

In pursuit of Excellence
Since 1960

Annual Report

2021



Jagadis Bose National Science Talent Search



I have sought permanently to associate the advancement of knowledge with the widest possible civic and public diffusion of it; and this without any academic limitations, henceforth to all races and languages, to both men and women alike, and for all time coming.

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;

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

SIRRAMASWAMY 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
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Principal Secretary,
Government of West Bengal
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Shri Manish Jain, IAS

Principal Secretary,
Government of West Bengal
Department of Higher Education & Department of School Education
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Prof. (Dr.) Partha Pratim Majumder

National Science Chair
&
Distinguished Professor, National Institute of Biomedical Genomics
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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



Chairman's message to the new awardees

The Jagadis Bose National Science Talent Search (JBNSTS) is on a growth path. It started in 1960 as a program to identify every year a handful of students beginning college education and nurture them through their career. Many of those admitted to this program have flourished in their disciplines and have achieved distinction in India and abroad.

Since that time education has spread widely and now excellent schools have developed in most districts. JBNSTS also has a far wider canvas now. The JBNSTS Scholarship is now offered at two levels: the Senior Scholarship for students entering college education in basic sciences, medicine, or engineering is given to around 50 students; and a Junior Scholarship given to about 200 students who have just crossed the Madhyamik or equivalent examination. To address the acute lack of girl students in the STEM (science, technology, engineering, and medicine) subjects, JBNSTS now also grants 50 JBNSTS Senior Bigyani Kanya Medha Britti Scholarships as well as 50 JBNSTS Junior Bigyani Kanya Medha Britti Scholarships for students at the same levels as the JBNSTS Senior and Junior Scholarships. For all students the Fellowships come with an a book grant. Besides the scholarships, from time to time JBNSTS undertakes programs for high school students, is involved in science outreach, provides laboratory facilities for students, and organizes science teacher training programs. Even this list is not exhaustive!

Very soon we will be inducting the new scholars for 2021, who deserve our highest praise. We must not forget that their teachers have contributed in no small measure to the development of the scholars as have the parents and guardians. From the excitement on the faces of the new scholars and the curiosity in their looks there can be no doubt that many of them will excel in their chosen areas. I feel convinced that they will meet the high expectations that society has from them.

All this would not have been possible without the support and encouragement from the Government of West Bengal. The Department of Higher Education and the Department of Science, Technology, and Biotechnology have always been by the side of JBNSTS. This has made it possible for the small team at JBNSTS under an inspiring leadership to continue its efforts as a catalyst for scientific excellence.

There is no question that JBNSTS has been a success story. Yet, there remains much more to do. The difficulties due to the pandemic and the online examinations may have affected the candidates unevenly. Not everybody has access to the facilities needed for such testing methods. In the years ahead we hope to return to normalcy. The spread of JBNSTS into the furthest corners of West Bengal will surely continue. It is our collective responsibility to ensure that a scientific outlook develops among people at large. With our scholars acting as messengers, JBNSTS will continue to devote its efforts to counter often propagated unscientific and anti-science ideas.

Prof. (Dr.) Amitava Raychaudhuri
Chairman, JBNSTS



One of the feelings I love most about science is that any given day could be the one on which you make a discovery or gain some startling new insight. —

Professor Madhavi Krishnan
(University of Oxford)

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From the Director's Desk

Honorable Chairman Sir, eminent members of the governing body, our scholars, awardees, the alumni/ alumna of our institution, my colleagues at JBNSTS, friends and well-wishers; a heartiest greeting to all of you !

Congratulations to all the young budding scientists, our new batch of scholars who have been selected in 2021 following multi-layered rigorous examinations. I am delighted that you have been able to make a mark through your distinguished academic performance by earning the coveted scholarship. Your accomplishment is a testimony of perseverance and talent which had encountered the prevalent precarious and critical time. It is my privilege to present the Annual Report of JBNSTS for the year 2021 which chronicles the journey of our beloved institution during the last year. JBNSTS had stepped into its 62nd year in 2022. The past six decades has culminated in securing large scale systematic change in the field of STEM education by making science inclusive and interdisciplinary.

Taking the mantle in 2015 as Director of the institute, I may recall that the last two years had been unusual with the pandemic causing a pandemonium in our social life with meteoric rise in cases triggering a partial closure of academic activities. The restrictive intermittent lockdowns, lack of inter-personal communication left the students hapless. But JBNSTS was never out of touch from its community and young scholars through interactions held on the virtual platform on a regular basis. 2021 began with bright sunshine by discovery of antidote for the nanometer sized virus but slowly in the later part of the year, the malefic features of the pandemic prevailed over the academic activities.

Even after seventy-five years of the nation's independence stark contrast remains in terms of unevengender participation in STEM education in (10 + 2) framework, which is being reflected in the declining numbers of participation of girls in science research and education. 2021 marks the advent of Junior Bigyani Kanya Medha Britti scholarship program which aims of empowerment of girls in STEM education. Under this particular scheme, JBNSTS is dedicated to groom the dormant talent of girl students of our state through scholarships and book grants coupled with nurturing programs throughout the year. The institute aims to create role models who would perform seminal work and play leadership roles in the fields of science education, research and technology which will be a landmark in the academic stratosphere of our nation, contributing significantly in the global arena of science.

To my dear scholars and students, I understand that life has thrown curve balls at you. I would like to urge you to explore the brighter side of life that when the nemesis of the virus had done all, the world, one day in the post-Covid era may appear to be a forlorn green earth thereby beginning of a new world order. During the last preceding years, the world had witnessed significant advancement in the research activities in fields like chemical biology, medicinal biochemistry, virology, epidemiology, genomics, bioinformatics, medical biotechnology which resulted in development of several types of vaccines against Covid-19, masks, sanitizers etc., all across the globe that strengthened our immunity and resistance against the virus. A new era beckons for all my dear students, who can make a mark through your talent and innovative acumen. It is pertinent to mention that on the other hand, the entire phase of pandemic has underscored the online model of academic discourses in the form of creation of unique pedagogy in science education for science aspirants. The development of powerful tools on the virtual platform and resource materials, cultivating web-based modules on the digital platform and web-based education traversed the nook and corner of our society which accounted substantial participation of the end users. This has added immense value to the academic sphere of the entire globe.

Education on the other hand refers to access to science. It is not limited to attainment of certificate, but on a broader note denotes attitude, actions and behavior with others in the society. We had organized a trail of exceptional District School Programs in the previous year in virtual mode. The interaction of classroom teaching amongst the pupils in their formative years had waned during the pandemic. This had replaced joyful experience of activity-based science teaching and learning with online classrooms on the virtual platform. The modules of online sessions were designed in conformity to the existing school middle-school curricula. All the modules were presented with demonstrations and experiments which students can perform by themselves in their home. The art of dispensing online science education by JBNSTS generated substