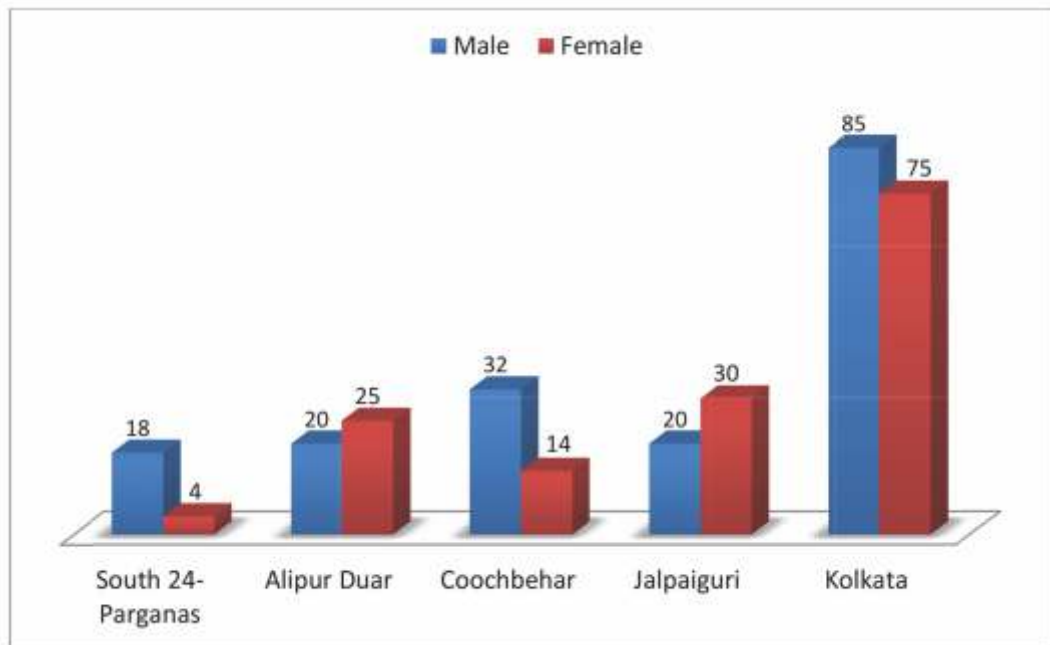
Visit to science and technological museums to expose them to creative ideas



## Phase II (5 day Advanced Residential Workshop)



Gender distribution of all the participants (2021-2022 batch)



## Exploring a bouquet of myriad topics of science in 2022

Science is a compulsory subject from elementary school onwards. But, there is a real confusion even among the teachers, regarding distinctive purposes of teaching science in schools. The children who come to the school classrooms belong to a heterogeneous socio-economic regional and cultural background, who may or may not pursue science and technology related careers. Thus, we try to meet the requirements of all the students so that they can apply and practice science in their everyday life. Experienced exceptional school teachers, passionate faculty members from colleges, universities and Research institutes are selected for motivating the young minds.

The participants were exposed to intriguing lectures comprising of fundamental concepts of several branches of science. They are mentored to perform exciting hands-on experimental activities in physical sciences and life sciences in the JBNSTS laboratories. The evening sessions comprised of classes on communication skills, personality development, and sessions on art, music and craft as a medium of expression. The entire sequence of event portrayed a sense of resilience, development of scientific temper at an early age which aims to solve the real-life and practical problems that plagues the society.

### Program figures at a glance

Number of Districts	05
Total Number of Participating Schools	14
Total Number of teaching learning hours	224
Total number of participating Students	322





## Snapshot of programs held in the year 2022

Timeline	Name of the institution	No. of participants
April 7 -12, 2022	<ul style="list-style-type: none"><li>o Garia Harimati Devi Uchcha Balika Vidyalaya, Kolkata</li><li>o Sonarpur Vidyapith (H.S.), South 24 Parganas</li></ul>	42
April 19-22, 2022	<ul style="list-style-type: none"><li>o Gandhi Colony Madhyamik Vidyalaya, Kolkata</li><li>o Haltu Kishalaya Shiksha Sadan (HS), Kolkata</li></ul>	41
May 10 -13, 2022	<ul style="list-style-type: none"><li>o Jadavpur NK Pal Adarsha Shikshayatan</li><li>o Ananda Ashram Balika Vidyapeeth</li></ul>	40
June 14-17, 2022	<ul style="list-style-type: none"><li>o Maynaguri Road High School (H.S.), Jalpaiguri</li><li>o Nagrakata High School (H.S.), Jalpaiguri</li></ul>	50
July 5 – 8, 2022	<ul style="list-style-type: none"><li>o Sukanta High School (H.S.), Alipurduar</li><li>o Deogaon High School (H.S.), Alipurduar</li></ul>	45
July 19 – 22, 2022	<ul style="list-style-type: none"><li>o Sakhawat Memorial Govt. Girls' High School, Kolkata</li><li>o Govt. Sponsored Multipurpose School, Taki House, Kolkata</li></ul>	58
July 26 - 29, 2022	<ul style="list-style-type: none"><li>o Shikarpur High School (H.S.), Coochbehar</li><li>o Chamta Deshbandhu Vidyalaya (H.S.) Coochbehar</li></ul>	46







## Interesting modules for theoretical classes including hands-on experiments performed during the workshops

### Physical Science and Chemistry

- \* Solar Energy in daily life
- \* Night sky viewing by telescope
- \* Archimedes Principle and concept of Buoyancy
- \* Momentum & Conservation
- \* Creation of colour using primary colours
- \* Effect of air pressure and height on a free moving pendulum
- \* Bernoulli's Principle and the properties of a fluid
- \* Making of pin-hole camera, microscope with single lens
- \* Reflection, Refraction, and total Internal Reflection
- \* Gravitational force, earth's rotation and spin motor of cricket ball
- \* Understanding the concept of force, pressure and Energy
- \* Preparation of colour using different chemical reactions
- \* Impact of heat and pressure on reactions
- \* Experiments on electric current
- \* Experiments on catalysts and indicators
- \* Acid-Base-indicators

### Mathematics

- Finding the Area of Quadrilateral and Square Root Algorithm
- Area of polygon in term of rectangle, square, hexagon and octagon inscribed in a circle
- System of Real Numbers
- Geometrical Riders in the fold of word problem
- The reformation geometry using quadrants, plotting coordinates and finding equation for coordinates
- Properties of triangle and its characteristics
- Fractioning of quadratic function and Method of solving quadratic equation

### Life Sciences

- ❖ BMI & Body Temperature Mapping
- ❖ Plants Pigments and their color



- ❖ Audio-visual exposure to the process of digestion with the experimentation of carbohydrate
- ❖ Determination of Pulse Rate and physiological basis
- ❖ Identification of cell and plant tissue
- ❖ Food Adulteration and analysis
- ❖ Identification of starch and other food components
- ❖ Experiments with microbes
- ❖ Distribution of acidity in our alimentary canal.
- ❖ Haemoglobin concentration and blood grouping
- ❖ DNA structure and the application of DNA information
- ❖ Origin of Life
- ❖ Local Biodiversity
- ❖ Health, Hygiene and Role of Nutrition
- ❖ Our Environment: We are in a state of War
- ❖ Microbes and Microscopy
- ❖ Origami representation of DNA double helix structure
- ❖ Fold-scope preparation and demonstration



## Mentors list

The following resource persons have mentored the students all along the year to build up their academic strength.

- ❖ 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. Abhijit Kar, Scientific Officer, JBNSTS
- ❖ Dr. Pijush Basak, Junior Scientific Officer, JBNSTS
- ❖ Dr. Smarajit Manna, Student Advisor; JBNSTS
- ❖ Dr. Arnab Pramanik, JBNSTS
- ❖ Dr. Punarbasu Chowdhury, University of Calcutta
- ❖ Mr. Siddhratha Sankar Chattopadhyay, Ex-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. Shyamal Chakrabarti, University of Calcutta
- ❖ Dr. Sanchari Chattopadhyay, JBNSTS
- ❖ Sri Arup Sengupta, Garfa DNM High School, Kolkata
- ❖ Sri Milan Chandra Gain , Uttar Rabindranagar Vivekananda H/S
- ❖ Sri Pintu Kr. Sinha , Katwa K.D.I, Purba Bardhaman
- ❖ Sri Saptarshi Mondal, Tangrakhali P.J.S.P High School (H.S)
- ❖ Sri Subir Bhattacharya, Dum Dum Kishore Bharati School, Kolkata
- ❖ Dr. Subhankar Ghosh, St Xavier's College, Kolkata
- ❖ Ms. Sharmistha Bhattacharya, Ananda Ashram Balika Vidyapith
- ❖ Sri. Partha Pratim Roy, Senior Faculty, South Point High School, Kolkata
- ❖ Dr. Pubali Dhar, Calcutta University, Kolkata
- ❖ Mr. Jibesh Bhattacharyya, Garfa DNM High School, Kolkata
- ❖ Sri. Dipankar Karmakar, The Heritage School
- ❖ Ms. Soma Roy, Orator, Kolkata





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# JBNSTS SENIOR SCHOLARSHIP PROGRAM

India's first talent  
search examination  
since 1960



## Senior Talent Search Test

### Motivating the talented students for innovation and invention

#### Inception of the program

JBNSTS is known for its academic excellence that provides science education to develop and promote innovation in diverse fields of science and technology and to translate the knowledge for nation building for the future. The senior scholarship program is the heritage program of JBNSTS which was initiated in the year 1960 by luminaries like Dr. B C Roy and Sir Jehangir Ghandy. This program supports the development of undergraduate science aspirants studying Basic Sciences, Engineering, and Medicine in West Bengal. The goal is to create scientific talent so that the nation's need for science and technology resources can be met. The program bears illustrious legacy in the last six decades which is reflected in the initial award ceremony of the program that was graced by the glorious presence of the nation's first Prime Minister Pandit Jawaharlal Nehru in 1960. This program is supported by Department of Science and Technology and Biotechnology, Government of West Bengal. This program has steered towards giving the talented student science aspirants a phenomenal platform to achieve distinction in science.

#### Highlights of the program

- ❖ A program that is designed to mentor talented students into scientists of tomorrow who can excel to greater heights in their academic career.
- ❖ Scholarships and book grants are being provided to scholars under the ambit of this program to facilitate their academic endeavour.
- ❖ Long term career progression of our scholars is one of the prerogatives of this program. They are induced to research and innovation in STEM through internships and short term projects under the mentorship of JBNSTS and other academic instructions in the initial stages of their academic career.
- ❖ In order to expose the talented minds towards the dynamic scenario of science, JBNSTS continuously organises various interactive seminars, workshops thereby creating a bridge with the stalwarts of the academics and industry which portrays an interdisciplinary pedagogy of science education.



## Eligibility for the year 2022

- ❖ Students who have passed / appeared in (10 + 2) Board examination (WBCHSE / CBSE / ISC / Visva-Bharati Board) in the year 2022 in science discipline and are bonafide students of first year undergraduate in Science (Hons.) (Subjects as acceptable under the scope of DST - INSPIRE, Government of India) / BS-MS /Engg. / Medicine in West Bengal in this year.

## Scheme and structure of Senior Talent Search Test 2022

<b>First Phase: Written Test</b> <b>Full Marks: 100</b>	
The first phase examines the fundamental concepts of students in prominent science subjects and topics.	The candidates are required to answer to objective and subjective questions, problem based questions from any three subjects out of Physics, Chemistry, Mathematics and Biology.
<b>Second Phase: Viva-Voce</b> <b>Full Marks: 100</b>	
This phase evaluates the aptitude of a science aspirant considering his presence of mind, intelligence, mode of approval to a problem, personality and academic orientation being assessed by a board of experts of different subjects.	Having qualified the preliminary phase, the candidates who were eligible to appear for the subsequent stage of STST were provided with an opportunity to comprehend science and technology with an innovative and inventive acumen and expand their ideas before the panelists and interact with them.
<b>Third and Final Phase: Scientific Creativity Test</b> <b>Full Marks: 100</b>	
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	The candidate presents and defends on his/her chosen problem 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.



## Details of scholarship to be availed

<p><b>Financial Benefits availed by Medicine and Engineering aspirants</b></p>	<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>• The scholarship and book grants are sponsored by Department of Science and Technology and Biotechnology, Government of West Bengal.</li> </ul>
<p><b>INSPIRE Fellowship</b></p>	<ul style="list-style-type: none"> <li>• Research grant amounting to Rs. 80,000 /- (Rs. 60,000 + Rs. 20,000) per annum is awarded to JBNSTS senior scholars till completion of Masters Degree in Basic Science curriculum vis-à-vis DST INSPIRE norms and regulation, Government of India.</li> </ul>

It is pertinent to mention in this context that a student drawing scholarship benefits from any other sources is not eligible to avail financial benefits of this particular scholarship.

## JBNSTS Senior Talent Search Test – 2022

Stages of Examination	Written Examination	Interview	Scientific Creativity Test
Timeline	21 <sup>st</sup> August, 2022 Sunday	05 November, 2022 to 06 November, 2022	25 November, 2022 to 27 November, 2022
Total number of candidates	2237	386	123
Total number of selected scholars	<b>JBNSTS Senior Scholars</b>		
	<b>59</b>		

Following the rigorous phases of examination held across 35 centres in all over West Bengal in regular physical mode of discourse which resumed in 2022, the final list of JBNSTS Senior Scholars is drawn below.



**2022 batch of JBNSTS Senior Scholars**

Name of the Senior Scholar	Present Stream of Study	Present Institute
Saptashwa Baisya	B. Stat	Indian Statistical Institute Kolkata
Arunava Bhattacharya	Engineering	Indian Institute of Technology, Kharagpur
Aishik Raysharma	B. Stat	Indian Statistical Institute Kolkata
Amre Salehin Mondal	Medicine	Medical College, Kolkata
Harmanpreet Singh	Medicine	R G Kar Medical College, Kolkata
Shrayan Mukhopadhyay	Engineering	Jadavpur University, Kolkata
Sammyabrata Nandy	Engineering	Indian Institute Of Technology, Kharagpur
Pratyush Biswas	Engineering	Indian Institute Of Technology, Kharagpur
Arya Choudhuri	Engineering	Indian Institute of Technology, Kharagpur
Manish Seth	Medicine	Maharaja Jitendra Narayan Medical College and Hospital, Coochbehar
Mayukh Mukherjee	Engineering	Indian Institute of Technology, Kharagpur
Subham Ghosh	Engineering	Indian Institute of Technology Kharagpur
Anurag Samanta	Engineering	Jadavpur University, Kolkata
Urjit Paul Chowdhury	B. Stat	Indian Statistical Institute, Kolkata
Debaksha Siddhanta	Medicine	R G Kar Medical College, Kolkata
Oishik Nandi	Engineering	Indian Institute of Technology, Kharagpur
Priyam Tarafder	Engineering	Indian Institute of Technology, Kharagpur
Soumyadip Das	Medicine	Bankura Sammilani Medical College, Bankura
Sabarna Kar	Medicine	R. G. Kar Medical College, Kolkata
Sourav De	B. Stat	Indian Statistical Institute, Kolkata

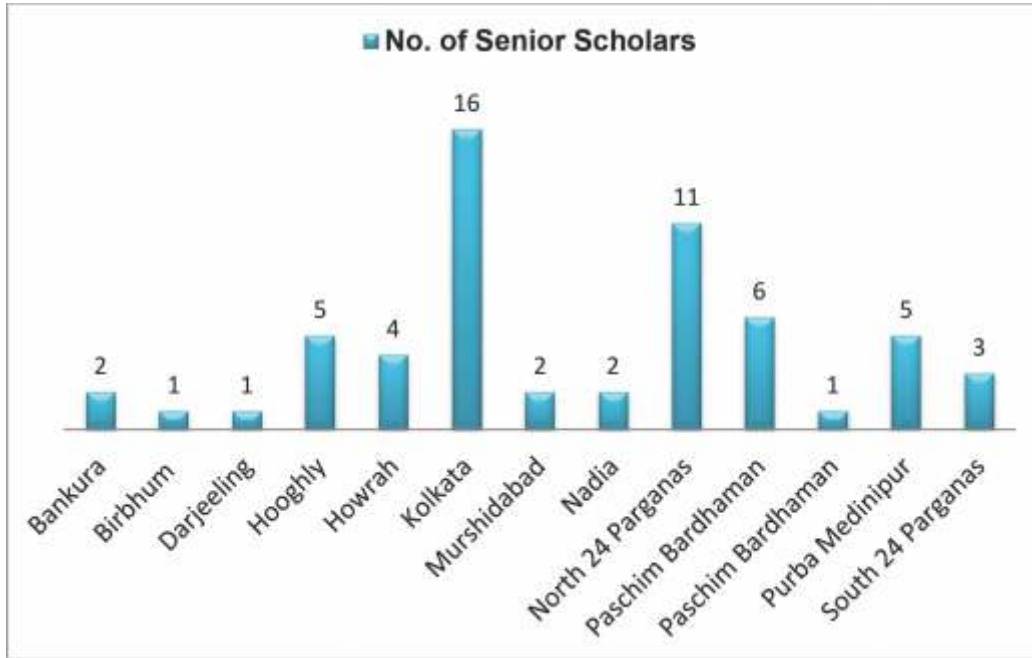


Scholars Name	Present Institute	Course / Stream of Study
Anish Gayen	Medicine	Calcutta National Medical College, Kolkata
Srinjan Bhattacharjee	Engineering	Jadavpur University, Kolkata
Sagnik Seth	BS-MS	Indian Institute of Science Education And Research, Kolkata
Sugata Laha	Engineering	Jadavpur University, Kolkata
Saptarshi Ghosh	Engineering	Jadavpur University, Kolkata
Shreya Shill	Engineering	Indian Institute of Technology, Kharagpur
Nilanjan Ghosh	Engineering	Institute of Engineering & Management, Kolkata
Pallab Chakraborty	Medicine	Medical College, Kolkata
Aprameyo Chakraborty	Engineering	Indian Institute of Technology, Kharagpur
Agnidhra De	Engineering	Indian Institute of Technology Kharagpur
Sankhodeep Dey	Medicine	Medical College, Kolkata
Aritra Maiti	Engineering	Jadavpur University, Kolkata
Aayushi Ghosh	Engineering	Jadavpur University, Kolkata
Jyotishko Banerjee	Engineering	Indian Institute of Technology, Kharagpur
Krishnendu Nayek	Engineering	Indian Institute of Technology, Kharagpur
Arka Hazra	BS(4yrs.)	Indian Institute of Technology, Kharagpur
Soumyadeep Ghosh	Engineering	Indian Institute of Technology, Kharagpur
Barsha Patsa	Medicine	All India Institute of Medical Sciences, Kalyani
Chandrayee Kumar	Medicine	Medical College, Kolkata
Baibhab Chakraborty	BS-MS	Indian Institute of Science Education And Research, Kolkata

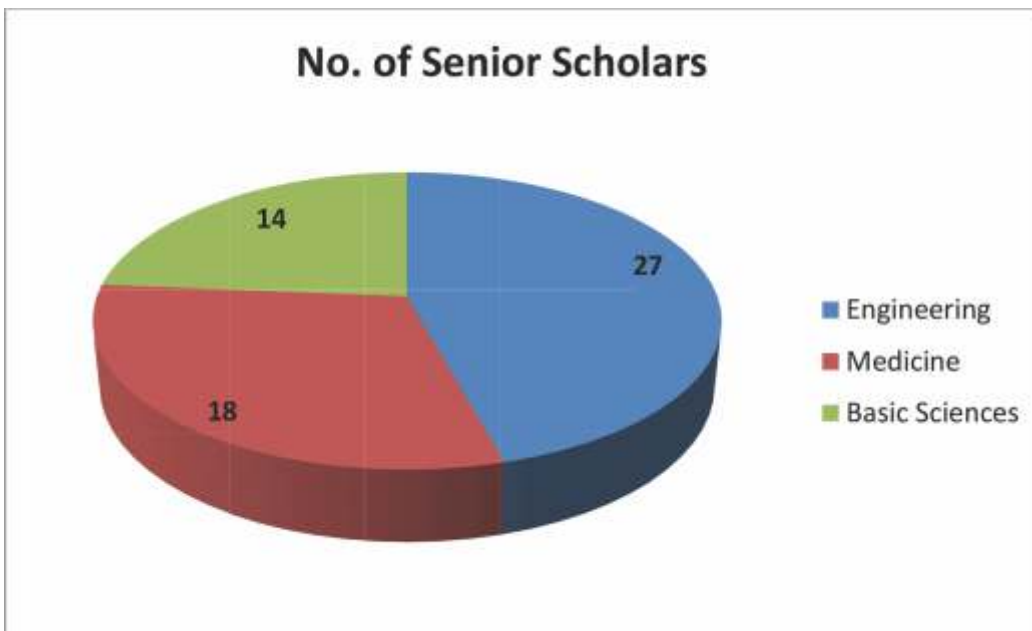


Scholars Name	Present Institute	Course / Stream of Study
Archisman Chakraborty	Medicine	IPGMER, Kolkata
Ayush Chandra	BS-MS	Indian Institute of Science Education And Research, Kolkata
Abhidipan Samanta	Engineering	Jadavpur University, Kolkata
Soham Biswas	Engineering	Indian Institute of Technology, Kharagpur
Soham Purkait	B. Stat	Indian Statistical Institute, Kolkata
Susnata Chattopadhyay	BS-MS	Indian Institute of Science Education and Research, Kolkata
Ritwick Pal	B. Stat	Indian Statistical Institute, Kolkata
Gahan Chattopadhyay	BS-MS	Indian Association for the Cultivation of Science, Kolkata
Mainak Mukherjee	Engineering	University of Calcutta, Kolkata
Srijita Naskar	Medicine	Medical College, Kolkata
Shrestha Mukherjee	B.Sc. (Hons.)	St. Xavier's College, Kolkata
Moupiyasi Kanrar	Medicine	North Bengal Medical Collage
Sayak Ray	Medicine	Medical College, Kolkata
Supratim Biswas	Medicine	Medical College, Kolkata
Agniva Saha	Engineering	Indian Institute of Technology, Kharagpur
Shantonil Bal	Medicine	R.G. Kar Medical College
Aritra Kumar Dutta	Engineering	Jadavpur University, Kolkata
Vedanta Hazra	BS	Indian Institute of Technology, Kharagpur
Kasita Panda	Medicine	Nilratan Sircar Medical College and Hospital, Kolkata

### Figurative analysis of Senior Scholars 2022 (district-wise)



### Analysis of Senior Scholars 2022 vis-à-vis their present stream of study



### School award for the year 2022

The award for best school in Senior Scholarship category has been accorded to **South Point High School**, Kolkata which comes in the form of a trophy and net worth amounting to Rs. 10,000/-.



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

Breaking boundaries:  
Exploring the promises in  
the girls in STEM fields



## Senior Bigyani Kanya Medha Britti Program

### Empowering girls to make a mark in STEM

#### Overview

The under-representation and disparity of women in STEM fields result from discrimination, deep-rooted social biases and inaccessibility to quality science education throughout different stages of their academic career. In the history of all the Nobel Prizes in the sciences, there have been 20 female laureates of the more than 600 prizes awarded in physiology or medicine, chemistry and physics. These ratios reflect gender disparity and inequality that exists in STEM field globally. Women account for a meagre percentage in tertiary education in science compared to their male counterparts. There is a noticeable gap between girls pursuing science in high school standards in India which casts a bleak spell in the society in terms of gender equality in academia and STEM workforce.

To bridge the gap, JBNSTS has initiated a unique program titled Senior Bigyani Kanya Medha Britti under the financial support of Department of Science and Technology (DST), Government of West Bengal encouraging the meritorious girl students of our state to pursue science in their higher education.

#### Framework of Senior Bigyani Kanya Medha Britti Program – 2022

The program identifies the prospective awardees on the basis of JBNSTS Senior Talent Science Test 2022. All the eligible girl students willing to partake in the program are required to apply for the Senior Talent Science Test 2022. As many as fifty numbers of girls qualifying the successive rounds of Senior Talent Science Test would be granted the Bigyani Kanya Medha Britti award. Furthermore, the scholarship details and eligibility criteria for availing the scholarship are drawn below.

#### Eligibility Criteria

- ❖ 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 Science Test.
- ❖ It is pertinent to mention that 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.



## Details of scholarship benefits to be availed

- ❖ The recipients of JBNSTS - 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.
- ❖ In addition to monthly fellowship, Rs. 5,000/- to be remitted on a yearly basis to all the scholars as their book grant.
- ❖ Regular enrichment programs, short term research projects diverse workshops, research practices, seminars, science camps are organised under the mentorship of acclaimed experts and esteemed science professionals as a part of talent nurturing programs.

## JBNSTS Senior Bigyani Kanya Medha Britti Awardees list – year 2022

Name of Awardees	Present Institution	Subject/ Stream of Study
Nishat Anjum	Malda Medical College, Malda	MBBS
Sanjbati Ghosh	All India Institute of Medical Sciences, Kalyani	MBBS
Snita Bhunia	Deben Mahata Government Medical College and Hospital, Purulia	MBBS
Asmi Chowdhury	R.G. Kar Medical College, Kolkata	MBBS
Pratyusha Mahapatra	Nilratan Sircar Medical College, Kolkata	MBBS
Nayanika Mukherjee	Nilratan Sircar Medical College, Kolkata	MBBS
Olivia Pal	Indian Institute of Technology, Kharagpur	Electrical Engineering
Ankana Majumdar	College of Medicine and Sagore Dutta Hospital, Kamarhati	MBBS
Snikta Sannigrahi	Nilratan Sircar Medical College, Kolkata	MBBS
Ahona Ray	Presidency University Kolkata	Life Sciences



Name of Awardees	Present Institution	Subject/ Stream of Study
Sulagna Ghosh	Medical College, Kolkata	MBBS
Parna Roy Chowdhury	Techno Main Salt Lake, Kolkata	Computer Science and Engineering
Suvashree Das Sharma	Bankura Sammilani Medical College, Bankura	MBBS
Shomili De	All India Institute of Medical Sciences, Kalyani	MBBS
Meherunnesa Khatun	Sarat Chandra Chattopadhyay Government Medical College and Hospital, Howrah	MBBS
Shamoyita Datta	Jadavpur University, Kolkata	Chemical Engineering
Ritika Gupta	All India Institute of Medical Sciences, Kalyani	MBBS
Snigdha Hati	Midnapore Medical College, Paschim Medinipur	MBBS
Ananya Koley	Government College of Engineering and Ceramic Technology, Kolkata	Computer Science And Engineering
Ankita Purakayastha	Raiganj Govt. Medical College & Hospital, Raiganj Uttar Dinajpur	MBBS
Rima Kar	Heritage Institute of Technology, Kolkata	Computer Science and Engineering
Soumodipa Chakraborty	Jadavpur University, Kolkata	Chemistry
Anindita Samanta	Murshidabad Medical College, Murshidabad	MBBS
Shreyasi Chandra	Nil Ratan Sircar Medical College, Kolkata	MBBS
Sharodia Roy	Jadavpur University, Kolkata	Chemical Engineering
Sulagna Chatterjee	Pandit Raghunath Murmu Smriti Mahavidyalaya, Bankura	Computer Science
Isika Mandal	Presidency University Kolkata	Physics
Suchana Hazra	Indian Institute of Engineering Science and Technology, Shibpur	Information Technology





Name of Awardees	Present Institution	Subject/ Stream of Study
Rajrupa Bhattacharjee	Heritage Institute of Technology, Kolkata	Chemical Engineering
Anjali Singh	Jalpaiguri Government Engineering College, Jalpaiguri	Computer Science and Engineering
Sritama Ghosh	Visva-Bharati University, Santiniketan	Chemistry
Reejul Chattaraj	Jadavpur University, Kolkata	Electrical Engineering
Ditsa Kundu	Government College of Engineering and Ceramic Technology, Kolkata	Information Technology
Sneha Pal	St. Xavier's College, Kolkata	Statistics
Shritama Bhattacharya	Indian Association for the Cultivation of Science, Kolkata	BS-MS
Ananya Mukhopadhyay	Medical College, Kolkata	MBBS
Asmita Roy	Bethune College, Kolkata	Physics
Parijat De	Burdwan Medical College, Purba Bardhaman	MBBS
Pallabi Chakraborty	St. Xavier's College, Kolkata	Biotechnology
Tusarin Islam	Dumkol College, Murshidabad	Physics
Arshiya Paul	St. Xavier's College, Kolkata	Statistics
Ishika Choudhury	Heritage Institute of Technology, Kolkata	Information Technology
Ishita Nath	Barasat Government College, Kolkata	Mathematics
Subhalaxmi Sinha	Presidency University Kolkata	Life Sciences
Mrigangana Sarkar	MCKV Institute of Engineering, Howrah	Computer Science and Engineering
Shreemoyee Misra	Jhargram Govt. Medical College and Hospital	Medicine
Olivia Das	Jadavpur University	Engineering



## Award for best school under Senior Bigyani Kanya Medha Britti Program 2022

The award for best school in Senior Bigyani Kanya Medha Britti category has been accorded to Delhi Public School, Ruby Park which comes in the form of a trophy and net worth amounting to Rs. 10,000/-.

Award for Best School

Delhi Public School, Ruby Park





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# JBNSTS JUNIOR SCHOLARSHIP PROGRAM

To identify high degree of  
innate curiosity at the  
plus two level



## Junior Scholarship Program

### Identification and nurturing the young talents

#### Genesis of the program

In 2015, JBNSTS initiated a futuristic program titled Junior Scholarship Program, to incorporate the talented high school students in West Bengal for pursuing a career in innovative STEM education. In an ever changing, dynamic environment it is important that our youths are prepared with right kind of knowledge and skillset to meet the demands of the evolving domain of STEM education and research. Thus it is pertinent to identify and mentor the meritorious students in their formative years so that the students receive preliminary exposure to the advanced level of STEM education. The Junior Scholarship Program is funded by the Department of Science & Technology and Biotechnology, Government of West Bengal.

#### Some of the highlights of this program

- Redesigned learning space in science for the talented aspirants pursuing science in higher secondary framework which is never possible in the existing school syllabi structure.
- Promoting academic excellence in the form of exposure to practical oriented learning in JBNSTS world-class laboratory facilities along with exposure to the theoretical interface of the advanced STEM subjects and topics which not only leverage the inherent aptitude of the students but also gives them a comprehensive understanding of the current academic demands of science as a whole.
- Providing scholarships to the meritorious students from all across West Bengal to support them financially so that the young minds can plan their career ahead.

#### Eligibility for the Junior Talent Search Examination

- This scholarship can be availed only by the students studying science in plus two levels in West Bengal year only.
- The applicants must have secured at least 75 per cent marks or equivalent CGPA in their class X qualifying examination, from any government recognised board namely, WBBSE, ICSE, CBSE etc.
- 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.

## Scheme and structure of Junior Talent Search Test 2022

### First Phase

<b>Written Test</b> <b>Total Marks: 90</b> <b>Full Time Allotted: 02 hours</b>	<ul style="list-style-type: none"><li>● The first phase examines in-depth conceptual knowledge of the students encompassing the subjects like Physical Science, Life Science and Mathematics.</li><li>● The students are required to answer objective questions from subjects like Physical Science, Life Science and Mathematics.</li></ul>
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### Second Phase

<b>Interview</b> <b>Total Marks: 100</b>	The students who qualify the first phase of Junior Talent Search Test are called for interview round which essentially evaluates the creativity and innovative acumen of the students, their perception, attitude towards solving problems before a board of experts. The experts are senior professors and scientists from different National institutes and universities.
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## Details of scholarship to be availed

<b>Scholarship for JBNSTS Junior Scholars</b>	<ul style="list-style-type: none"><li>● The Junior Scholars are awarded with scholarship valued Rs. 1,250/- per month for two years.</li><li>● Rs. 2,500/- Annual Book Grant for two subsequent years.</li></ul>
<b>JBNSTS Encouragement Award</b>	<ul style="list-style-type: none"><li>● Fifty (50) candidates are selected as encouragement awardees inter-alia who are rewarded with one-time book grant amounting to Rs. 5,000/- to award their academic excellence.</li></ul>



## 8<sup>th</sup> chapter of JBNSTS Junior Talent Search Test – 2022

Stages of Examination	Written Examination	Interview
Timeline	21 <sup>st</sup> August, 2022 Sunday	10th December, 2022 to 11th December, 2022
Total number of candidates	10,632	406
Total number of selected awardees	<b>JBNSTS Junior Scholars</b>	<b>JBNSTS Encouragement Awardees</b>
	<b>202</b>	<b>51</b>

Following the rigorous phases of examination held across 35 centres across West Bengal in regular physical mode of discourse which resumed in 2022, the final list of JBNSTS Junior Scholars is drawn below.

### 2022 batch of JBNSTS Junior Scholars

Name of the Scholars	Present Institution
Shubhradeep Paul	Kalyani University Experimental High School
Avik Das	Alipurduar MC William High School
Bibaswan Biswas	Bishop Morrow School
Arkadeb Manna	Bidhannagar Govt. High School
Bijit Moish	B. D. M. International
Soumyadeep Dutta	Kalyani Central Model School
Rupayan Mandal	Nawab Bahadurs Institution
Ankur Saha	Akrurmoni Coronation Institution
Shruto Kalyan	The Heritage School
Asmit Manab	Ramakrishna Mission Vidyalaya, Narendrapur
Ayush Saha	Bodhicariya Senior Secondary School
Srutarshi Tripathi	Delhi Public School Ruby Park
Chandradip Karmakar	Burdwan Municipal High School
Shourya Mukherjee	Ramakrishna Mission Boys Home High School, Rahara
Mainak Chandra	B. D. M. International
Shounak Kar	The Scottish Church Collegiate School



Name of the Scholars	Present Institution
Prasun Kumar	Birbhum Zilla School
Arnab Gorai	Ramakrishna Mission Vidyalaya Narendrapur
Md Sahid	Arambagh High School H.S.
Soumyadeep Das	South Point High School
Soham Mukherjee	RKM Vidyalaya Narendrapur
Rajdeep Roy	South Point High School
Reeck Mondal	Ramakrishna Mission Vidyalaya Narendrapur
Shankhadeep Ghosh	Garalgacha High School
Sayar Nag	Raiganj Sri Sri Ramkrishna Vidyabhaban H.S
Anwasha Sarkar	Kashinath Lahiri Public School
Anjanabha Paul	Tufanganj N.N.M High School
Anisha Yasmin	Delhi Public School Ruby Park
Md Amaan Khan	Delhi Public School Ruby Park
Suryajyoti Das	Bangabari High School
Dwaipayan Saha	Ramakrishna Vivekananda Mission Vidyabhawan
Ahan Mukherjee	South Point High School
Aishwarya Chakrabarti	South Point High School
Suryansh Ray	Ramakrishna Mission Vidyalaya Narendrapur
Parijat Dey	Ramakrishna Mission Boys Home High School
Tuhin Subhra	Nawab Bahadurs Institution
Sudipto Ghosh	Beachwood School
Chittrak Betal	K.T.P.P. High School
Ankur Kundu	Chandernagore Sri Aurobindo Vidyamandir
Pravatanshu Mandal	BSF Sr. Sec. School, Kadamtala
Souharda Khan	New Barrackpur Colony Boys High School
Ayushman Saha	Ramakrishna Mission Vidyalaya Narendrapur
Sk Md Sayeed Ikram	The Royal International School
Arnab Datta	Don Bosco School
Pranjal Ghosh	Bishnupur High School
Bibaswan Das	Ramakrishna Mission Vidyalaya Narendrapur



Name of the Scholars	Present Institution
Riddhi Pratim Dalai	Midnapore Collegiate School
Ritabrata Das	Hooghly Collegiate School
Adrija Biswas	Bishop Morrow School
Mayukh Majumdar	Gorabazar Iswarchandra Institution
Amritabha Paul	Tufanganj N.N.M High School
Angira Saha	Sudhir Memorial Institute
Sagnik Chakrabarty	Ramakrishna Mission Vidyalaya Narendrapur
Sayan Mandal	Delhi Public School
Mainak Maity	DAV Public School, Haldia
Mayukh Paul	BDMI School
Swarnendu Darbar	Mahishadal Raj High School
Pathikrit Debdutto Biswas	Kalyani University Experimental High School
Kaushiki Sarkar	Gazole Sewchand Paremewari Vidyamandir
Soukarya Bhattacharya	DPS Ruby Park
Shatadrumi Dey	Manisha International School
Rounak Mandal	Burdwan Municipal High School
Samay Paria	RKMV Narendrapur
Yajat Mishra	Delhi Public School Ruby Park
Arnesh Das	Kalyani University Experimental High School
Archisman Bhattacharya	Delhi Public School Ruby Park
Rupam Maiti	Kalyani University Experimental High School
Ayan Das	Contai Public School
Anurag Kole	DPS Ruby Park
Satyaki Banerjee	Burdwan Municipal Boys High School
Baidurya Ghosh	Bholananda National Vidyalaya
Shubhajeet Das	North Point Senior Secondary Boarding School
Swarnava Saha	Ramakrishna Mission Boys Home High School Higher Secondary
Arnav Gangopadhyay	Bankura Banga Vidyalaya
Soumyadeep Mahanty	Purulia Zilla School





Name of the Scholars	Present Institution
Atif Akbar	Gorabazar Iswar Chandra Institution
Katharup Jana	Jyotkalyan Pusparani Vidyamandir
Meghamala Bandyopadhyay	La Martiniere For Girls
Tannistha Das	Pathfinder Higher Secondary Public School
Suryadipta Ganguly	Hem Sheela Model School
Aryaprabha Chowdhury	Jalpaiguri Zilla School
Zinita Ghosh	Vivekananda Mission School, Joka
Sharanya Chatterjee	St. Anthonys High School
Shaswata Mondal	Ramakrishna Mission Vidyalaya Narendrapur
Suvanwita Das	Kalyani Central Model School
Ritajit Bhattacharya	Delhi Public School, Ruby Park
Aishi Ghosh	Kalyani Public School
Soham Paul	Delhi Public School, Ruby Park
Debanjan Maiti	Egra Jhatulal High School
Antariksh Sengupta	South Point High School
Sahitya Middy	Palaspai Anchal R K Vidyamandir
Sounika Mandal	Delhi Public School Ruby Park Kolkata
Sneha Dey	Delhi Public School, Durgapur
Deeptam Bhar	DAV Public School
Ahan Chakraborty	Ramakrishna Mission Boys Home High School Rahara
Sougata Ghosh	Balurghat High School
Titas Samanta	South Point High School
Gairika Mukhopadhyay	Ananda Ashrama Sarada Vidyapeeth for Girls
Niharika Basak	Dhupguri High School
Soumik Pal	Ramakrishna Mission Vidyalaya, Narendrapur
Pranshu Nemani	St. Xavier's Collegiate School
Nandini Khan	Aligunj R R Balika Vidyalaya H S
Afreen Mondal	Memari V. M. Institution, Unit-1
Soumyabrata Mukhopadhyay	Jalpaiguri Zilla School
Ankan Chatterjee	Bagati Ramgopal Ghosh High School



Name of the Scholars	Present Institution
Aritra Pal	Techno India Group Public School
Debdan Samanta	Bholananda National Vidyalaya
Aritro Chatterjee	Delhi Public School Ruby Park Kolkata
Soumyojyoti Pal	St. Claret School
Sagnik Ghoshal	Uttarpara Govt. High School
Rupam Barman	Tufanganj N.N.M High School
Soumyadip Giri	Egra J.L. High School
Pathikrit Patra	Ramakrishna Mission Vidyalaya, Narendrapur
Dip Mondal	Bongaon High School
Aneswa Sahu	K.T.P.P High School
Bristi Pal	Chinsurah Balika Bani Mandir
Rupayan Chatterjee	Kalna Ambika Mahismardini High School H.S.
Swastika Koley	Jhikra High School
Tamanna Patra	Bankura Banga Vidyalaya
Souvik Routh	Nandanpur High School
Rhyin Mandal	Hem Sheela Model School
Arghyadip De	Jamalpur High School
Arkajyoti Halder	Bongaon High School
Sagnik Kumar	Hooghly Collegiate School
Suprit Banerjee	Ramakrishna Mission Vidyalaya Narendrapur
Sabuj Kumar Das	Khepal N.C.K.B High School H.S
Soumili Bhattacharya	Chinsurah Balika Bani Mandir
Dwaipayan Gon Bannerjee	Delhi Public School Ruby Park
Gourav Chakraborty	Beachwood School
Ayushman Ganguli	Naihati Narendra Vidyaniketan
Sarbesh Das	Prafullanagar Vidyamandir Hs
Sreejit Dey	M. C. Kejriwal Vidyapeeth
Aditi Sarkar	Raghunathganj High School (H. S.)
Ved Chattopadhyay	Delhi Public School Ruby Park



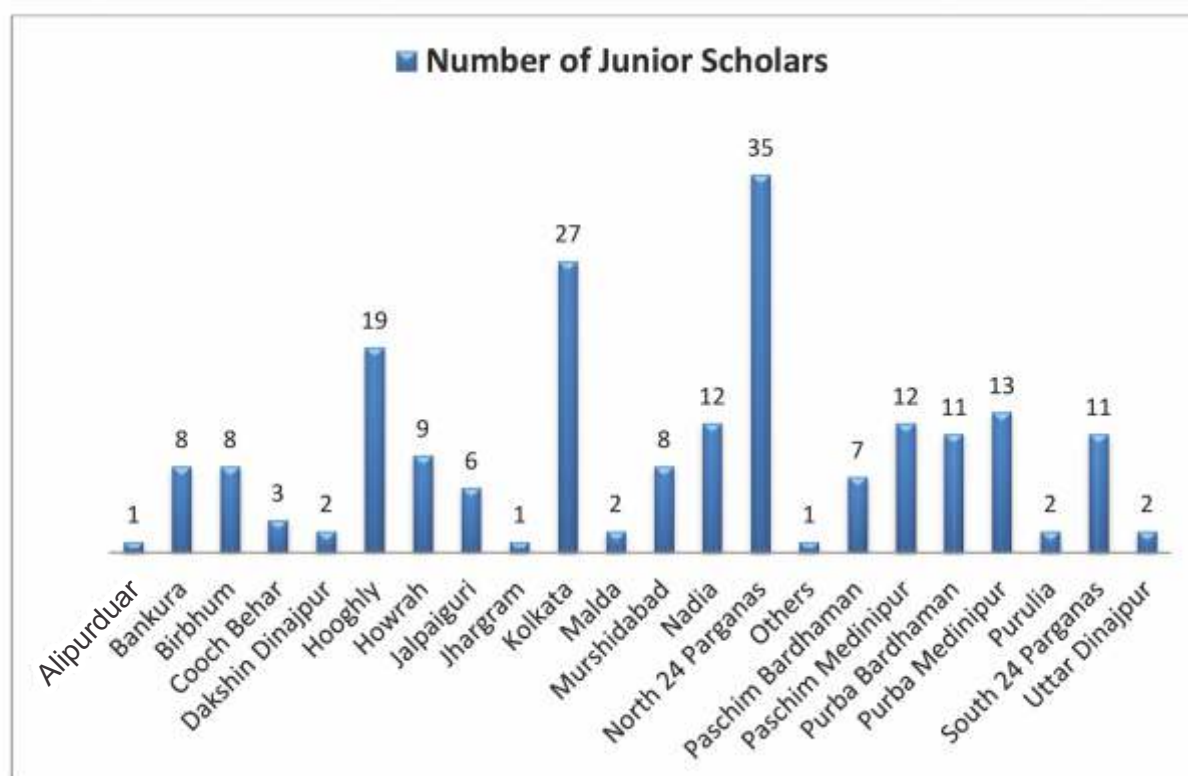
Name of the Scholars	Present Institution
Deepro Sarkar	Jadavpur Vidyapith
Soumendu Datta	Howrah Zilla School
Kinjal Das	St. Xavier's Institution
Srijib De	Mahes Sri Ramkrishna Ashram Vidyalaya
Anuvab De	Aditya Birla Vani Bharati
Manorom Banerjee	SXI Panihati
Aryadip Roy	South Point High School
Mohammad Shaan	Bhavans Gangabux Kanoria Vidyamandir
Krish Jhunjhunwala	Delhi Public School Ruby Park
Manashree Maity	Kolaghat Thermal Power Plant High School
Arggho Chakraborty	Pannalal Institution
Srnita Patra	Bankura Mission Girls High School
Hirak Saha	St. Pauls Mission School
Soham Das	Delhi Public School, Ruby Park
Arghyadeep Dutta	Hindu School
Ahenjeeta Ghosh	Contai Public School
Abhishek Bhattacharjee	Santinagar Vidyamandir
Upanita Das	Pathfinder Higher Secondary Public School
Soumen Paul	Jhapordah Duke Institution
Sahid Aktar	Bolpur High School
Saikat Biswas	Krishnagar Collegiate School
Soumyadip Ghosh	Goaltore High School
Meghna Hazari	DAV Public School
Devjyoti De	St. Augustines Day School
Anish Saha	Ramakrishna Mission Vidyalaya, Narendrapur
Soumik Dhabal	Bankura Zilla School
Atreya Mondal	Basirhat High School
Rishav Roy Chowdhury	Basirhat Town High School
Agniv Nandi	Bishop Morrow School



Name of the Scholars	Present Institution
Md Shahnawaz Abedin	Rahatpur High Madrasah (HS)
Ranit Sahoo	Ramakrishna Mission Vidyabhavan Midnapore
Usnish Paul	RKV Narendrapur
Avinava Chowdhury	Manisha International School, Durgapur
Aritra Sarkar	Techno India Group Public School
Prerona Mitra	K.T.P.P. High School (H.S.)
Abir Ghosh	Manisha International School
Neel Pradhan	Ramakrishna Mission Vidyalaya, Narendrapur
Sagarika Sinha	Delhi Public School, Ruby Park, Kolkata
Argha Patra	Arambagh High School
Baidik Banerjee	Burdwan Municipal High School
Atindra Paul	Belda Gangadhar Academy
Aurbagni Chakrabarti	Dolna Day School
Debabrata Bhuniya	Ramakrishna Mission Vidyalaya, Narendrapur
Surath Ghosh	Katwa Kashiram Das Institution
Debarghya Maiti	Sonakhali High School
Hrit Chaudhury	Ramakrishna Mission Boys Home High School Rahara
Mayukh De	DAV Public School Medinipur
Soumyajit Das	Ramakrishna Mission Vidyalaya Narendrapur
Animikha Dutta Dhar	Saltlake Shiksha Niketan
Amlandeep Basu	Pannalal Institution
Akash Sen	Dainhat High School
Prithvish Chakraborty	Jalpaiguri Zilla School
Prapti Sarkar	Holy Child School Jalpaiguri
Aurhit Paul	Madhyamgram High School
Rupkatha Saha	Kalyani Public School
Mayukh Chowdhury	South Point High School
Sangeeta Goswami	Naihati Narendra Vidyaniketan H.S.
Arka Saha	Ramakrishna Mission Vidyalaya, Narendrapur

Name of the Scholars	Present Institution
Md Muthar Alam	Saifee Golden Jubilee English Public School
Indrajit Bardhan	Ramakrishna Mission Boys Home High School Rahara
Srijit Bhunia	Ramakrishna Mission Vidyalaya Narendrapur
Adrisa Karmakar	Bankura Banga Vidyalaya
Sambarto Mukhopadhyay	The Assembly of God Church School
Tanisha Kabiraj	Kaligati Smriti Nari Siksha Niketan
Abhirup Biswas	Baranagar Narendra Nath Vidyamandir
Asmita Bhattacharya	Sainthia High School
Swapnesu Karmakar	Kendriya Vidyalaya Santragachi
Soumyaraj Das	Narendrapur R.K. Mission Vidyalaya

### Figurative analysis of Junior Scholars 2020 (district-wise)



**JBNSTS Encouragement Awardees : 2022**

Name of the Candidates	Name of the Present Institution
Syantant Sen	Burdwan Model School
Bitan Ahmed	Sarisha Ramakrishna Mission Siksha Mandir H.S
Rannvijay Roy	Ruby Park Public School
Debanjan Datta	Ramakrishna Mission Vidyalaya Narendrapur
Subhakanta Mohapatra	South Point High School
Sayan Panday	Rajballavpur High School
Anwess Kumar Das	Mahesh Sri Ramakrisna Ashram Vidyalaya H.S.
Aritra Dutta	H. M. Education Centre
Soubarna Mayra	Ramakrishna Mission Vidyalaya, Narendrapur
Shreyan Pal	Delhi Public School Ruby Park
Swarup Karmakar	Bankura Banga Vidyalaya
Soham Layek	Bankura Zilla School
Shubho Das	Dooars International Public School
Soumya Mukherjee	Mahesh Sri Ram Krishna Ashram Vidyalaya (H.S.)
Saptik Chatterjee	Ramakrishna Mission Vidyalaya Narendrapur
Md Rijwanul Basir	Siksha Satra, Visva Bharati
Soham Barman	Ramakrishna Mission Vidyalaya, Narendrapur
Ankan Kundu	Chandernagore Sri Aurobindo Vidyamandir
Tridib Mondal	Kedarpur B. N. High School
Ankur Ghosh	Burdwan Municipal High School
Soumyajit Nandi	Rampurhat Jitendralal Vidyabhaban
Sagnik Roy	Delhi Public School Ruby Park
Agnibhu Kundu	Burdwan Model School
Akash Chowdhury	Delhi Public School Ruby Park, Kolkata
Shourya Naha	Delhi Public School Ruby Park
Shreyos Chatterjee	South Point High School
Abhra Chatterjee	Ramakrishna Mission Vidyalaya
Arnab Nayak	Baranagar Narendranath Vidyamandir



Name of the Candidate	Name of the Present Institution
Abhra Ghosh	Uttarpara Govt. High School
Swastik Sarkar	Hooghly Collegiate School Govt.
Monikanchan Bhunia	Malpar Vivekananda Sikshaniketan
Rudra Dutta	Mahesh Sri Ramkrishna Ashram Vidyalaya
Debmalya Niyogi	Midnapore Ramakrishna Mission Vidyabhaban
Anirudhha Roy	South Point High School
Sankalan Jana	Khodambari Union B.P.H.S. School
Partha Rana	Tamluk Hamilton High School
Subarno Mandal	Lalbagh Singhi High School
Sandipta Gayen	Uttarpara Model School (Higher Secondary)
Abhradeep Karmakar	Satish Chandra Memorial School
Abhijit Pal	Illambazar Higher Secondary School
Soumalya Kuila	DAV Public School, Midnapore
Biswayan Adhikary	Hooghly Collegiate School Govt.
Aritra Ghosal	Aditya Birla Vani Bharati
Anish Ghorai	Haldia Govt Spon. Vivekananda Vidyabhaban
Nayan Maity	Kolaghat Thermal Power Plant High School
Swapnil Dutta	Naihati Narendra Vidyaniketan
Swastik Sar	Burdwan Municipal High School
Sanchayan Banerjee	Bibhum Zilla School
Suhrid Samanta	Ramkrishna Mission Vidyalaya, Narendrapur
Dwaipayan Sinha	Kandi Raj High School
Abhijit Sarkar	Gazole H. N. M. High School



## School awards for the year 2022

Award for Best School	Special Award for District Schools
<p><b>Ramakrishna Mission Vidyalaya, Narendrapur</b></p>	<ul style="list-style-type: none"><li>● Ramakrishna Mission Boys' Home School (H.S.), Rahara, North 24 Parganas</li><li>● Kolaghat Thermal Power Plant High School, East Midnapore</li><li>● Kalyani University Experimental High School, Nadia</li><li>● Burdwan Municipal Boys High School, Purba Bardhaman</li></ul>

The award for best school in Junior Scholarship category has been accorded to Ramakrishna Mission Vidyalaya, Narendrapur which comes in the form of net worth amounting to Rs. 10,000/-. Furthermore, four schools have been selected for special award in the Junior Scholarship category, Rs. 5000/- would be awarded to each of the schools.

Science is not only a disciple of reason but also one of romance and passion.

Stephen Hawking





ANNUAL REPORT 2022

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

A platform for growth and  
achieving excellence in STEM  
for young girls studying science  
in higher secondary level  
across the districts of  
West Bengal



## Junior Bigyani Kanya Medha Britti

### An initiative for promotion of participation of girls in science

#### Perspective

Even though India has achieved marvels in science and technology, gender inequality in the ambit of science still continuous to plague our society. Our nation produces large number of scientists and science professionals in the world yet paltry representation of girls in science education has been a pressing issue which is a result of discrimination prejudices and stereotypes in the society. The lack of girls' participation in science at an early age is subjected to lack of awareness of science being meted out to them in school education.

Addressing the complexity of gender gap and the plight of young girls to study science in the high school standard in West Bengal, JBNSTS had initiated an exclusive program for the talented girl students of our state pursuing science in higher secondary framework of education. Since inception of this scheme in 2020 under the support of Department of Science and Technology & Biotechnology, Government of West Bengal, this program has invoked admiration and appreciation from the girl science aspirants of our state. This program is also an encouragement for the parents to rear up their young girls.

#### Objectives

- ❖ Science and gender equality both are the vital issues for the achievement of the internationally agreed development goals including sustainable development,
- ❖ JBNSTS advocates for gender equality and inclusivity and strives to balance the gender diversity in STEM education and research in the fundamental stage so that girls can make a difference in the society.
- ❖ To expose the girl students to different opportunities of education by mentoring them under the ambit of JBNSTS .
- ❖ Financial support in the form of monthly scholarships and annual book grants to facilitate academic pursuits of Junior Bigyani Kanya Medha Britti awardees.
- ❖ Continual academic support to the girl students of our state studying science in higher secondary framework through educating them by mentoring programs thereby leveraging their talent, intellectual abilities which are required to succeed in today's challenging environment.
- ❖ Exposure to diverse array of topics in Physics, chemistry , mathematics , Biology, Statistics and quality experiment based training in JBNSTS laboratory facilities which is never possible in their existing school curricula.

## Framework of Junior Bigyani Kanya Medha Britti program - 2022

Depending on their performance in written and interview the program identifies the prospective awardees on the basis of JBNSTS Junior Talent Science Test 2022. As many as fifty numbers of girls qualifying the successive rounds of Junior Talent Science Test are granted the Bigyani Kanya Medha Britti award. Furthermore, the scholarship details and eligibility criteria for availing the scholarship are drawn below.

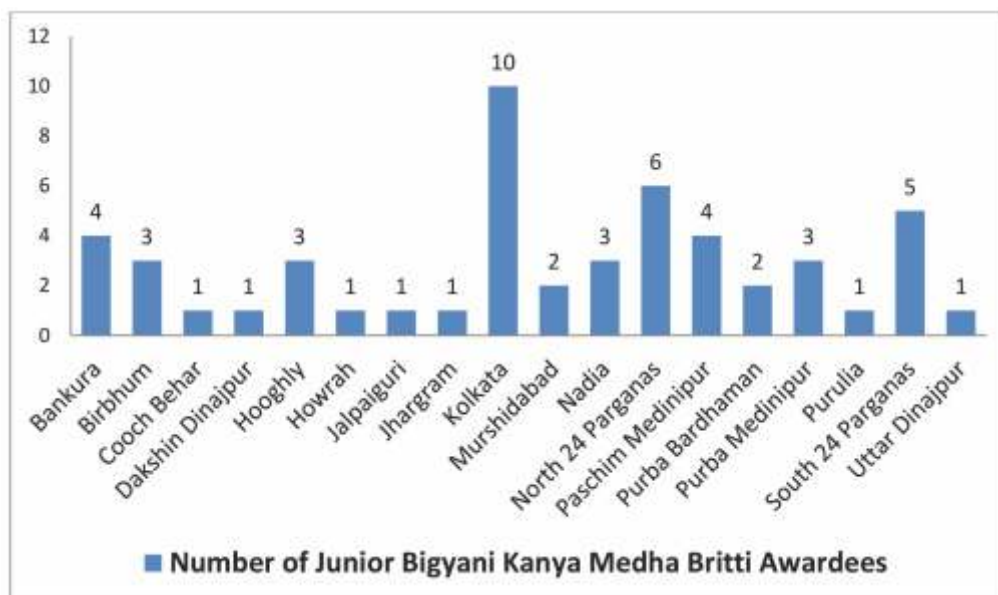
### Eligibility criteria

- ❖ This scholarship can be availed by the girl students studying science in higher secondary level in West Bengal in the current year only.
- ❖ The applicants must have secured at least 75 per cent marks or equivalent CGPA in their qualifying examination of class X, from any government recognised board namely, WBBSE, ICSE, CBSE etc.
- ❖ 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.

### Details of scholarship to be availed

- ❖ 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.
- ❖ Furthermore, Rs. 2,500/- Annual Book Grant for two subsequent years would be provided to the JBNSTS Junior Bigyani Kanya Medha Britti awardees.

## District wise analysis of Junior Bigyani Kanya Medha Britti Awardees – 2022





## 2022 Batch of Junior Bigyani Kanya Medha Britti Awardees

Name of the Awardees	Present Institute
Yanvi Majumdar	Bodhicariya Senior Secondary School
Swagata Bedi	St. Pauls Academy
Mrittika Biswas	Atreyee DAV Public School
Avishikta Das	Nagarukhra High School HS
Shreeja Saha	B D Jain Modern School HS
Soumili Bhunia	DAV Public School, Haldia
Adrija Paria	DAV Public School Medinipur
Priya Mandal	Sevayatan Vidyalaya H.S.
Madhurima Dey	Hetampur Raj High School HS
Kaninika Bhowmik	Mahishadal Raj High School
Aihika Dutta	Kalyani Central Model School
Pritha Pati	Bankura Mission Girls High School
Aratrika Pahari	The BSS School
Adwitiya Upadhyay	Vivekananda Mission School
Hiya Samanta	Delhi Public School, Ruby Park
Anamika Biswas	Sri Narasingha Vidyapith
Alivia Hossain	Auxilium Convent School, Dum Dum
Deepanwita Khaskel	Vidyasagar Shishu Niketan
Waheedah Zahin	Abbot Shishu Hall
Debika Mondal	Nava Nalanda Santiniketan Higher Secondary School
Ahana Pal	Delhi Public School, Ruby Park
Pramana Kundu	Ashoknagar Adarsha Balika Vidyalaya HS
Aonkona Biswas	Kendriya Vidyalaya Barrackpore AFS
Lahama Das	Berhampore Lipika Memorial Girls High School
Iluka Bera	Delhi Public School Ruby Park, Kolkata
Ayushi Chatterjee	Delhi Public School Ruby Park, Kolkata
Tandrita Mukherjee	Vivekananda Academy



Name of the Awardees	Present Institute
Ayusmita Char	AGPN Convent and E.R. School
Zinat Sultana	Calcutta Girls High School
Prathama Banerjee	Techno India Group Public School
Adrija Das	Gokhale Memorial Girls School
Anushka Chakraborty	South Point High School
Semontii Mandal	Auxilium Convent School
Sathi Giri	Mohanpur High School
Tanuska Sarkar	Karimpur Jagannath High School
Dishani Banerjee	Patrasayer Bamira Gurudas Institution
Srijani Ghosh	Krishna Bhabini Nari Siksha Mandir
Sneha Sadhukhan	Bholananda National Vidyalaya
Arunima Sau	Holy Cross School
Saniya Mandal	Bankura Banga Vidhyalaya
Chandrani Saha	G.D. Birla Centre for Education
Sreejeeta Roy	Hariyana Vidya Mandir
Ahana Koner	Kalna Mahismardini Girls Institution
Urbee De	Bholananda National Vidyalaya
Ananya Chatterjee	G D Birla Centre for Education
Sucharita Sarkar	Holy Child Institute
Sanchayita Dey	Tajpur Ramcharan High School
Sulaghna Dey	Holy Child Institute
Rituparna Garai	Goaltore High School
Saloni Khan	Chandernagore St. Anthony's School for Girls
Pallabi Sarkar	Baranagar Rajkumari Memorial Girls High School
Renaissance Biswas	Kalagachia Jagadish Vidyapith



**If you know you are on the right track,  
if you have this inner knowledge, then  
nobody can turn you off... no matter  
what they say.**

**– Barbara McClintock**



ANNUAL REPORT 2022

# JBNSTS VIDYASAGAR STATE SCIENCE OLYMPIAD

Promoting scientific reasoning &  
logical ability among  
school students



## **JBNSTS Vidyasagar State Science Olympiad**

**Unique program for improving the quality of Science education**

### **Foundational principle of the initiative**

JBNSTS is a prodigal platform for qualitative dissemination of knowledge and information of science in the academic ecosystem of the nation. Identifying talented students mentoring them to face further challenges in making career in science is the vision of JBNSTS. The Vidyasagar State Science Olympiad is a rigorous academic and scholastic aptitude competition in West Bengal that includes the school going pupils up to the level of each block. This State Science Olympiad provides participating candidates with an exposure to the competitive world to have this learning skills on a state and finally to the national level. Such examinations play an important role in evaluating students' performance.

The inaugural edition of Vidyasagar State Science Olympiad conducted by JBNSTS under the auspices of School Education Department, Government of West Bengal was scheduled to be held in the preceding year to celebrate 200<sup>th</sup> birth centenary year of Iswar Chandra Vidyasagar but was delayed due to the obscurities related to the unprecedented pandemic. Finally it was resumed in 2022 which encompassed overwhelming participation from the students and invoked appreciation from all over West Bengal. It was conducted both for class IX and X only for this year since last year examination could not be conducted.

### **Objectives that this program aims to achieve**

- The JBNSTS Vidyasagar State Science Olympiad is a state wide competition which provides the talented science aspirants a platform to enhance their skillsets by appreciation of their exact needs. The students can analyse their strength and weakness based on their performance.
- The program intends to mentor and nurture the aspiring talent by uplifting their knowledge on different topics of science and mathematics in the secondary standard of existing curricula through the tri-phased examination.
- It helps them to understand deep knowledge about subjects and sharpens their minds for aptitude and competitive exams.
- Appearing for Olympiads gives self confidence in students and helps them work hard to achieve their goals.
- Subjects become interesting to them when the students challenge themselves to come out of their comfort zone and have a desire to learn more.





- The program aims to foster the selected students through participation in experimental learning in state-of-the-art laboratory facilities of JBNSTS and expand the potent merit of the pupils through participation in interactive seminars, workshops and symposia.
- In acknowledgement of the aptitude of the scholars, and to support their academic needs, scholarship and book grant would be awarded to the top hundred students from all over West Bengal along with their nurturing workshops.

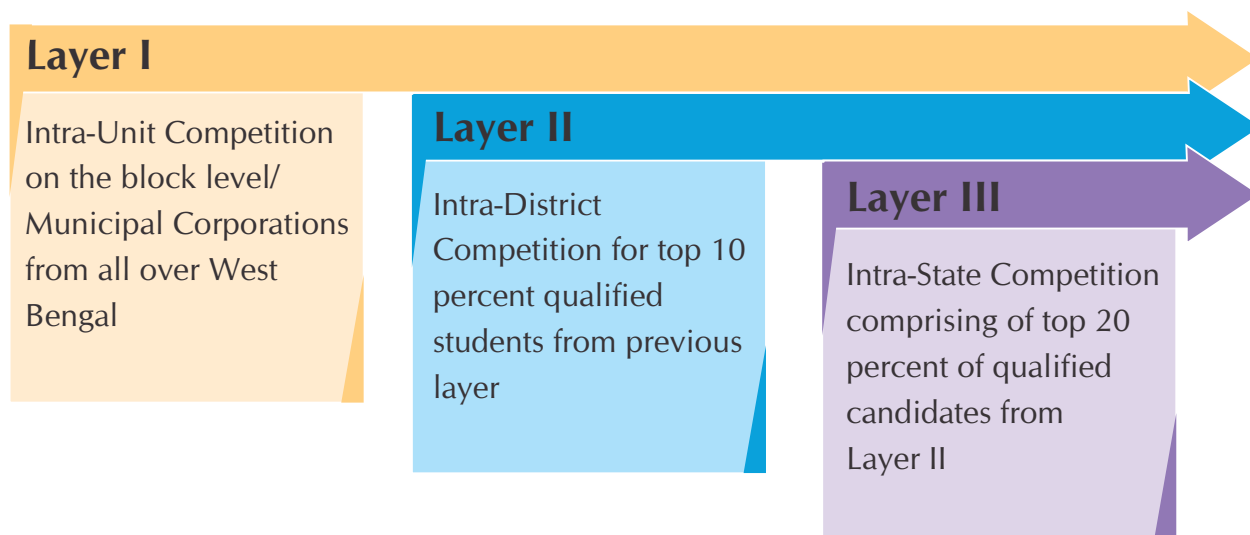
## Scheme and structure of JBNSTS Vidyasagar State Science Olympiad

### 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 Examination, 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 test.

### Structure of the examination

The Vidyasagar State Science Olympiad is a three phased screening test which evaluates the aptitude of a student through questions in Physical Science, Life Science and Mathematics comprising of topics related to the state board's specified syllabus. The following schematic figure outlines the design of examination in brief.





**Enunciated form of the examinations and subsequent awards are drawn up below.**

<b>Layer I Intra - Unit Competition</b>	Top three (03) candidates would be awarded with Book Grant amounting to Rs. 1000/-.
<b>Layer II Intra District Competition</b>	<ul style="list-style-type: none"><li>• This test would be conducted for the top ten per cent qualified students from layer one of the examination under each district of West Bengal.</li><li>• Top twenty per cent students from each district shall be entitled to receive Book Grant worth Rs. 2000/-.</li></ul>
<b>Layer III Intra State Competition</b>	<ul style="list-style-type: none"><li>❖ This phase of the examination accounts for top twenty per cent qualified students across all the districts of West Bengal selected through layer 2.</li><li>❖ Top 100 candidates from all over West Bengal selected as Vidyasagar State Science Olympiad Scholarship awardees would be provided with scholarship worth Rs. 1000/- per month and annual book grant of Rs. 2500/- for two years along with mentoring workshops prepare them for national level Examinations.</li></ul>

### **Vidyasagar State Science Olympiad conducted by JBNSTS: An Overview**

<b>Snapshot</b>	<b>Layer 1</b>	<b>Layer 2</b>	<b>Layer 3</b>
No. of examination centres	383	26	26
Date of the examination	May 8, 2022	July 24, 2022	August 28, 2022
No. of applied/ selected candidates	36,110 for class IX 35,629 for class X	3417 for class IX 2089 for class X	674 for class IX 423 for class X



## List of State Science Olympiad scholars from class IX

Name of the Scholars	School Name	District
Bineet Karmakar	Lalbagh Singhi High School (H.S)	Murshidabad
Bidit Khamri	Ramakrishna Mission Vidyabhavan (H.S)	Paschim Medinipur
Danish Rahaman	Krishnagar Collegiate School	Nadia
Arha Bhattacharya	Chandrakona Jirat High School U. Pry	Paschim Medinipur
Sumit Mondal	Belari Vivekananda Vidyamandir	Howrah
Abritti Ghatak	Balurghat Girls' High School	Dakshin Dinajpur
Rajarshi Mahapatra	Belda Gangadhar Academy U. Pry	Paschim Medinipur
Arindam Paul	Hindu School	Kolkata
Aditya Ranjan Roy	Naihati Narendra Vidyaniketan	North 24 Parganas
Jishnu Das	Chakdaha Ramlal Academy	Nadia
Swarnendu Chattopadhyay	Belgharia High School	North 24 Parganas
Subham Pramanik	Majilpur J.M. Training School (HS)	South 24 Parganas
Priyanka Bera	Bajkul Balai Chandra Vidyapith (H.S.)	Purba Medinipur
Arijit Manna	Hoomgarh Chandabila High School U.Pry.	Paschim Medinipur
Anurupa Mandal	Gobindapur RK High School	Hooghly
Subhankar Biswas	Nabadwip Bakultala High School	Nadia
Shankhadeep Jana	Reapara Adarsha Vidyapith (H.S)	Purba Medinipur
Sounak Chatterjee	Katwa Kashiram Das Institution	Purba Bardhaman
Indrani Chakraborty	Bardhaman Bidyarthi Bhavan Girl's High School	Purba Bardhaman
Soumalya Patra	Ramharipur R.K.Mission H.S	Bankura
Anurag Mondal	Harindanga High School	South 24 Parganas
Priyam Ghosh	Chakdaha Ramlal Academy	Nadia
Debnath De	Patrasayer Bamira Gurudas Institution	Bankura
Sanjhbati Sengupta	Carmel High School	Kolkata
Roudrabho Das	Prafulla Nagar Vidyamandir (H.S.)	North 24 Parganas
Raihan Parwez	Nagar Aziza Memorial High School (H.S)	Murshidabad
Souryajyoti Kar	Krishnaganj Krishi Silpa Vidyalaya	Purba Medinipur
Abhijnan Mallick	Dum Dum Kishore Bharati High School	North 24 Parganas
Sampad Paria	Contai Model Institution	Purba Medinipur



Name of the Scholars	School Name	District
Pranit Sahoo	Paniparul Mukteswar High School	Purba Medinipur
Ankita Kundu	Tanadighi H.S	Bankura
Abhijit Koley	Arambagh High School	Hooghly
Sayan Bhakta	Lachipur Binapani High School U. Pry	Paschim Medinipur
Anirjan Mandal	Bankura Zilla School	Bankura
Priyanshu Ghosh	Suri Public & Chandragati Mustafi Memorial High School	Birbhum
Ayush Pal	Dakshin Chatra High School	North 24 Parganas
Arkajit Kundu	Bankura Zilla School	Bankura
Amit Banik	Banamalipur Priyanath Institution	North 24 Parganas
Ritojyoti Debnath	Krishnagar High School	Nadia
Aranyadeb Barman	Shyampur High School	Howrah
Pratyush Maiti	Haldia Govt. Sponsored X Class Secondary School (H.S)	Purba Medinipur
Argha Deep Ghosh	Ramakrishna Mission Sarada Vidyapith (High School)	Bankura
Aneek Das Adhikari	Patha Bhavan	Kolkata
Soumik Ghosh	Prafulla Nagar Vidyamandir (H.S.)	North 24 Parganas
Krishanu Panda	Machatora Union High School	Bankura
Agniva Patra	Ramakrishna Mission Vidyabhavan (H.S)	Paschim Medinipur
Shibam Atha	Bankura Christian Collegiate School	Bankura
Aniruddha Seal	Patha Bhavan	Kolkata
Disha Biswas	Bagula Purbapara High School	Nadia
Suman Shit	Belda Gangadhar Academy U. Pry	Paschim Medinipur
Rupam Raul	Rohini C. R. D. High (H.S)	Jhargram
Toufique Omar	Kharera A.N.H.M High School	Murshidabad
Abhik Sarkar	Raghunathganj High School	Murshidabad
Prantik Sengupta	Jalpaiguri Zilla School High	Jalpaiguri
Srijan De	B .E .College Model High School	Howrah
Akashdeep Sadhukhan	Baidyapur Ramkrishna Vidyapith	Purba Bardhaman
Soha Mukhopadhyay	Michaelnagar Shikshanikatan (H.S)	North 24 Parganas



Name of the Scholars	School Name	District
Anindita Das	Bagmari Nari Kalyan Siksha Sadan	Purba Medinipur
Indranil Bhattacharyya	Katwa Kashiram Das Institution	Purba Bardhaman
Harit Mondal	Saltora Dr. B.C. Vidyapith	Bankura
Soumyadeep Chakraborty	Tukuria Ramkrishna High School Upry.	Paschim Medinipur
Premananda Sarkar	Beliaberah K.C.M. High School (HS) U Pry	Jhargram
Anushka Mahanti	New Integrated Govt. School, Simlapal	Bankura
Madhuri Sarkar	Baul Parameswar High School	Dakshin Dinajpur
Monisankar Bakshi	Bagula Purbapara High School	Nadia
Trijita Mukherjee	Maslandapur Bhudeb Smriti Balika Vidyalaya (H.S)	North 24 Parganas
Sanjana Singha	Alipurduar Newtown Girls High	Alipurduar
Chirodip Kundu	Seharabazar C.K. Institution	Purba Bardhaman
Priyangshu Chakraborty	Mahesh Sri Ramkrishna Ashram Vid	Hooghly
Ratnadeepa Makur	Shibdas Central Girls H.S	Bankura
Ayshi Halder	Uttarpara Girls' High School	Hooghly
Soumyadip Khara	Tukuria Ramkrishna High School Upry.	Paschim Medinipur
Nishan Pal	Raghudevhati Sadharaner Vidya.	Howrah
Manami Samanta	Khukurdaha I.C.M.M.H.S. U. Pry.	Paschim Medinipur
Pratip Mitra	Kola Union High School	Purba Medinipur
Asmit Samanta	Dakshin Moyna High School (H.S.)	Purba Medinipur
Aneek Adak	Gopalpur Deshbandhu Chittaranjan High School	Paschim Medinipur
Navonil Das	Kaligram High School	Maldah
Aritra Samanta	Jujersa P.N.Manna Institution	Howrah
Sanway Samanta	Parulia Kulakamini High School	Purba Bardhaman
Anuj Kumar Das	Mahesh Sriramkrishna Ashram Vivekananda Vidyalaya	Hooghly
Arnab Halder	Gorabazar I. C. Institution	Murshidabad
Nandini Das	Birnagar Shivakali Girls' High School (H.S)	Nadia
Anushka Adhikari	Dhibagnan K. B. Roy H.S School	Hooghly
Sayan Mallik	Sodepur High School	Hooghly
Sagnik Manna	Mahammadpur Deshapran Vidyapith (H.S.)	Purba Medinipur



Name of the Scholars	School Name	District
Parijat Baul	Falakata Girls' High School	Alipurduar
Sinchan Maitra	Jalpaiguri Zilla School High	Jalpaiguri
Sayantan Chakrabarty	Komarpur G C High School	Purba Bardhaman
Soumik Khan	Taldangra Fulmati High School (H. S.)	Bankura
Md. Atique	Asansol R.K.Mission High School	Paschim Bardhaman
Saptarshi Pal	Ramakrishna Mission Boys' Home High School (HS)	North 24 Parganas
Soumyadeep Mandal	Garh Raipur High School (HS)	Bankura
Soham Mandal	Jhargram Kumud Kumari Institution (H.S)	Jhargram
Reetam Kumar Ghosh	Ghanarampur S. V. U. Pry.	Paschim Medinipur
Trisha Ghosh	Kanlla Ramkrishna Vidyapith	Murshidabad
Aksa Laskar	Sherpur Ramchandrapur High School (H.S)	South 24 Parganas
Misbaul Hoque	Sovanagar High School	Malda
Purnendu Ghosh	Balsi H.S	Bankura
Ritankar Pal	Burdwan Municipal High School	Purba Bardhama





### List of State Science Olympiad scholars from class X

Name of the Scholars	School Name	District
Devdutta Majhi	Katwa D.D.C. Girls' High School	Purba Bardhaman
Soham Nandi	Midnapore Collegiate Boys High School U. Pry	Paschim Medinipur
Sagnik Patra	Midnapore Collegiate Boys High School U. Pry	Paschim Medinipur
Soumyadip Mallick	Berachampa Deulia Uchcha Vidyalaya	North 24 Parganas
Subham Paul	Burdwan Municipal High School	Purba Bardhaman
Mounak Ghosh	Gorabazar I. C. Institution	Murshidabad
Rupayan Pal	Burdwan C.M.S. High School	Purba Bardhaman
Prantik Ganguli	Arambagh High School	Hooghly
Promit Ghosh	Gobardanga Khantura High School	North 24 Parganas
Tufan Sannigrahi	Simlapal Madan Mohan High School (Simlapal M.M. H.S)	Bankura
Brato Roy	Ushagram Boys' High School(H.S)	Paschim Bardhaman
Kuntal Choudhury	Susundighi H.P. High School	Purba Bardhaman
Subhodeep Chapadar	Katwa Kashiram Das Institution	Purba Bardhaman
Abhranil Barik	Jhargram Kumud Kumari Institution (H.S.)	Jhargram
Anindya Sundar Chattaraj	Jhargram Kumud Kumari Institution (H.S.)	Jhargram
Jishnu Ghosh	Mahesh Sriramkrishna Ashram Vivekananda Vidyalaya	Hooghly
Vinayak Senapati	Rohini C.R.D. High (H.S)	Jhargram
Arjun Mukhopadhyay	Tirol High School	Hooghly
Sourasish Bhattacharjee	Baranagar Ramkrishna Mission High School	North 24 Parganas
Parnava Samanta	Bagnan High School	Howrah
Ribhu Sinhamahapatra	Simlapal Madan Mohan High School (Simlapal M.M. H.S)	Bankura
Subhadeep Mondal	Gobardanga Khantura High School	North 24 Parganas
Ayan Rakshit	Gobardanga Khantura High School	North 24 Parganas
Sumalya Mahapatra	Kajalgarh M.S.B.C.M. High School	Purba Medinipur
Arpit Bera	Shyamsundarpur Patna High School	Purba Medinipur



Name of the Scholars	School Name	District
Rohit Roy	Midnapore Collegiate Boys High School U. Pry	Paschim Medinipur
Preeti Khanra	Joteghanashyam Nilmoni H.S. U. Pry.	Paschim Medinipur
Gourab De	Nabadwip Bakultala High School	Nadia
Arghyadeep Goswami	Hoomgarh Chandabila High School U. Pry	Paschim Medinipur
Dishani Hajra	Salepur S.S. Vidyapith	Hooghly
Md Sarwar Imtiaz	Ramakrishna Mission Vivekananda Vidyamandir	Malda
Ritam Manna	Bankura Zilla School	Bankura
Aranyo Ray	Jadavpur Vidyapith	Kolkata
Arnab Majhi	Midnapore Collegiate Boys High School U. Pry	Paschim Medinipur
Riddhit Pal	Katwa Kashiram Das Institution	Purba Bardhaman
Ankan Nandi	Ramkrishna Mission M.P. School	Hooghly
Mritunjay Chandra	Balarampur P.C. High School (H.S.)	Purulia
Sugato Chatterjee	New Andul H.C. School (High)	Howrah
Srijita Sarkar	Ghatal Y.S.S.V. U. Pry	Paschim Medinipur
Mayukh Sasmal	Sodepur High School	Hooghly
Archisman Kayal	New Andul H.C. School (High)	Howrah
Shreesh Saha	Chanchal Siddheswari Institution (H.S)	Maldah
Subhadeep Das	Durgapur T.N. High School	Paschim Bardhaman
Trinanjana Datta	Jadavpur Vidyapith	Kolkata
Anasmita Das	Contai High School	Purba Medinipur
Suvadip Sarkar	Bankura Zilla School	Bankura
Rayhan Abedin	Ramakrishna Mission Vivekananda Vidyamandir	Maldah
Shreyashi Ghosh	Barlow Girls High School	Maldah
Himadri Banerjee	Laulara R.C. Academy (H.S.)	Purulia
Swaraj Pradhan	Bartana P.A High School	Purba Medinipur
Anirudha Paul	Hoomgarh Chandabila High School U. Pry.	Paschim Medinipur
Ananya Kumbhakar	Sri Sarada Devi Balika Vidya M	Bankura





Name of the Scholars	School Name	District
Soumyadip Ash	Galsi High School	Purba Bardhaman
Rajdip Sasmal	Ramkrishna Mission M.P. School	Hooghly
Shoaib Khan	Panskura Bradley Birt High School	Purba Medinipur
Namrata Mondal	Saltora Girls H.S	Bankura
Anindya Sundar Ghosh	Mahesh Sri Ramkrishna Ashram Vid	Hooghly
Subhrajyoti Ghosh	Gorabazar I. C. Institution	Murshidabad
Unmesh Saha	Sodepur Chandrachur Vidyapith	North 24 Parganas
Raju Mondal	Chandpara Bani Vidya Bithi	North 24 Parganas
Nazfar Rahaman	Rampurhat Jitendralal Vidyabhaban	Birbhum
Srijan Ghosh	Purba Barasat Adarsha Bidyapeeth	North 24 Parganas
Nirmalya Bhadra	Napara High School (H.S.)	Purulia
Sidhartha Mondal	Panchra High School	Birbhum
Parambrato Das	Sarisha Ramakrishna Mission Sikshamandir (HS)	South 24 Parganas
Kritisha Parui	Ghatal Y.S.S.V. U. Pry.	Paschim Medinipur
Lisa Das	Sashi Bhusan Dutta Girls' High	Birbhum
Sonai Mukherjee	Mission Girls H.S Bankura	Bankura
Nilanjan Ghosh	Nanoor Chandidas Memorial High School	Birbhum
Abhinaba Ghosh	Gorabazar I. C. Institution	Murshidabad
Amit Biswas	Chakdaha Ramlal Academy	Nadia
Arnab Datta	Baranagar Ramkrishna Mission High School	North 24 Parganas
Rupanjan Sarkar	Ramakrishna Mission Boys' Home High School (Hs)	North 24 Parganas
Tanika Ray	Chakdaha Basanta Kumari Balika Vidyapith (H.S)	Nadia
Tanmoy Ghosh	Taki Ramakrishna Mission High School	North 24 Parganas
Anurag Mondal	Kautala Ramkrishna Ashram High School (H.S)	South 24 Parganas
Ankita Maity	Kumarchak High School	Howrah
Anushreya Das	Chanchal R. D. Girls' High School (H.S.)	Maldah
Ritam Paul	Kandapasara D.P. High School	Purba Medinipur



Name of the Scholars	School Name	District
Arka Pal	Nabadwip Bakultala High School	Nadia
Satirtha Saha	Balurghat High School	Dakshin Dinajpur
Spandan Mondal	Diamond Harbour Bharat Sevasram Sangha Pranab Vidyapith (H.S)	South 24 Parganas
Arya Bikram Mandal	Manasadwip Ramakrishna Mission High School	South Twenty Four Parganas
Arka Mondal	Taki Ramakrishna.Mission High School	North 24 Parganas
Krishnaraj Kundu	Ramnagar Abinash High School	Hooghly
Aman Nandy	Jadavpur Vidyapith	Kolkata
Bipasha Patra	Ramnagar Balika Vidyalaya	Purba Medinipur
Arpan Das	Asansol Old Station High School	Paschim Bardhaman
Soham Maity	Kola Union High School	Purba Medinipur
Lina Das	Manindra Nath High School	Coochbehar
Samanway Sarkar	Duttapukur Mahesh Vidyapith	North 24 Parganas
Subodh Das	Barabisha High School (H.S)	Alipurduar
Deepanjan Mondal	Karkaria Joytara Vidyapith (H)	Birbhum
Sourasish Mitra	Chakdaha Ramlal Academy	Nadia
Rudranil Mandal	Contai Model Institution	Purba Medinipur
Purnendu Das	Paramanandapur Jagannath Institution	Purba Medinipur
Iman Das	Mathabhanga High School	Coochbehar
Saikat Biswas	New Alipore Multipurpose School	Kolkata
Sumit Ray	Ramakrishna Mission Boys' Home High School (HS)	North 24 Parganas
Soumalya Patra	Kenduadihi High School	Bankura

**The good thing about science  
is that it's true whether or not  
you believe in it.**

**Neil deGrasse Tyson**



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# JBNSTS TALENT ENRICHMENT PROGRAM

An initiative to  
develop a generation of  
STEM innovators



## Talent Enrichment Program

Nurturing scientists of the future

### Perspective

Long ago, India had pledged to form scientific temper in the society to create a self-reliant nation. Our country suffers from a malady of absence of proper platform wherein the talented student scientists could be groomed for their further academic pursuits in STEM. Definitely, these nurturing sessions do not lead directly to any career benefits, rather they provide a stimulus to begin career in science and technology, to undertake a lifelong journey into the realms of exciting intellectual challenges.

Responding to the needs of the nation, JBNSTS had initiated several programs, amongst them Talent Enrichment Program deserves special mention. This initiative catalyzes the excellence of the young bright minds of India along with sustenance of their creativity and productivity in science. The program makes a conscious effort to identify and nurture scientific talents who would lead India in the global platform in STEM education and research.

### Process of nurturing gifted talents in science

- A** Educational seminars, conferences, symposias etc. are grooming tools which expose the talented students to global trends of STEM education and research.
- B** Different workshops where the scholars can experience hands-on activity which creates a bridge and association between the scientific community of the country and the student scientists. Even programs are arranged with IISER, IICB, IACS etc.
- C** Academic visits to the nations acclaimed science research institutes and organisations eg. TIFR, IISC, NCBS, JNCASR, ISRO, NIMHANS etc. for accretion of knowledge of working in state-of-art laboratories in complex science subjects and avenues.

This program ensures creation of a pool of exceptional talent through holistic development of the talented minds in STEM thus strengthening the human resource of our country.

## Concise depiction of academic activities held in JBNSTS for this year

### Symposium on Medical Science and Research

Due to the pandemic situation this program suffered a lot, only online programs could be held. But once the new normal condition is over, series of programs and planning commenced. A unique program was organized for the medical students. The seminar comprised of acclaimed medical professionals, medical practitioners, doctors and senior scholars along with Bigyani Kanya Medha Britti awardees. The interaction circumfused upon latest developments and breakthroughs in the domain with unprecedented new opportunities in drug discovery and roles of pediatrician, surgeon or therapist and clinician in the upcoming era globally. The esteemed speakers emphasized upon medical science being one of the fastest growing sectors of the world economy and have made rapid strides over the years. There is a massive need for clinical research professionals in this fast-growing field. Clinical research makes an interesting career option with a great scope for professional growth and the future doctors can select a sub discipline that focuses on research and management. All the sessions including the quiz program served as a huge inspiring learning curve for the budding doctors who have



seemingly been communicated with the global trends and philosophy of medical research, education and practice and medical ethics in the field. Specifics of the seminar are given below.

Title/ Topic of discourse	Speakers
<b>Roadmap to evolve as a standout Clinician and Researcher</b>	<b>Dr. Sudip Chatterjee</b> Hony Professor at VIMS
<b>Tools for Basic Research : Introduction to Cell Culture</b>	<b>Dr. Anirban Ganguly</b> AIIMS, Deoghar
<b>Approach to Medical Research as a Clinician: Scopes and Benefits</b>	<b>Dr. Ananya Sengupta</b> Institute of Neurosciences, Kolkata
<b>Medical Science Quiz</b>	<b>Dr. Piyas Gargari</b> IPGME&R, Kolkata

### One day seminar for senior scholars

In a separate string of academic discourses held in JBNSTS an ensemble cast of topics related to STEM was being discussed. The orientation integrated insightful dialogue by legendary scientists and environmentalist. The conversation conformed to waste management, awareness regarding waste disposal which will help in scientific recycling of waste and the need of human intervention to prevent the wastage of natural resources and the assistance to recycling for saving natural resources to help in maintaining circular economy. Discussion and description on phenomenon in statistical



thermodynamics motivated the development of simulated annealing algorithm. Demonstrations on how learning approaches represent novel paradigms to efficiently and accurately solve problems enhancing classical scientific computing approaches and future challenges for the data-driven computing paradigm were outlined to the scholars. The esteemed speakers enunciated the basic chemistry of how the electron is stored and then utilized in cell phone battery and some of the chemical challenges of current Li-ion batteries and few chemical strategies towards improved batteries compatible with the renewable future that we all envisage. The participants were enthralled to learn new concepts of contemporary science which even included the relation of physics with that of music. Sketch of the stimulating topics and concepts discussed are being mentioned underneath.



Name of the mentors/ speakers	Title/ topic of the lectures
<p><b>Waste Management: Impact on Environment, Society &amp; Economy</b></p>	<p><b>Dr Sanghamitra Mukherjee</b> Sreemitram, Kolkata</p>
<p><b>Simulated Annealing: Minimization by Monte Carlo</b></p>	<p><b>Prof. Probal Choudhuri</b> Indian Statistical Institute, Kolkata</p>
<p><b>Emerging Approaches for Designing Peptide based Therapeutics</b></p>	<p><b>Dr Rituparna Sinha Roy</b> Indian Institute of Science Education &amp; Research, Mohanpur, Nadia</p>
<p><b>The way we store electrons</b></p>	<p><b>Dr. Urmimala Maitra</b> Indian Association for the Cultivation of Science, Kolkata</p>
<p><b>In Search for Hidden Spaces</b></p>	<p><b>Prof. Soumitra SenGupta</b> Indian Association for the Cultivation of Science, Kolkata</p>
<p><b>Doing Science in a Data-driven and Connected World – A Machine Learning Perspective</b></p>	<p><b>Dr Swagatam Das</b> Indian Statistical Institute, Kolkata</p>







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# BIOTECHNOLOGY ON JBNSTS PLATFORM

Exploring solutions from  
microbes to DNA-analysis in  
the state-of-art facilities  
of JBNSTS



## Biotechnology for Student Scientists

Learning myriad avenues of biotechnology on JBNSTS platform

### Rationale of this initiative

The current premise of the high school syllabus related to biological sciences indicates inadequate emphasis towards biotechnology which is denoted by lack of exposure towards the practical aspects of the subject that appears to be a stumbling block for the students pursuing biological sciences in high school framework. JBNSTS being a prominent institute of science in the eco-system of the state addressed the existing lacunae in the form of dearth of congenial environment for manifestation of practical hands-on experimental activities as a prefix to the existing syllabus. 2018 marks the advent of biotechnology program on JBNSTS program under the financial patronage of Department of Science and Technology and Biotechnology, Government of West Bengal. The biotechnology laboratory has been designated in the name of the legendary scientist Rosalind Franklin.

### Manifold objectives the program aims to fulfill

To function as a phenomenal premise of incubation for the high school science students having inclination towards biological sciences.

To create a platform of research driven activities for pupils, faculties, teachers, project research scholars from all over the state in biotechnology.

To impart the participants with practical modules of the subject bearing resonance with the existing syllabus and guiding them to perform the latest experiments in JBNSTS laboratories under the mentorship of expert facilitators.

Induction on judicious application of biotechnology being necessary for solving real life problems of the environment along with orientation on therapeutics and drug delivery.

## Unique module designed for nurturing students in JBNSTS Biotechnology platform

The four-fold method developed by JBNSTS encapsulates the process of nurturing young talented science aspirants as mentioned below.

- ❖ Enthusing the young talents by exposing them to remarkable lectures on transnational emerging topics of biotechnology by eminent scientists, researchers and teachers.
- ❖ Mentoring the participants about usage and technical know-how of sophisticated and modern instruments, devices for performing various experiments in JBNSTS laboratories.
- ❖ Mentoring the students to analyze the experimental dataset and preparing presentation.
- ❖ Interactive sessions by the mentors with the participants regarding the scope, prospects and avenues of the subject for further academic research activities by the students.

## A condensed account of JBNSTS Biotechnology programs held in 2022

This year witnessed the revival of JBNSTS biotechnology workshops in the physical mode in the institute's campus doing away with the limitation of conducting programs due to successive phases of the pandemic in the erstwhile years. The resumption of workshops was marked with great enthusiasm amongst the large number of vibrant students and teachers of our state. JBNSTS hosted several





theoretical and practical based sessions for the high school science aspirants under the mentorship of acclaimed professionals along with interactive theoretical sessions stirred their appetite for knowledge which was never possible in the prevailing biological sciences curriculum of high school framework.

### Pen sketch of experiments performed and topics covered

- ❖ Bacteriological media preparation and sterilization
- ❖ Bacterial Growth Curve
- ❖ Different types of microbes, their basic shapes, Gram staining, microbes from curd
- ❖ DNA Isolation from Bacteria
- ❖ Estimation and purity of DNA by spectrophotometer
- ❖ DNA Gel Electrophoresis of bacterial Genomic DNA and PCR product
- ❖ Determination of blood group amongst humans
- ❖ Estimation of haemoglobin from human blood
- ❖ Microscopic viewing of different bacterial cells
- ❖ Polymerase Chain Reaction (PCR) of a bacteria specific gene
- ❖ Spectrofluorometric determination of chlorophylls
- ❖ Use of spectrophotometer for quantitative analysis of food adulteration





## List of theoretical lectures (Title/ Topics)

- ❖ Biotechnology: Improving the Quality of Life
- ❖ Application of Biotechnology: Clean up our Environment
- ❖ Biotechnology and its applications
- ❖ Biotechnological tools for the Genetic Engineering
- ❖ Biotechnology: The Scope and Applications
- ❖ Introduction to Biotechnology Techniques and Tools
- ❖ Biotechnology: Concept and application
- ❖ Recent trends in Biotechnology
- ❖ Basic concept of biological macromolecules
- ❖ History and development of Biotechnology in current scenario
- ❖ Plant Biotechnology and application
- ❖ Concept of ABO blood grouping system
- ❖ Working principle of instrument used in Biotechnology laboratory
- ❖ Bacterial DNA isolation
- ❖ Polymerase chain reaction basic steps and working principle
- ❖ Basic concept of gel electrophoresis technique
- ❖ Concept on sterilization technique and good laboratory practices (GLP)
- ❖ Principle and application of spectrophotometer

## List of participating schools in Biotechnology programs for the year 2022

- Balia Nafar Chandra Balika Vidyalaya
- Ballygunge Government High School
- Baranagar Rajkumari Memorial Girls' High School
- Basirhat Town High School
- Birbhum Zilla School
- Brahmo Balika Shikshalaya
- Chittaranjan High School
- Dum Dum Kishore Bharati High School
- Gandhi Colony Madhyamik Vidyalaya (H.S.)



- Garfa Dhirendranath Memorial High School (H S)
- Garia Harimati Devi Uchch Balika Vidyalaya
- Harinavi D.V.A.S High School
- Jadavpur N K Pal Adarsha Sikhayatan
- Kamala Vidyamandir High School for Girls
- Katwa Kashiram Das Institution
- Mathurapur Sri RKV Nari Siksha Mondir
- Muralidhar Girls School
- Netaji Nagar Balika Vidya Mandir
- Prafulla Nagar Vidyamandir
- Rajpur Vidyanidhi High School
- Sakhawat Memorial Govt. Girls' High School
- Santoshpur Rishi Aurobindo Balika Vidyapith
- Taldi Surabala Sikshayatan for Girls (H.S.)
- Tangrakhali P. J. P High School (H. S)
- Taki House Govt. Sponsored Girls' High School





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# JBNSTS TEACHERS' TRAINING PROGRAM

Introducing novel ideas in  
teaching science to develop innovation  
and problem solving aptitude among  
the students of West Bengal



## Teachers' Training Program

### Unique Faculty development program in science

#### Origin of the Program

Designing science lesson is essential to upgrade the level of learning methodology by the teachers. Integration of new skills, audio-visual techniques etc. supplemented with traditional chalk and talk lectures in the teaching process are highly important. Teaching and learning methods consisting of latest technologies and pedagogy, especially in STEM education and research is essential in the modern context.

JBNSTS had launched Teachers Training Program to improve learning outcomes at the middle and high school level of science education under the sponsorship of Department of Science and Technology, Government of West Bengal. This initiative is a capacity building programme for science teachers of our state which aims to build competencies among all the teachers and school principals at the high school framework. This program has been very popular among the science teachers of all schools across the state.





## Highlights of this initiative

- The basic objective of this training curriculum is to equip science teachers of West Bengal to encourage and foster innovative teaching techniques of complex science subjects towards the students through standardized and novel training modules.
- Capacity building of the teachers with good teaching practices, including moral and ethical values.
- Most importantly, initiating hands-on activity in each science subject of teaching to enhance the confidence and fundamental concept among the students.
- To integrate the book learning with the aptitude of real life problem solving attitude of the students.
- Convergence of ICT and e-learning with conventional mode of teaching-learning and assessment of science education amongst the teachers of our state which enables and enrich inclusive classroom environment.
- To develop new pedagogy and learning modules leading to induce creativity and innovation among students and promoting experiential and joyful learning of science education amongst the learners.

JBNSTS organises highly qualified & experienced professors and scientists to inspire and motivate the teachers. Excellent infrastructural support in the form of well-equipped laboratories and other resources acts as a phenomenal resources in the science teaching learning ecosystem of the state.





**Orientation about globally acclaimed innovative teaching procedures in STEM by experienced faculties and experts**

**Activity based training modules in JBNSTS state-of-the-art laboratories**

**Model of conducting science faculty development programs in schools of West Bengal**

**Interactive sessions with esteemed science faculties facilitating knowledge and experience sharing through inclusion of latest technologies**

**Project and ideas presentation by participating teachers with regard to novel teaching methods conforming to the existing science syllabus**

### **Snapshot of Teachers Training programs held in 2022**

Once the pandemic receded, JBNSTS resumed science faculty development programs in the institute's campus. But in the new normal situation several online workshops were held, though several limitations were obvious. Present programs in physical mode aimed to create science educators who will be equipped with contemporary teaching techniques and innovative strategies, approaches and



methodologies for teaching science. Some of the interactive sessions are focused on deeper understanding of student-teacher relationships to the participants, which they can put into practice in diverse classrooms. The participating teachers were being guided of incorporating innovative teaching kits, lesson modules and procedural exercises .Names of few experts of the workshops are mentioned hereunder.

Name of the Resource Person/Faculty	Topic/Title
<b>Dr. Partha Karmakar</b> Joint Director Public Instruction, Govt. of West Bengal & Advisor at West Bengal Central School Service Commission	Teaching Mathematics in school - Different Innovative approaches
<b>Prof. (Dr.) Dhruvajyoti Chattopadhyay</b> Vice Chancellor, Sister Nivedita University, Kolkata  <b>Prof. (Dr.) Maitree Bhattacharyya</b> Director, JBNSTS	How to motivate teachers by a teacher
<b>Mr. Arup Sengupta</b> Former Head Master Garfa High School, Kolkata	Classroom teaching in Life Science through activities
<b>Dr. Sayan Das</b> Department of Physics Muragachha Govt. College	Studying Physics through experiments using computer simulations
<b>Dr. Uttam Ghosh</b> University of Calcutta, Kolkata	Current Development in Applied Mathematics





<p><b>Dr. Abhisek Basu</b> Department of Zoology, Behala College</p>	<p>Life Science in classroom: Innovative approaches to make the learning more enjoyable</p>
<p><b>Dr. Riddhi Majumder</b> Department of Microbiology St. Xavier's College (Autonomous), Kolkata</p>	<p>Let's make Life Science fun to learn</p>
<p><b>Sri Haroprosad Mondal</b> Principal Regional Institute of Printing Technology, Kolkata</p>	<p>How to motivate Mathematics of Class X level</p>
<p><b>Dr. Rajib Sarkar</b> Department of Chemistry Muragachha Govt. College</p>	<p>The teaching of Chemistry through daily experiences</p>
<p><b>Dr. Nantu Sarkar</b> Department of Mathematics, University of Calcutta</p>	<p>Number System, Polynomials, Quadratic Equations, Relations Functions</p>
<p><b>Mr. Parimal Bera</b> NIEPID, RC, Kolkata</p>	<p>Effective Classroom Management Technique</p>
<p><b>Dr. Debajyoti Ghoshal</b> Jadavpur University, Kolkata</p>	<p>Teaching chemical equation' changes and goals</p>
<p><b>Dr. Sutapa Sanyal</b> Krishnagar Govt. College, Nadia</p>	<p>Innovative Life Science Teaching</p>





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

Upholding the fundamental  
rights of quality education and  
human rights ensuring  
social justice



## Orientation and Training program of teachers for Children with Special Needs

### Background/ Perspective of the initiative

The Right to Education mandates every child with special needs irrespective of the kind, degree of disability to being provided with quality education. Teachers play a crucial role in inclusive education and have a significant impact on how well a child is educated. Teachers frequently lack the resources and are unable to meet the needs of differently abled student. A sufficient number of well-trained and prepared teachers are necessary for inclusion. Teachers should get specialised support to enable inclusive methods in their classrooms. To enable them to modify the learning environment to fit a variety of requirements, teachers should also be oriented, especially on policies and practises to promote the right of individuals with disabilities to participate in the educational process at all levels.

This is a great initiative from the School Education Department, Government of West Bengal through JBNSTS which is targeted towards teachers and resource persons of Primary, Upper Primary, Secondary, Higher Secondary, Shishu Shiksha Kendra (SSK) and Madhyamik Shiksha Kendra (MSK) Government and Government aided schools from all across West Bengal.



### Objectives of the program

- JBNSTS has designed an integrated approach of training the teachers of our state by preparation of specialised education plan, resource support and research with special focus on pupils with special needs.
- Elimination of existing barriers to inclusion and bottlenecks in the academia by equipping our teachers with academic support to reach out to the learners regardless of individual difficulties or limitations.
- Creation of a substructure of education for special children as an integral part of the education system as opposed to mere existence of a system within the framework of general education.

- Being responsive to the diverse needs of the learners with limitations of varying degree through the means of accommodating different learning styles, strategies that ensure equality and reaffirm all the pupils with special needs avail the fundamental right of quality education in their formative years as mentioned in New Education Policy.
- Capacity building of the teachers so that they can empower the parents with the knowledge of existing societies, cognitive therapies, counselling system, support agencies, help lines etc for the development of the children with special needs.

## Teachers' Orientation Program for Children with Special Needs: The first phase

JBNSTS has conducted the first phase of Teachers' Sensitization cum Orientation & Training Program on Inclusive Education for the Children with Special Needs on the digital platform for the school teachers of Primary, Upper Primary, and Secondary, Higher Secondary framework along with Sahayak, Sahayikas of Shishu Shiksha Kendra (SSK) and Madhyamik Shiksha Kendra (MSK) of West Bengal. Specifics of the programs held are laid below. In the second phase of this program, interactive session as well as lectures from experts will be organised.

Total no. of participating teachers	Total no. of participating schools from all across West Bengal	Total no. of districts covered
1,62,402	81,201	24 academic districts of West Bengal

The programs were being conducted in three different slots which comprised of all the districts of West Bengal. A brief representation of districts vis-à-vis all the slots are elucidated below.

Districts covered under Slot -1 (14-16 July 2022)	Alipurduar, Bankura, Birbhum, Coochbehar, Dakshin Dinajpur, Darjeeling, Hooghly, Howrah
Districts covered under Slot-2 (20-22 July 2022)	Jalpaiguri, Jhargram, Kalimpong, Kolkata, Malda, Murshidabad, Nadia, North 24 Parganas
Districts covered under Slot-3 (27-29 July 2022)	Paschim Bardhaman, Paschim Medinipur, Purba Bardhaman, Purba Medinipur, Purulia, Siliguri, South 24 Parganas, Uttar Dinajpur



## Glimpse of experts and delivered lectures of Phase I of the program

Speakers	Topic of Presentation / Discussion
<b>Dr. Anamika Sinha</b> Director, Manovikas Kendra, Kolkata	Introduction to disabilities
<b>Mr. Parimal Bera</b> National Institute for Empowerment of Persons with Multiple Intellectual Disabilities (NIEPMD), Kolkata	Screening, identification of disabilities and referral services
<b>Prof (Dr.) Bishnupada Nanda</b> Department of Education, Jadavpur University, Kolkata	Historical perspective of inclusive education
<b>Ms. Lipika Bhattacharyya</b> Senior Consultant in Special Education	Class Room Management & Teaching Strategies: Role of Teachers
<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)	Issues & Challenges of students in the inclusive classroom
<b>Dr. Ratan Sarkar</b> Head of the Department of Education PK College, Contai	Legal Framework for Inclusive Education in India

Science and everyday life cannot and should not be separated.

**Rosalind Franklin**





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# JBNSTS CELEBRATION OF SPECIAL EVENTS

To increase the awareness among people about science and technology and reflect the theme "Basic Sciences for Sustainable Development"

## Science Day Celebration at JBNSTS

Celebrated every 28 February, National Science day in India highlights the invention of Raman Effect by Nobel laureate and Physicist CV Raman. This event has been observed by JBNSTS with clear objective of enhancing scientific temper, encourage innovation in science by infusing scientific temperament to create a holistic outlook towards science in the society. The theme for this year was *"Integrated Approach in Science and Technology for Sustainable Future"*.

JBNSTS observed the significant occasion in the institute's campus through a host of activities in the form of quiz program for students from all across West Bengal and presentation by school teachers in science of our state with regard to teaching methodology and science exhibition. By linking science more intensely with society this year's National Science Day aimed to ensure that the pupils, teachers, and other stakeholders in the society are kept abreast of the developments and dynamic outlook of science. The participating students studying in high school standard in different parts of West Bengal were lucidly being acquainted of the applications of several genres of science through exciting quiz sessions comprising of several rounds. On the other hand, novel teaching methodologies were being discussed by the participating teachers and evaluators which identify measures that can enhance the perceptibility of a science aspirant towards science subjects at an elementary stage. All the participants were presented with certificates and mementos towards the closure of the ceremony. The initiative promoted public awareness from various quarters of the society for judicious usage of science for societal benefits and raising interest towards various scientific endeavors for creation of a sustainable society.



## Felicitation of new batch of JBNSTS scholars and awardees: Annual Award Ceremony 2021

The vulnerability arising from the pandemic had waned the possibility of crowning the scholars through physical mode of discourse in the past consecutive years. This year, JBNSTS organized induction program of newly selected scholars and awardees of 2021 batch in the institute's campus. Given the changing landscape of the Covid-19 pandemic, all the activities were held in JBNSTS with the consideration of health and safety of the students. The program serves as a means to recognize and celebrate the talent, hard work and perseverance of the talented student scientists from all across West Bengal. The felicitation ceremony commenced with welcoming the scholars and awardees in JBNSTS campus. They are the talented students who have been inducted into the hall of fame of the prestigious organization which has emerged as a platform for the encouragement of excellence of STEM education and research in our state.

The scholars and awardees were engaged in interactions over diverse array of STEM related topics with acclaimed scientists and legendary teachers of science. The entire proceedings of the theoretical sessions were telecast to the parents of the scholars and awardees through multitude of web cameras who were positioned in the spacious lounge in the institute's campus. The motivating lectures contributed to the development of a firmer science base of the young science aspirants who are studying in different institutions across





West Bengal. Towards the closure of each session, the newly identified scholarship recipients and awardees were conferred with the prestigious scholarship in the form of certificates by the eminent guests along with presenting of licensed software enabled laptop to top ten boys and top ten girl scholars respectively in Senior Scholarship category to facilitate their academic endeavor and scope of web access in STEM education and research. A composite structure of some of the exceptional lecture sessions to motivate the scholars is laid below.

Topic of lectures	Speaker
Looking Back at Newtonian Science	<b>Prof. Soumitra Sengupta</b> School of Physical Sciences, IACS Kolkata
An interdisciplinary approach in optical spectroscopy for the development of indigenous (Swadeshi) technology	<b>Dr. Samir Kumar Pal</b> Department of Chemical, Biological & Macromolecular Sciences, S N Bose National Centre for Basic Sciences, Kolkata
Artificial Intelligence: Can it Deliver like human?	<b>Dr. Anupam Basu</b> Director, NIT, Durgapur



## Glimpses of Award Ceremony 2021 at JBNSTS





Science knows no country, because knowledge belongs to humanity, and is the torch which illuminates the world.

**Louis Pasteur**



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# JBNSTS PROGRAMS WITH VIGYAN PRASAR

Propagating the importance of  
science and its application  
in the community



# JBNSTS Vigyan Prasar Initiative

Bridging the gap between science and society



VIGYAN PRASAR

## Rationale of the initiative

The transfer of knowledge from the portals of laboratory to the tertiary end users' needs to be percolated for betterment of the society and mankind. The scientific temper has always been in India, in the form of logic, reasoning and method of acquiring knowledge through the cultural evolution of man. JBNSTS initiated science communication in its real term in collaboration with Vigyan Prasar an organisation under Department of Science and Technology, Government of India to demystify science through several activities thereby popularising the subject which gave an impetus to scientific pursuits and development of scientific outlook in the society.

## Salient features of this initiative

- ❖ A number of programs and activities have been introduced by JBNSTS to disseminate and spread scientific knowledge and scientific outlook among the masses particularly in vernacular which has forged a new dimension in the science communication and popularisation on West Bengal.





- ❖ Exploiting various means and modes of science communication and journalism like, print media, audio-visual platform and digital media.
- ❖ Organising science exhibitions, workshops, science fairs, etc. thus ensuring two way communication and thereby achieving penetration to the segments of the local populace of the society.
- ❖ Publication of periodicals, science journals, magazine namely, Vigyan Katha integrating the entire landscape of Science & Technology namely, Engineering, Health and Medicine, Natural Science, Environment and Wildlife, Science and Society. Demonstrations/Experiment Shows, Quizzes, focussing on India's contribution to science and technology and will also cover the latest S&T developments from all around the world and developing videos on scientific content.

### **Celebration of Vigyan Sarvatra Pujyate : A scientific extravaganza in collaboration with Vigyan Prasar**

India's achievements in the field of science and technology dates back to the glorious legacy of seventy five years of the nation's independence. 'The Amrit Mahotsav' science showcase was also titled *Vigyan Sarvatra Pujyate* was organised by JBNSTS from February, 22 – 28, 2022. JBNSTS has assumed to be the prime nodal centre for coordinating the program in West Bengal. The week long program circumferred upon four distinguishing themes namely, *Annals of Science, Milestones in*





*Modern S & T, Swadeshi Paramparik Inventions & Innovations and Transforming India.* The event encompassed substantial participation by students, teachers, science faculties, technologists and general public from all across West Bengal. Several discussions in the form of lecture sessions, quiz, interaction with luminaries of science, experiment sessions displayed the scientific legacy and technology prowess to explore solutions to real-life practical problems in society. An excerpt of the program is given below.

Topic/Title of Sessions	Name of the Speaker
<b>Science and Technology: What does the future hold?</b>	<b>Prof. Amitava Raychaudhuri</b> Emeritus Professor, University of Calcutta, Shanti Swarup Bhatnagar Awardee
<b>Priorities for medical research to achieve S &amp; T developments in India</b>	<b>Dr. Abhijit Chowdhury</b> Gastroenterologist, Senior Professor, SSKM and Indian Institute of Liver and Digestive Sciences, Kolkata
<b>Genetic diversity in India</b>	<b>Prof. Partha Pratim Majumdar</b> National Science Chair (Scientific Excellence), Government of India
<b>Materials and Manufacturing innovation for Society</b>	<b>Prof. Bikramjit Basu</b> Professor, Materials Research Centre, Indian Institute of Science, Bangalore
<b>The need for History of Science</b>	<b>Dr. Manas Pratim Das</b> Program Officer, All India Radio
<b>Quiz Competition for UG-PG, PhD, Research Scholars</b>	<b>Dr. Anirban Ganguly</b> All India Institute of Medical Sciences Deoghar

We cannot solve problems with the same thinking we used to create them.

**Albert Einstein**



## Activity Calendar 2022

### JANUARY 2022

**03.01.2022:** Online publication of JTST/JBKMB 2021 final result based on performance in online written test and interview 2021.

**January 17, 2022:** JBNSTS-Vigyan Prasar collaborative webinar on 'Mutation and Covid' by Dr. Kaberi Datta, Assistant Professor, Department of Zoology, Sarojini Naidu College for Women.

**January 14, 2022:** Online web-seminar on “কোভিড - বিজ্ঞান ও লোকস্বাস্থ্য” for the senior scholars and Bigyani Kanya Medha Britti scholars of JBNSTS by Dr. Abhijit Chowdhury, Indian Institute of Liver & Digestive Sciences, Kolkata

**January 19, 2022:** JBNSTS-Vigyan Prasar collaborative webinar on অতিমারীর ক্রমবৃদ্ধিতে আধুনিক সভ্যতার ভূমিকা by Dr. Satabdi Banerjee, Assistant Professor, Department of Environmental Management and Science, William Carey University, Meghalaya.

**January 28, 2022:** Online web seminar on Biotechnology-20 [Hands on experience for a day] : for high school students.

**January 28, 2022:** JBNSTS-Vigyan Prasar collaborative webinar on “Covid Vaccination: Myth Vs Fact” by Dr. Rajib Majumder, Assistant professor, Dept. of Biotechnology, School of Life Science and Biotechnology, Adamas University.

**January 31, 2022:** JBNSTS-Vigyan Prasar collaborative webinar on “Digital Images: Representation and Processing” by Dr. Ishita De Ghosh, Associate professor, Dept. of Computer Science, Barrackpore Rastraguru Surendranath College.

**January 31 - February 8, 2022:** JBNSTS - WBDS Program 2022, Series - 8 (Supported by Dept. of Higher Education, Govt. of West Bengal) for class IX students of North Bengal & Kolkata districts of West Bengal.

### FEBRUARY 2022

**February 15 - 22, 2022:** JBNSTS - WBDS Program 2022, Series - 9 (Supported by Dept. of Higher Education, Govt. of West Bengal) for class IX students of Alipurduar, Jalpaiguri and Coochbehar districts of West Bengal.

**February 17, 2022:** Biotechnology Hands on Workshop for High School students of Jadavpur N K Pal Adarsha Shikshyatan.

**February 22 - 28, 2022:** “বিজ্ঞান সর্বত্র পূজ্যতে” a program under the aegis of the Azadi Ka Amrit Mahotsav (celebrating the 75th Year of Indian Independence) organized by JBNSTS and Vigyan Prasar in collaboration for the young school students and scholars of West Bengal.



**February 24, 2022:** Biotechnology Hands on Workshop for High School students of Garia Harimati Devi Uchcha Balika Vidyalaya, Kolkata.

## MARCH 2022

**March 2-9, 2022:** JBNSTS - WBDS Program 2022, Series - 10 (Supported by Dept. of Higher Education, Govt. of West Bengal) for class IX students of Alipurduar, Jalpaiguri and Coochbehar districts and Kolkata of West Bengal.

**March 26, 2022 :** JBNSTS-Vigyan Prasar collaborative webinar on “BPH and Prostate cancer: Two urological diseases afflicting the aging male population” by Dr. Sanmitra Ghosh, Assistant Professor, Department of Microbiology, School of Life Science and Biotechnology, Adamas University.

## APRIL 2022

**April 7-12, 2022:** District School Students' Science Orientation workshop for 42 class VIII students of Garia Harimati Devi Uchcha Balika Vidyalaya, Kolkata and Sonarpur Vidyapith (HS), South 24 Pgs.

**April 7, 2022:** JBNSTS-Vigyan Prasar collaborative webinar on “Zoonoses and Reverse Zoonoses vis-a-vis One health concept” by Prof (Dr.) Siddhartha Joardar, Department of Veterinary Microbiology, West Bengal University of Animal and Fishery Sciences.

**April 13, 2022 :** JBNSTS-Vigyan Prasar collaborative webinar on “Impact of Air Pollution on Human Health” by Dr. Manas Ranjan Ray, Former Assistant Director, Chittaranjan National Cancer Institute, Kolkata.

**April 19-22, 2022:** District School Students' Science Orientation workshop for 41 class VIII students of Gandhi Colony Madhyamik Vidyalaya, Kolkata and Haltu Kishalaya Shiksha Sadan, Kolkata.

**April 21, 2022:** JBNSTS-Vigyan Prasar collaborative webinar on “Climate Change and Food Security: The Role of Animal Resources” by Prof (Dr.) Pradip Kumar Das, Department of Veterinary Physiology, West Bengal University of Animal and Fishery Sciences.

**April 29, 2022 :** JBNSTS-Vigyan Prasar collaborative webinar on “Lightning induced coupling mechanism of earth's ionosphere and magnetosphere” by Dr Sudipta Sasmal, Assistant Professor, Indian Centre for Space Physics (ICSP), Kolkata.

## MAY 2022

**May 08, 2022:** 1<sup>st</sup> layer examination of Vidyasagar Science Olympiad 2021 & 2022 , an initiative by Govt. of West Bengal and organized by JBNSTS for the selected students of class IX and X from each unit of the state. 45,951 candidates appeared at 383 examination centres across West Bengal.

**May 10-13, 2022:** District School Students' Science Orientation workshop for 40 class VIII students of Jadavpur N K Pal Adarsha Shikshyatan and Ananda Ashram Balika Vidyapeeth, Kolkata.



**May 11-13, 2022:** JBNSTS Teachers' Training Program for 50 middle & high school science teachers from different schools of West Bengal.

**May 16, 2022:** JBNSTS-Vigyan Prasar collaborative webinar on “The Fascinating World of Animals: An Ethological Perspective” by Dr. Sandip Pal, Assistant Professor, Department of Zoology Barrackpore Rastraguru Surendranath College.

**May 21, 2022:** JBNSTS-Vigyan Prasar collaborative webinar on “বায়োপ্রসেস প্রযুক্তির প্রয়োগ এবং উপযোগিতা” by Dr. Arpita Das, Assistant Professor, School of Biotechnology, Adamas University.

**May 28, 2022:** JBNSTS-Vigyan Prasar collaborative webinar on Alzheimer's Disease by Dr. Nilanjana Bhattacharyya Nath, HOD, Dept. of Biotechnology, Swami Vivekananda Institute of Modern Science.

**May 30, 2022:** Planning and implementation meeting of Vigyan Prasar with JBNSTS.

## JUNE 2022

**June 5, 2022:** Seminar organized for the JBNSTS - Medical scholars under the Talent Enrichment Program.

**June 14 - 17, 2022:** District School Students' Science Orientation workshop for 50 class VIII & IX students of Maynaguri Road High School (H.S.), Jalpaiguri & Nagrakata High School, Jalpaiguri.

**June 21, 2022:** Award Distribution Ceremony and scientific lecture session for selected 63 Junior Scholars, Junior Bigyani Kanya Medha Britti and Encouragement Awardees of 2021 Batch.

**June 23, 2022:** Award Distribution Ceremony and scientific lecture session for selected 67 Junior Scholars, Junior Bigyani Kanya Medha Britti and Encouragement Awardees of 2021 Batch.

## JULY, 2022

**July 1, 2022:** One day Science Colloquium at JBNSTS for Senior Scholars and Senior Bigyani Kanya Medha Britti Awardees of 2019 and 2020 batch under the ageis of Talent Enrichment Program.

**July 4, 2022:** Award Distribution Ceremony and scientific lecture session for 67 Junior Scholars, Junior Bigyani Kanya Medha Britti and Encouragement Awardees of 2021 Batch.

**July 5-8, 2022:** District School Students' Science Orientation workshop for 50 class VIII students of Deogaon High School (H.S.) Alipurduar & Sukanta High School, Alipurduar.

**July 9, 2022:** Award Distribution Ceremony and scientific lecture session for 51 Senior Scholars and 42 Senior Bigyani Kanya Medha Britti Awardees of 2021 Batch.

**July 12, 2022:** Biotechnology Hands on Workshop for 10 High School students of Sakhawat Memorial Govt. Girls' High School, Kolkata.

**July 14-16, 2022:** Telecast of Phase I slot 1 Teachers' sensitization cum orientation & Training program on Inclusive Education for the Children with Special Needs (CWSN) for 8 educational districts.



**July 18, 2022:** Award Distribution Ceremony and scientific lecture session for 75 Junior Scholars, Junior Bigyani Kanya Medha Britti and Encouragement Awardees of 2021 Batch.

**July 19-22 July, 2022:** District School Students' Science Orientation workshop for 58 class VIII students of Sakhawat Memorial Govt. Girls' High School, Kolkata & Govt. Sponsored Multipurpose School (Boys) Taki House, Kolkata.

**July 20, 2022:** Biotechnology Hands on Workshop for 19 High School students of Taldi Surabala Girls high School.

**July 20-22, 2022:** Telecast of Phase I slot 2 Teachers' sensitization cum orientation & Training program on Inclusive Education for the Children with Special Needs (CWSN) for 8 educational districts.

**July 24, 2022:** 2<sup>nd</sup> layer examination of Vidyasagar Science Olympiad 2021 & 2022, an initiative by Govt. of West Bengal and organized by JBNSTS for the selected 3417 students of class IX and 2089 class X from each district of West Bengal and 674 students from class IX and 423 students from class X qualified for third layer. Candidates appeared at 26 examination centers across West Bengal.

**July 26-29 July, 2022:** District School Students' Science Orientation workshop for 46 class VIII students of Shikarpur High School (H.S), Coochbehar & Chamta Deshbandhu Vidyalaya (H.S), Coochbehar.

**July 27-29, 2022:** Telecast of Phase I slot 3 Teachers' sensitization cum orientation & Training program on Inclusive Education for the Children with Special Needs (CWSN) for 8 educational districts.

## AUGUST 2022

**August 5, 2022:** Biotechnology Hands on Workshop for 15 High School students of Netaji Nagar Vidyamandir & Gandhi Colony Madhyamik Vidyalaya (H.S).

**August 21, 2022:** 64<sup>th</sup> Senior Talent Search Test -2237 candidates applied out of which 1447 candidates appeared at 35 examination centres across West Bengal.

**August 21, 2022:** 8<sup>th</sup> Junior Talent Search Test- 10632 candidates applied out of which 9294 candidates appeared at 35 examination centres across West Bengal.

**August 28, 2022:** 3<sup>rd</sup> layer examination of Vidyasagar Science Olympiad 2021 & 2022, an initiative by Govt. of West Bengal and organized by JBNSTS for the selected 674 students of class IX and 423 class X from each district of West Bengal. Candidates appeared at 26 examination centers across West Bengal.

## SEPTEMBER 2022

**September 07, 2022:** Biotechnology Hands on Workshop for 20 High School students of Muralidhar Girls School.

**September 15 -17, 2022:** North East Outreach Program and Science workshop at Ramkrishna Mission Vidyalaya , Agartala for the students of class VI, VII & VIII.



**September 20, 2022:** Publication of final result of Vidyasagar Science Olympiad 2021 & 2022. 100 students from class IX and 100 students from class X across West Bengal were selected.

**September 23, 2022:** Biotechnology Hands on Workshop for 20 High School students of Taki Govt. Girl's high School.

## NOVEMBER 2022

**November 05, 2022 & November 06, 2022:** Interview for 386 candidates selected from the written examination of Senior Talent Search Test 2022.

**November 11, 2022:** Biotechnology Hands on Workshop for 16 High School students of Kamala Chatterjee School for Girls.

**November 25, 2022 - November 27, 2022:** Scientific Creativity Test for **123** candidates selected from the interview phase of Senior Talent Search Test 2022.

## DECEMBER 2022

**December 10, 2022 - December 11, 2022:** Interview for **403** candidates selected from the written examination of Junior Talent Search Test 2022.

**December 14, 2022:** One Day Program for the middle school students organized by JBNSTS under the aegis of Scope Bangla, Vigyan Prasar, attended by 53 school students and teachers.

**December 21, 2022:** Publication of final result of STST/SBKMB 2022.

**December 22, 2022:** Publication of final result of JTST/JBKMB 2022.



## JBNSTS Scholars' Achievements

- In the Senior Talent search Examination 2022, of the 59 students selected for awards, 30 students were junior JBNSTS scholars in 2020. Also, of the 50 Bigyani Kanya Medha Britti awardees in 2022, 6 are junior JBNSTS scholars.
- Suryadeep Mandal (2019 batch) won the first prize in the PCB Design Challenge and Pharma Challenge conducted during the IIT Madras' annual technical fest - Shaastra, held in January 2022.
- Sunanda Mandal (2019 batch) was selected for DESIS Ascend Educare by D E Shaw India in a batch of top 75 out of 6000+ applicants in 2021 and selected for Networking Event Uber She + + '21 being among top 75 students from 1300+ registration
- Siddharth Kashyap (2019 batch) received the 1st certificate of CA-ship(2nd position in batch) in Forensic Medicine and Toxicology.
- Debbani Patra (2019 batch) topped the 1st Professional MBBS exam of WBUHS. Also received Gold Medal in Anatomy, Certificate of Honours in Physiology and Grand Honours in 1st year and 2nd year.
- Kumardip Basak (2019 batch) and his colleagues' paper on 'Spin-Stabilization and Attitude Tracking of a Spacecraft Simulator using MPC', has been selected for presentation at AIAA SciTech 2023 conference, National Harbour, MD.
- Samik Mukhopadhyay (2019 batch) is one of the eight students selected for The University of Tokyo Summer Internship Program in 2022.
- Debopam Sil (2019 Batch) received the Gold Medal in Physiology in 2021 and was selected for research presentation at the Walter E. Dandy Neurosurgical Club in July 2021 and case presentation at the Bengal Academy of Forensic Medicine Conference in 2022.
- Mousam Sinha (2018 batch) secured a position of AIR 12 on IIT-JAM 2021, and AIR 11 in ISI M Stat.
- Aniket Bose (2018 batch), champion quizzer in Medicine, Gold Medal in Pharmacology in University exam with Distinctions in Pathology and Microbiology.
- Tathagata Dey (2018 batch) published 4 Journal papers, 5 Conference papers and 1 book chapter in the computational biology field and secured All India Rank 21 in GATE Computer science examination.
- Tannistha Mondal (2018 batch) was a participant of Big Data Summer Institute, organized by University of Michigan, Ann Arbor in 2021. She passed B Stat with Distinction from ISI, Kolkata in 2021.





- Srestha Kanjilal (2018 batch) graduated from Jadavpur University (Computer Science and Engineering department) with First Class distinction.
- Siba Smarak Panigrahi (2018 batch) has been awarded the J N Tata Endowment for the higher education and presently pursuing his Masters in Computer Science at McGill University and Mila. He has also been selected for IUSSTF-Viterbi Award and DAAD-WISE scholarship in 2021.
- Souradip Das (2018 batch) secured 1st position in Ophthalmology jointly among students of the West Bengal University of Health Sciences in 2022.
- Nirnimesh De (2018 batch) received First Class Distinction with Honours Degree in Bachelor of Engineering in Mechanical Engineering from Jadavpur University. Also certified for outstanding performance in National Engineering Olympiad 5.0 Examination with AIR 6 in Final Year.
- Dibyadoot Sasmal (2018 batch) has been selected for the Birendra Suhasini Memorial Scholarship in surgery in 2022.
- Vishal Raj (2017 batch) received the Goralal Syngal Memorial Scholarship by IIT, KGP and ranked 84 out of 6950 participants worldwide in the Google Kickstart 2021 Round E competitions.
- Soumava Paul (2016 batch) published 3 research papers at 2 top-tier conferences, secured a perfect GPA (1.0) on German scale in first semester of Master's in Visual Computing at Saarland University from March 2022.
- Ritaja Roy (2016 batch), joined the PhD program at IIT Gandhinagar in Earth Sciences
- Rumjhum Mukherjee (2015 batch) got selected as a PhD student in Hannover Medical School, Germany in the area of Safety Integrated and Infection Reactive Implants(SIIRI).
- Swapnasopan Datta (2014 batch) is currently pursuing PhD from the Johannes Gutenberg University, Mainz (JGU).
- Dr. Ketan Agarwal (2014 batch) secured AIR 108 rank in Jan 2020 and presently a 3rd Year Post Graduate trainee in General Medicine, AIIMS PATNA.
- Avik Ray (2012 batch) pursuing a master's in epidemiology at Harvard University, was awarded the J. N. Tata Scholarship to pursue MS and the Rose Traveling Fellowship at Harvard to conduct a study in Nigeria as a Principal Investigator. Also, One of the six global winners the Lasker Essay Competition.
- Sourav Manna (2011 batch) awarded The Raymond and Beverly Sackler Center Postdoctoral fellowship for Computational Molecular and Materials Science at Tel Aviv University and Prize postdoctoral fellowship in quantum science and technology at Institut Quantique in University of Sherbrooke.



- Anindita Mahapatra (2011 batch) published a research article in the Journal of Physical Chemistry B in October 2021, which also made the front cover of the issue it was published in. She is presently working as a postdoctoral researcher in the University of Texas at Austin, in Texas, USA from February 2022.
- Sudip Chakraborty (2011 batch) secured a postdoc position at CEA Paris-Saclay, France.
- Riya Kayal (2011) received the International Max Planck Research School Fellowship in theoretical chemistry in 2021.
- Sarbajaya Kundu (2010 batch) started as an IQ postdoctoral fellow at the Department of Physics and Institut Quantique (IQ), Universite de Sherbrooke and is currently working as a Dirac Postdoctoral Associate at the Department of Physics, University of Florida (UF)
- Dr. Abhishek Sinha, A Senior Scholar of 2007 was awarded INSA Medal for Young Scientist 2021 by Indian National Science Academy, New Delhi.

I am among those who think  
that science has great beauty.

**Marie Curie**



## Research and Development Activities

### Prof. Maitree Bhattacharyya and Biotechnology Research group

#### Publications

1. Ria Ghosh, Soumendra Singh, Dipanjan Mukherjee, Susmita Mondal, Monojit Das, Uttam Pal, Aniruddha Adhikari, Aman Bhushan, Surajit Bose, Siddharth Sankar Bhattacharyya, Debasish Pal, Tanusri Saha-Dasgupta, Maitree Bhattacharyya, Debasis Bhattacharyya, Asim Kumar Mallick, Ranjan Das, Samir Kumar Pal, Samir Kumar Pal. Host-Assisted Delivery of a Model Drug to Genomic DNA: Key Information from Ultrafast Spectroscopy and in silico Study. *ChemBioChem*, 2022, doi.org/10.1002/cbic.202200109.
2. Sangita Das, Partha Pratim Das, James W Walton, Kakali Ghoshal, Lakshman Patra, Maitree Bhattacharyya, Tapan Kumar Mondal, Sabu Thomas. Human peripheral blood mononuclear cells targeted multidimensional switch for selective detection of HSO<sub>3</sub><sup>-</sup> anion. *Dyes and Pigments*, 198, 109966, 2022.
3. Sangita Das, Lakshman Patra, Partha Pratim Das, Kakali Ghoshal, Saswati Gharami, James W Walton, Maitree Bhattacharyya, Tapan Kumar Mondal. A new ratiometric switch “two-way” detects hydrazine and hypochlorite via a “dye-release” mechanism with a PBMC bioimaging study. *Physical Chemistry Chemical Physics*, 24(35), 20941-20952, 2022.
4. Sangita Das, Partha Pratim Das, James W Walton, Kakali Ghoshal, Lakshman Patra, Maitree Bhattacharyya. An excited state intramolecular proton transfer induced phosphate ion targeted ratiometric fluorescent switch to monitor phosphate ions in human peripheral blood mononuclear cells. *Dalton Transactions*, issue 28, 2022.
5. Ria Ghosh, Susmita Mondal, Dipanjan Mukherjee, Aniruddha Adhikari, Saleh A Ahmed, Reem I Alsantali, Abdelrahman S Khder, Hatem M Altass, Ziad Moussa, Ranjan Das, Maitree Bhattacharyya, Samir Kumar Pal. Oral drug delivery using a polymeric nanocarrier: chitosan nanoparticles in the delivery of rifampicin. *Materials Advances*, 3, 4622-462810, 2022, 1039/D2MA00295G.
6. Ria Ghosh, Susmita Mondal, Dipanjan Mukherjee, Aniruddha Adhikari, Maitree Bhattacharyya, Samir Kumar Pal. Inorganic-Organic Synergy in Nano-hybrids Makes a New Class of Drug with Targeted Delivery: Glutamate Functionalization of Iron Nanoparticles for Potential Bone Marrow Delivery. *Current Drug Delivery*, Volume 19, Number 10, pp. 991-1000(10), 2022, 10.2174/1567201819666220328142620.
7. Sudip Nag, Arnab Pramanik, Maitree Bhattacharyya. Green synthesized nanomaterials for greener environment. *Handbook of Microbial Nanotechnology*, 2022, 10.1016/B978-0-12-823426-6.00019-X.



8. Shantanu Bhunia, Ankita Bhowmik, Arnab Pramanik, Rambilash Mallick, Joydeep Mukherjee. Successive cultivation of cabbage and spinach by land application of recycled slaughterhouse waste: Benefit to farmers and agro-ecosystem health. *Environmental Technology & Innovation*, 29, 102967, 2022
9. Arnab Pramanik, Sourav Das, Tuhin Ghosh. Role and Prospect of Marine Biotechnology in Blue Economy. *The Blue Economy*, 77-90, 2022.
10. Samudra Prosad Banik, Maitree Bhattacharyya, Rituparna Ghosh, Tanima Chatterjee and Pijush Basak. Unveiling the prevalence and impact of diabetes on COVID-19. *Viral, Parasitic, Bacterial, and Fungal Infections*. 2022. <https://doi.org/10.1016/B978-0-323-85730-7.00045-X>

### Dr. Paromita Roy

#### Publications

- Cross, J. R., Mishra. A., O'Reilly, C. & Roy, P. (2022). Exploring Goodness of Fit: Social Cognition Among Students with Gifts and Talents in Ireland and India. *SENG Journal: Exploring the psychology of giftedness*, 1(2).
- Roy, P., & Mishra, A. [Manuscript under review] Experiences and struggles during Covid-19 pandemic in India: A qualitative study of 12 women. *ANTYAJAA: Indian Journal of Women and Social Change (JWS)*.
- Roy, P., & Mishra, A (2021). Mapping eminence and scholarship of gifted and talented students of STEM in India - 60 years of talent development and nurture. *Gifted & Talented International*. <https://doi.org/10.1080/15332276.2021.1953949>
- Mishra, A. & Roy, P. (2021). Social and emotional wellbeing of high-ability students in India during the COVID-19 pandemic: Gender differences. *Nurturing Talents. APFG Newsletter*, 8(1).
- Roy, P., and Dai D Y. (2019). Understanding Giftedness in the Indian Context. In M. Yuen & S Leung (Eds.), *Special Issue on STREAM Education for Gifted Students in Asia – Pacific. Nurturing Talents APFG Newsletter 2019*, 6 (1), 5-7. (Awarded the Nurturing Talents Recognition Award 2019)
- Zhang, Z., Aljughaiman A., Gomez-Arizaga, M.P. , Grabner, R., Gucyeter, S., Hoxha, L., Irueste , P., Ponomareva,I., Roy, P., and Ziegler, A. (2018). Creativity motivation construct development and cross cultural validation. *Psychological Test and Assessment Modelling*, 60(4), 517-530. VID-19 pandemic: Gender differences. *Nurturing Talents. APFG Newsletter*, 8(1).



ANNUAL REPORT 2022

# JBNSTS FUNDS AND ACCOUNTS

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



## Financial Report 2021-22

JBNSTS is happy to report its financial progress during the Financial Year 2021-22. 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 650 district school students of 32 schools from different districts of West Bengal during the year 2021-22 in both online and offline mode and also provided internet data support for students during online programme mode.

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

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

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

<b>Financial years</b>	<b>2021-22</b>
<b>Department Higher Education, Government of West Bengal</b>	
For Salary & Maintenance	Rs. 2,11,78,488/-
<b>Department Science &amp; Technology and Biotechnology, Government of West Bengal</b>	
Senior Scholarship & Senior Bigyani Kannya Medha Britti	Rs. 2,40,99,312/-
Junior Scholarship & Junior Bigyani Kannya Medha Britti	Rs. 1,18,59,839/-
<b>Department of School Education, Government of West Bengal</b>	
Vidyasagar Science Olympiad program	Rs. 50,00,000/-

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



**M. Saha & 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, 2022, 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, 2021, 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 31.03.2022. The management estimates to spend the undermentioned unspent balances in FY 2022-23.



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)	1,08,311.75
4	Department of Science & Technology (DST)	47,293.05
5	Junior Talent Search Test (DHE - JTST)	24,71,458.00

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 : 01.07.2022**

**Place: Kolkata**

**M. Saha & Co.**

**Chartered Accountants**

**Firm Registration No.: 305135E**

**(CA. Debarshi Saha)**

**Partner, Membership No.: 061398**

**UDIN: 22061398AMILXF8788**



JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH

## JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH

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

### BALANCE SHEET AS ON 31ST MARCH, 2022

PREVIOUS YEAR ₹	DESCRIPTION	SCHEDULES	CURRENT YEAR ₹	
<b>SOURCES OF FUNDS</b>				
45,466,086.42	Land & Building Fund	A	44,487,135.42	
16,908,987.20	Movable Properties Fund	B	14,574,065.20	
56,244,367.16	Other Funds	C	58,082,661.10	
42,883,209.08	Unutilised Grants	D	42,093,512.40	
14,581,287.00	Current Liabilities	E	25,419,865.60	
458,409.00	Other Deposits	F	437,924.00	
<b>176,542,345.86</b>	<b>TOTAL</b>		<b>185,095,163.72</b>	
<b>APPLICATION OF FUNDS</b>				
45,466,086.42	Land & Building	G	44,487,135.42	
16,908,987.20	Movable Properties	G	14,574,065.20	
-	Land & Building Fund Investments	H	-	
-	Movable Properties Fund Investments	I	-	
92,325,831.06	Other Investments	J	88,219,271.00	
1,494,707.05	Loans & Advances	K	9,904,783.49	
20,346,734.13	Cash & Bank Balances	L	27,909,908.61	
<b>176,542,345.86</b>	<b>TOTAL</b>		<b>185,095,163.72</b>	
On behalf of the Governing Body		In terms of our report of even date attached herewith For <b>M. Saha &amp; Co.</b> Chartered Accountants FRN: 305135E		
<b>Prof (Dr.) Maitree Bhattacharyya</b> Director		<b>CA. Debarshi Saha</b> Partner Membership No.: 061398 UDIN: 22061398AMILXF8788		
Kolkata Date: 1st July, 2022				



**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, 2022**

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>									
54,261,333.44	Grant-in-aid		69,385,528.32	-	-	-	-	-	-	69,385,528.32
	- Donations		-	-	10,000.00	-	-	-	-	10,000.00
4,725,800.26	Interest on Investments		-	1,000,127.73	1,124,976.34	115,373.51	2,686,198.96	77,762.37	82,066.01	5,086,504.92
607,775.31	Interest earned on Savings / Short-term Dep		30,329.00	168,484.00	395,198.00	-	109,518.00	-	-	703,529.00
1,195,913.00	Registration Fees (For Senior/Junior Talent		-	-	-	-	1,550,421.00	-	-	1,550,421.00
	- Search Tests)		-	-	-	-	-	-	-	-
	- Miscellaneous Other Receipts		-	-	-	-	-	-	-	-
	- Rent Earned		-	-	-	-	-	-	-	-
	- Accommodation		-	-	-	-	-	-	-	-
284,581.00	Liabilities Written Back		-	-	-	-	-	-	-	-
203,400.00	Overhead		-	-	-	-	-	-	-	-
<b>61,278,803.01</b>	<b>Total Income (A)</b>		<b>69,415,857.32</b>	<b>1,168,611.73</b>	<b>1,530,174.34</b>	<b>115,373.51</b>	<b>4,346,137.96</b>	<b>77,762.37</b>	<b>82,066.01</b>	<b>76,735,983.24</b>
	<b>EXPENDITURES</b>									
	<b>General :</b>									
<b>57,843,274.44</b>	Expenses		68,900,064.32	212,000.00	13,690.00	-	5,256,142.00	-	-	<b>74,381,896.32</b>
	- Programme Expenses		-	-	-	-	-	-	-	-
<b>57,843,274.44</b>	<b>Total Expenditure (B)</b>		<b>68,900,064.32</b>	<b>212,000.00</b>	<b>13,690.00</b>	<b>-</b>	<b>5,256,142.00</b>	<b>-</b>	<b>-</b>	<b>74,381,896.32</b>
3,435,528.57	Surplus for the Year		515,793.00	956,611.73	1,516,484.34	115,373.51	910,004.04	77,762.37	82,066.01	2,354,086.92
	Less: Capital Expenses met out of Revenue Income									
	- Land & Building Fund									
<b>446,742.00</b>	Movable Properties Fund		515,793.00	-						<b>515,793.00</b>
<b>2,988,786.57</b>	<b>Net Surplus for the Year</b>		<b>-</b>	<b>956,611.73</b>	<b>1,516,484.34</b>	<b>115,373.51</b>	<b>(910,004.04)</b>	<b>77,762.37</b>	<b>82,066.01</b>	<b>1,838,293.92</b>

In terms of our report of even date attached herewith

For **M. Saha & Co.**  
Chartered Accountants  
FRN: 305135E

Sd/-  
**CA. Debarshi Saha**  
Proprietor

Membership No.: 061398  
UDIN: 22061398AMILXF8788

On behalf of the Governing Body

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

KOLKATA  
The 1st July, 2022



JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH

## JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH

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

### RECEIPTS & PAYMENTS ACCOUNT FOR THE YEAR ENDED 31.03.2022

RECEIPTS	RS	PAYMENTS	RS
<b>Revenue Income</b>		<b>Revenue Payments</b>	
Grant-in Aid from Govt.	69,385,528.32	Establishment Expenses :	
Registration fee's received	1,550,421.00	Salaries & Wages	13,347,402.00
Income from Investments	5,790,033.92	Office and Administrative Expenses	7,968,086.16
Miscellaneous and other receipts	-	Project Programme Activities	
Liabilities written Back	-	Expenses funded by Govt.	47,584,576.16
		Scholars Reserve Fund	-
		Expenses	212,000.00
		Development Fund	-
		Expenses	13,690.00
		JBNSTS Own Generation Fund	
		Expenses	5,256,142.00
		Staff Welfare & Medical Fund	
		Expenses	-
		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)	-
Government/Public Bodies Grants	-	Building (Construction Work in progress)	-
Income from Investments	-	Electrical Installation & Equipment	-
Investments withdrawn	-	Furniture, Equipment	-
Movable Properties Fund :		Computers	515,793.00
Donations/Gifts	-	Electrical Equipment & Generator	-
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	6,579,656.13	Buses, Lorries, Tractors, etc.	-
Development fund Donation	10,000.00	Library Books	-
		Endow / Permanent Fund Investments	-
		Land & Building Fund Investments	-
		Movable Prop. Fund Investments	-
		Development Fund Investments	1,516,484.34
		Scholar Reserve Fund Investments	956,611.73
		Other Investments	-
Closing Unspent Grant	42,093,512.40	Opening Unspent Grant	42,883,209.08
Opening Grant Receivable	290,818.36	Closing Grant Receivable	9,302,155.00
Closing Sundry Deposits :		Opening Sundry Deposits :	
Caution Money	-	Caution Money	-
Students' Deposits	-	Students' Deposits	-
Security Deposits	437,924.00	Security Deposits	458,409.00
Loans & Advances :		Loans & Advances :	
Others	276,349.44	Electricity Deposit	-
Electricity Deposit	734,745.00	Others	409,834.22
Closing Current liabilities	25,419,865.60	Sundry Amount Receivable	-
		Opening Current Liabilities	14,581,287.00
TOTAL	152,568,854.17	TOTAL	145,005,679.69
Opening Balance	20,346,734.13	Closing Balance	27,909,908.61
<b>GRAND TOTAL</b>	<b>172,915,588.30</b>	<b>GRAND TOTAL</b>	<b>172,915,588.30</b>
Cash in Hand	44,773.00		
Cheques in Hand	-		
At Banks in SB & CD A/c	27,865,135.61		
Total (Rs)	27,909,908.61		

On behalf of the Governing Body

Sd/-

Prof. ( Dr. ) Maitree Bhattacharyya  
Director

For M. Saha & Co.  
Chartered Accountants  
FRN: 305135E  
Sd/-

CA. Debarshi Saha  
Proprietor  
Membership No.: 061398  
UDIN: 22061398AMILXF8788

KOLKATA  
The 1st July, 2022

**JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH**

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

**SCHEDULE - A : Land & Building Fund as at 31.03.2022**

<b>PARTICULARS</b>	<b>Land and Building Fund Rs.</b>
Credit Balance as at 01.04.2021	45,466,086.42
<b>ADD</b>	
Capital Grants	
Development Fund (Out of Opening Balance)	-
Net Surplus as per I/E A/c (II)	
<b>A TOTAL Rs.</b>	<b>45,466,086.42</b>
<b>Less</b>	
Depreciation on Assets (Contra)	978,951.00
Transfer to different funds	
Net Deficit as per I/E A/c (II)	
<b>B Total Deduction Rs.</b>	<b>978,951.00</b>
Balance as at 31.03.2022 as per Balance Sheet (A-B) <b>Rs.</b>	<b>44,487,135.42</b>

**SCHEDULE - B : Movable Properties Fund as at 31.03.2022**

<b>PARTICULARS</b>	<b>Movable Properties Fund Rs.</b>
Credit Balance as at 01.04.2021	16,908,987.20
<b>ADD</b>	
Capital Grants	
Transfer From I/E A/c (II) for acquiring Capital Assets	515,793.00
Income from Investments	
Transfer from different funds	
Development Fund	-
Net Surplus as per I/E A/c (II)	
<b>A TOTAL Rs.</b>	<b>17,424,780.20</b>
<b>Less</b>	
Depreciation on Assets (Contra)	2,850,715.00
Transfer to different funds	
Net Deficit as per I/E A/c (II)	
<b>B Total Deduction Rs.</b>	<b>2,850,715.00</b>
Balance as at 31.03.2022 as per Balance Sheet (A-B) <b>Rs.</b>	<b>14,574,065.20</b>



**JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH**

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

**SCHEDULE - C : OTHER FUNDS AS AT 31.03.2022**

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 01.04.2021	18,657,597.56	20,256,019.19	2,001,013.92	-	1,000,000.00	11,548,475.21	1,348,694.15	1,423,335.93	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)	956,611.73	1,516,484.34	115,373.51			(910,004.04)	77,762.37	82,066.01	
<b>A TOTAL Rs.</b>	<b>19,614,209.29</b>	<b>21,772,503.53</b>	<b>2,116,387.43</b>	<b>-</b>	<b>1,000,000.00</b>	<b>10,638,471.17</b>	<b>1,526,456.52</b>	<b>1,605,401.94</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 31.03.2022 as per Balance Sheet (A-B) Rs.	<b>19,614,209.29</b>	<b>21,772,503.53</b>	<b>2,116,387.43</b>	<b>-</b>	<b>1,000,000.00</b>	<b>10,438,471.17</b>	<b>1,526,456.52</b>	<b>1,605,401.94</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, 2022

Particulars	Opening Unutilised Grant as on 01.04.21	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	Transfer to different funds	Total Expenses	Over Expenditure/ Deficit	Closing Unutilised Grants as on 31.03.2022
	₹	₹	₹	₹	₹	₹	₹	₹	₹	₹	₹	₹	₹
<b>Government of West Bengal</b>													
Dept of Higher Edn. (DHE) - Maint. Grant West Bengal Distr. Scheme (WBDS)	6,340,878.61		21,178,488.00			27,519,866.61	13,347,402.00	70,255.00	7,988,086.16	-	21,385,743.16		6,133,623.45
Junior Talent Search Test (DHE - JTST)	2,511,945.08		-			2,511,945.08		1,231,559.00		34,869.00	1,266,428.00		1,245,517.08
Junior Talent Search Test (DST - JTST)	12,481,835.82		3,500,000.00			23,466,674.82		4,875,755.00		260,114.00	12,620,708.00	7,484,839.00	10,845,966.82
Senior Talent Search Test (DST - STST)	4,967,302.00		7,484,839.00			19,171,451.00		7,484,839.00			15,988,317.00		3,183,134.00
Talent Enrichment Programme (DST - TEP)	7,202,181.00		14,204,149.00			7,202,181.00		180,000.00			180,000.00		7,022,181.00
Teachers' Training Programme (DST - TTP)	3,827,318.10		-			3,827,318.10		523,576.00			523,576.00		3,303,742.10
Bigyani Kanya Medha Bhatti (DST)	828,806.00		11,245,163.00			12,073,969.00		11,011,213.00			11,011,213.00		1,062,756.00
WB Academy of Science & Technology (WAST)	30,000.00		-			30,000.00		30,000.00			30,000.00		-
State Science Fair 2019	-	6,501.00	-			- 6,501.00		-			-	6,501.00	-
Biotechnology Laboratory (Dept. of Biotechnology)	79,221.92		-			79,221.92		1,008,794.00			1,008,794.00		-
DST - (WAST)	2,831.75		-			2,831.75							2,831.75
Vidyasagar Science Olympiad	-		5,000,000.00			5,000,000.00		74,900.00		173,250.00	248,150.00		4,751,850.00
<b>Other Organisations</b>													
Maulana Abul Kalam Azad Instt. Of Asian Studies (MAKAIAS) Dr. Paromita Roy	1,658.00		-			1,658.00					-		1,658.00
RSSDI-Diabetis (Prof. Maitree Bhattacharyya)	44,431.00		-			44,431.00		19,253.00			19,253.00		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		-			108,311.75		-			-		108,311.75
Department of Science & Technology (DST-ITP)	-	288,127.00	-	203,500.00		- 64,627.00		-			-	64,627.00	47,293.05
Department of Science & Technology (DST)	47,293.05		-			47,293.05		-			-		1,086,928.80
Department of Science & Technology (DST-TIP)	1,056,599.80		-		30,329.00	1,086,928.80		-			-		-
Talent Enrichment Programme (CSIR) Vigyan Prasar (VP)	-	9,850.89	-			(9,850.89)		-			-	9,850.89	-
Vigyan Prasar (VP) 2020	-	5,322.00	-			(5,322.00)		-			-	5,322.00	-
Vigyan Sarvatra Pujataye (VP)	799,375.20		1,063,195.00			1,852,570.20		1,085,689.60		47,560.00	1,133,249.60		719,320.60
Science & Engineering Research Bureau (SERB) u/ DST Dr. Pijush Basak	-		3,200,000.00			3,200,000.00		3,200,000.00			4,000,425.56	800,425.56	-
	-	1,017.47	800,425.56					800,425.56					
<b>Total</b>	<b>42,883,209.08</b>	<b>290,818.36</b>	<b>67,666,259.56</b>	<b>203,500.00</b>	<b>30,329.00</b>	<b>109,693,071.19</b>	<b>13,347,402.00</b>	<b>47,584,576.16</b>	<b>7,988,086.16</b>	<b>515,793.00</b>	<b>69,415,857.32</b>	<b>9,302,155.00</b>	<b>42,093,512.40</b>



## 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
₹		₹
	<b>Deposits for :</b>	
760,000.00	Scholarship	358,000.00
139,228.00	Book Grant	130,365.00
2,954,000.00	Bigyani Kannya Medha Brtti	8,725,000.00
-	Talent Enrichment Programme	
34,003.00	Junior Talent Search Test (DST, GOWB)	4,687,348.00
15,000.00	Best School Award	15,000.00
5,775.00	Development Fund Expenses (Biotech Lab)	5,775.00
99,031.00	Repair & Maintenance (General)	316,134.00
-	Contingency	52,860.00
-	Liab for JB Own Fund Exp	1,696,178.00
-	WBDS Programme Expenses	28,227.00
-	City Conveyance	111,979.00
132,759.00	Repair & Maintenance (Building)	318,301.00
-	Security Expenses	173,443.00
-	Cleaning Expnses	35,550.00
50,410.00	Electricity	54,550.00
121,712.00	Books & Journals	122,900.00
8,500,000.00	Advance Grant from DST,GOWB for Scholarship & Sc. W/s under JTST for next year	
353,750.00	Interior Decorator & Renovation(Development fund)	353,750.00
-	P.TAX	4,760.00
52,778.00	TDS(Consultancy)	80,254.00
19,773.00	TDS (Contractors)	33,091.00
517,640.00	TDS(Staff)	
59,286.00	TDS (GST)	42,849.00
9,600.00	DST (SEATS) Expenses	9,600.00
	DST (GOI) VSP Expenses	20,456.00
	GPF Payable	115,300.00
	Vidyasagar Science olympiad 2022	82,530.00
-	Vigyan Prasar expenses	98,123.60
5,138.00	CPF Payable	5,138.00
393,877.00	Senior Talent Search Test	7,384,877.00
357,527.00	Refundable to DST (SEATS), Govt. of India	357,527.00
<b>14,581,287.00</b>	<b>Total</b>	<b>25,419,865.60</b>

### SCHEDULE - "F" : OTHER DEPOSITS

PREVIOUS YEAR		CURRENT YEAR
₹		₹
	<b>Deposits for :</b>	
25,000.00	Security Deposit by Electrical Contractor	-
433,409.00	Security Deposit by Civil Contractor	437,924.00
<b>458,409.00</b>		<b>437,924.00</b>



## JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH

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

### SCHEDULE - "G" : FIXED ASSETS AS AT 31.03.2022

Description of Assets	Written down values at 01.04.2021 Rs.	Addition During the Year 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 31.03.2022 Rs.
<b>I. Land &amp; Buildings</b>							
1. Leasehold Land	2,075,669.00	-	-	2,075,669.00		-	2,075,669.00
2. Buildings	19,092,153.11	-	-	19,092,153.11	5%	954,608.00	18,137,545.11
3. Rain Water Harvesting System	43,686.65	-	-	43,686.65	5%	2,184.00	41,502.65
4. Mural	27,528.26	-	27,528.26	5%	1,376.00	26,152.26	
5. Biotechnology Laboratory	138,551.40	-	-	138,551.40	15%	20,783.00	117,768.40
<b>TOTAL</b>	<b>Rs. 21,377,588.42</b>	<b>-</b>	<b>-</b>	<b>21,377,588.42</b>		<b>978,951.00</b>	<b>20,398,637.42</b>
<b>II. Construction Work-in-Progress Rs.</b>							
1. Building (Innovation Centre)	24,088,498.00	-	-	24,088,498.00		-	24,088,498.00
<b>TOTAL LAND &amp; BUILDING</b>	<b>Rs. 45,466,086.42</b>	<b>-</b>	<b>-</b>	<b>45,466,086.42</b>		<b>978,951.00</b>	<b>44,487,135.42</b>
<b>III. Movable Properties</b>							
<b>Furniture, Equipment, Plant etc.</b>							
1. Electrical Equipment	4,184,019.74	-	-	4,184,019.74	15%	627,603.00	3,556,416.74
2. Electrical Fittings	110,461.51	-	-	110,461.51	10%	11,046.00	99,415.51
3. Electrical Fittings funded by GoWB	102,464.25	-	-	102,464.25	10%	10,246.00	92,218.25
4. Furniture	2,944,405.78	-	-	2,944,405.78	10%	294,441.00	2,649,964.78
5. Office Equipment	161,967.24	-	-	161,967.24	15%	24,295.00	137,672.24
6. Science Indoor Exhibits	43,733.26	-	-	43,733.26	15%	6,560.00	37,173.26
7. Computer	664,815.42	-	-	664,815.42	40%	265,926.00	398,889.42
8. Laboratory Equipment	7,769,919.03	-	-	7,769,919.03	15%	1,165,488.00	6,604,431.03
9. Computer & Accessories funded by Govt Grant	496,766.24	515,793.00	-	1,012,559.24	40%	405,024.00	607,535.24
10. Printer/Scanner/Photocopier funded by GOWB	11,163.10	-	-	11,163.10	40%	4,465.00	6,698.10
11. Air Condition (Dormitory)	356,214.28	-	-	356,214.28	10%	35,621.00	320,593.28
<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</b>	<b>Rs. 16,908,987.20</b>	<b>515,793.00</b>	<b>-</b>	<b>17,424,780.20</b>		<b>2,850,715.00</b>	<b>14,574,065.20</b>

**JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH**

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

**SCHEDULE H: LAND & BUILDING INVESTMENTS AS AT 31.03.2022**

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 31.03.2022 as per Balance Sheet (A to C) Rs.	-

**SCHEDULE I: MOVABLE PROPERTIES FUND INVESTMENTS AS AT 31.03.2022**

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 31.03.2022 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 31.03.2022

PREVIOUS YEAR	PARTICULARS	Total Other Fund Investments Rs.	Scholar Reserve Fund Investments Rs.	Development Fund Investments Rs.	Laboratory Fund Rs.	JB Own Fund Investments Rs.	Staff Welfare & Medical Fund Rs.	Infrastructure Fund Investments Rs.	Other Investments Rs.	Total Rs.
Rs.	Rs.	A	B	C	D	E	F	G	H=A+B+C+D+E+F+G	
	- A. FIXED / TERM DEPOSITS									
32,611,543.00	With State Bank of India, Kasba	15,596,644.90	16,021,611.17	1,098,076.93				0.00		32,716,333.00
1,100,000.00	With State Bank of India, Jeevan Deep	1,100,000.00								1,100,000.00
807,774.00	With State Bank of India, Salt Lake	807,778.00								807,778.00
55,732,514.06	With Punjab National Bank	51,521,160.00		1,018,310.50	10,438,471.17	1,526,456.52	1,605,401.94	36,932,519.87		51,521,160.00
30,000.00	With UCO Bank	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>92,325,831.06</b>	<b>A TOTAL</b>	<b>17,534,422.90</b>	<b>18,065,611.17</b>	<b>2,116,387.43</b>	<b>10,438,471.17</b>	<b>1,526,456.52</b>	<b>1,605,401.94</b>	<b>36,932,519.87</b>		<b>88,219,271.00</b>
	B. OTHER DEPOSITS									
	- B TOTAL									
	C. BALANCE IN SAVINGS BANK									
5,786,678.75		2,079,786.39	3,706,892.36							5,786,678.75
<b>5,786,678.75</b>	<b>C TOTAL</b>	<b>2,079,786.39</b>	<b>3,706,892.36</b>							<b>5,786,678.75</b>
<b>98,112,509.81</b>	Balance as at 31.03.2022 as per Balance Sheet (A to B)	<b>19,614,209.29</b>	<b>21,772,503.53</b>	<b>2,116,387.43</b>	<b>10,438,471.17</b>	<b>1,526,456.52</b>	<b>1,605,401.94</b>	<b>36,932,519.87</b>		<b>94,005,949.75</b>



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

**SCHEDULE K: LOANS & ADVANCES AS AT 31.03.2022**

PREVIOUS YEAR		CURRENT YEAR	
		₹	₹
	<b>Security Deposits:</b>		
11,000.00	For Telephone	11,000.00	
916,539.27	For Electricity	181,794.27	192,794.27
	<b>Loans &amp; Advances:</b>		
-	For Advance against Tour/Program (Staff)	2,550.00	
2,079.95	For Advance for Postage	1,877.95	
46,585.00	For Advance to Suppliers	46,595.00	
-	GST Refund receivable	-	
227,684.47	Tax Deducted at Sources (Refundable)	358,811.27	409,834.22
	<b>Receivables (Grants):</b>		
	From Deptt of Science & Technology and Biotechnology, Govt of West Bengal (Biotechnology Laboratory)		929,572.08
	<b>Over Expenditure Receivables (Grants):</b>		
6,501.00	From Deptt of Higher Education, Govt of West Bengal	7,491,340.00	
5,322.00	From Govt. of India, Vigyan Prasar	5,322.00	
-	From Govt. of India, Vigyan Sarvatra Pujataye (VP)	800,425.56	
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	9,850.89	8,372,582.92
<b>1,494,707.05</b>			<b>9,904,783.49</b>

**JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH**

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

**SCHEDULE L: CASH AND BANK BALANCES as at 31.03.2022**

PREVIOUS YEAR		CURRENT YEAR	
		₹	₹
17,419.00	<b>a) Cash in hand (As physically verified)</b>		44,773.00
	<b>b) Cash at Bank : (Held in Savings Bank Accounts with)</b>		
1,111,464.80	State Bank of India, Kasba(GAP02-PR)	1,141,779.80	
64,986.28	State Bank of India, Kasba(GAP03-AK)	66,758.28	
504,999.25	State Bank of India, Kasba(GAP01-PB)	2,392,323.75	
1,311,592.73	State Bank of India, Kasba, (A/c No 10415825348)	2,079,786.39	
744,666.36	State Bank of India, Kasba, (A/c No 10415825360)	3,706,892.36	
2,100,617.76	State Bank of India, Kasba, (A/c No 10415825359)	1,496,195.06	
13,023,068.93	Punjab National Bank, Bosepukur Rajdanga, (A/c No 5486)	16,197,433.95	
521,149.52	State Bank of India, Saltlake, (A/c No 10836429242)	587,355.52	
			27,668,525.11
	<b>c) Cash at Bank : (Held in Current Accounts with)</b>		
943,461.50	State Bank of India, Kasba, (CA-35061192770)	191,668.50	
-	State Bank of India, Kasba, (Current Account No. 33224282758)	-	
			191,668.50
	<b>d) Interest Accrued on Savings Bank Deposits</b>		
493.00	State Bank of India, Kasba(GAP02-PR)	507.00	
29.00	State Bank of India, Kasba(GAP03-AK)	30.00	
561.00	State Bank of India, Kasba(GAP01-PB)	731.00	
574.00	State Bank of India, Kasba, (A/c No 10415825348)	913.00	
581.00	State Bank of India, Kasba, (A/c No 10415825360)	1,640.00	
839.00	State Bank of India, Kasba, (A/c No 10415825359)	1,077.00	
231.00	State Bank of India, Salt Lake, (A/c No 10836429242)	44.00	
			4,942.00
<b>20,346,734.13</b>			<b>27,909,908.61</b>



## JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH

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

SCHEDULE - "M"

### ESTABLISHMENT

PREVIOUS YEAR		CURRENT YEAR
₹		₹
13,313,063.00	Salary & Allowances	13,347,402.00
-	Leave Salary	-
-	Contribution to Provident Fund (Office)	-
<b>13,313,063.00</b>	<b>TOTAL</b>	<b>13,347,402.00</b>

SCHEDULE - "N"

### PROGRAMME EXPENSES

PREVIOUS YEAR		CURRENT YEAR
₹		₹
	<b>I. Expenses funded by Deptt of Higher Education, Govt. of West Bengal</b>	
703,851.00	Annual Award Ceremony	50,692.00
150,013.00	Books & Journals	19,563.00
<b>853,864.00</b>	<b>Sub Total</b>	<b>70,255.00</b>
	<b>II. Expenses funded by Deptt of Higher Education, Govt. of West Bengal (WBDS)</b>	
84,000.00	Academic Meeting	-
1,161,858.00	Science /Advanced Science Workshop	1,266,428.00
<b>1,245,858.00</b>	<b>Sub Total</b>	<b>1,266,428.00</b>
	<b>III. Expenses under Govt. of West Bengal [DHE - Junior Talent Search Test (JTST)]</b>	
-	Awareness Programmes	-
-	Contingencies	-
-	Science Workshop	-
-	Talent Search Tests	-
-	<b>Sub Total</b>	-
	<b>IV. Expenses under Govt. of West Bengal [DST - Junior Talent Search Test (JTST)]</b>	
	Annual award Ceremony	1,032,191.00
35,000.00	Best School Award	30,000.00
235,000.00	Encouragement award	17,000.00
1,007,500.00	Book Grant	1,182,500.00
5,785,000.00	Scholarship	7,025,000.00
458,500.00	Science Workshop	7,500.00
1,405,353.68	Talent Search Test	1,588,662.00
1,100,108.00	Awareness Programm	9,854.00
214,606.00	Teaching Aid	260,114.00
972,000.00	Remunerations	972,000.00
445,181.00	Contingencies	495,887.00
<b>11,658,248.68</b>	<b>Sub Total</b>	<b>12,620,708.00</b>



	<b>V. Expenses under Govt. of West Bengal [DST - Senior Talent Search Test (STST)]</b>	
970,000.00	Book Grant	1,309,000.00
1,274,700.00	Laptop Distribution to Scholars	1,388,100.00
9,352,000.00	Scholarship	11,280,000.00
985,836.00	Talent Search Test	2,011,217.00
<b>12,582,536.00</b>		<b>15,988,317.00</b>
	<b>VI. Expenses under Govt. of West Bengal [DST - Teachers' Training Programme (TTP)]</b>	
26,298.00	Fooding, Lodging & Refreshment Expenses	23,289.00
-	Consumables	279,900.00
40,000.00	Honararium to Resource Personnel	109,387.00
60,000.00	Meeting Expenses for Workshop Planning	6,000.00
-	Travel for Mentors & Participants	105,000.00
<b>126,298.00</b>		<b>523,576.00</b>
	<b>VII. Expenses under Govt. of West Bengal [DST - Talent Enrichment Programme (TEP)]</b>	
-	Seminar & Workshops	-
180,000.00	Manpower costs	180,000.00
-	Visit to research & Sc. Establishment	-
-	Contingencies	-
<b>180,000.00</b>		<b>180,000.00</b>
	<b>VIII. Expenses under Govt. of West Bengal [DST - Bigyani Kanya Medha Britti]</b>	
394,000.00	Book Grant	950,000.00
4,704,000.00	Scholarship	9,600,000.00
330,000.00	Manpower Costs	360,000.00
7,553.00	Workshop Expenses	101,213.00
103,950.00	Teaching Aids & Accessories	-
<b>5,539,503.00</b>		<b>11,011,213.00</b>
	<b>XI. Expenses under Govt. of India [DST - SEATS]</b>	
-	Science Camps (INSPIRE)	-
-		-
	<b>XVI. Expenses funded by Indian Council of Medical Research (ICMR)</b>	
-	Fellowship Stipend (Senior Research Fellow - Mr. Rudradip Pattanayak)	-
-	Contingencies	-
-		-



## 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>	
228,695.70	Postage, Telegram & Telephone	75,457.10
41,300.00	Audit Fee	41,300.00
221,562.38	Contingency	268,313.06
406,971.80	Electricity	461,315.00
36,781.00	Printing & Stationery	71,555.00
279,950.00	City Conveyance	721,907.00
374,720.00	Property Tax	428,962.00
8,638.00	Pronouncement & Publicity	2,114.00
262,740.00	Repairs and Maintenance (Computer & other equipment)	310,337.00
505,760.00	Repairs and Maintenance (General)	544,944.00
1,309,114.00	Repairs and Maintenance (Building)	1,901,725.00
84,500.00	Legal and Filing Fees & Expenses	122,350.00
2,054,467.00	Security Expenses	2,122,999.00
481,773.00	Cleaning Expenses	530,788.00
114,616.00	Staff Welfare Expenses	900.00
352,320.00	Salary(Contractual)	363,120.00
<b>6,763,908.88</b>		<b>7,968,086.16</b>
	<b>EXPENSES UNDER SCHOLARS' RESERVE FUND</b>	
Rs.		Rs.
391,000.00	Scholarship	192,000.00
28,000.00	Book Grant	20,000.00
-	Encouragement Award	-
<b>419,000.00</b>		<b>212,000.00</b>
	<b>EXPENSES UNDER BIOTECHNOLOGY LABORATORY</b>	
Rs.		Rs.
1,064,968.00	Remuneration to Contractual Employees at Biotechnology Laboratory	948,667.00
167,235.00	Repair & Maintenance	25,960.00
136,004.00	Science Workshop Biotechnolaboratory	21,808.00
232,089.00	Consumables Biotech Laboratory	12,359.00
<b>1,600,296.00</b>		<b>1,008,794.00</b>
	<b>EXPENSES UNDER LABORATORY FUND</b>	
Rs.		Rs.
-	Laboratory Fund Expenses	-
-	Repair & Maintenance	-
-		-





<b>EXPENSES UNDER VIGYAN PRASAR</b>		
Rs.		Rs.
-	Contingency	2,772.00
-	Contingency	31,988.32
-	Honorarium	120,047.20
-	Manpower	740,323.00
-	Overhead	60,000.00
-	Science Workshop/seminar	119,333.08
-	Teaching & learning Aid	61,558.00
-		<b>1,133,249.60</b>
<b>EXPENSES UNDER VIGYAN SARVATRA PUJATAYE (VP)</b>		
Rs.		Rs.
-	Consumables(VP-VSP)	44,342.00
-	Decoration(VP-VSP)	120,071.00
-	Food(VP-VSP)	240,982.00
-	Honorarium (VP-VSP)	182,000.00
-	Organizational Expenses(VP-VSP)	289,097.20
-	Other Organization's Expenses	2,997,425.00
-	Prizes(VP-VSP)	50,400.00
-	Science Workshop(VP-VSP)	4,002.36
-	Travel (VP-VSP)	72,106.00
-		<b>4,000,425.56</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, 2022

#### 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. 66,419/= 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 includes 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 LIC of Rs 71,19,964/- as on 31.03.2021, out of which during the FY 2021-22 the Society paid the 2<sup>nd</sup> and final Installment of Rs 35,59,964/- and debited the same to its Revenue Accounts under JBNST Own Fund, vide resolution passed in Governing Body Meeting dated 19.03.2021. The current service cost as estimated by LIC for the FY 2021-22 of Rs 16,96,178/- has been provided as liability in FY 2021-22.
  - 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**

- That the Society during the relevant financial year 2021-22 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 31.03.2022 of Rs 99,04,783.49 (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 31.03.2022. The management estimates to spend the undermentioned unspent balances in FY 2022-23.

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)		1,08,311.75
4	Department of Science & Technology ( DST )		47,293.05
7	Junior Talent Search Test (DHE - JTST)		24,71,458.00

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 1<sup>st</sup> day of July, 2022

Place: Kolkata

On behalf of the Governing Body

For, M. Saha & Co  
Chartered Accountant Firm  
Regn. No. : 305135E

Sd/-

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

Sd/-

**CA Debarshi Saha**  
Partner  
(Memb. No: 061398)



Our scholars at Talent Enrichment Program at JBNSTS



Issued by  
Director

Jagadis Bose National Science Talent Search  
1300, Rajdanga Main Road, Kasba, Kolkata 700 107  
Phone : (033) 2442 8267 / 8269 / 8270 / 2441 7542

E-mail : [jbnsts@jbnsts.ac.in](mailto:jbnsts@jbnsts.ac.in)  
Website: [www.jbnsts.ac.in](http://www.jbnsts.ac.in)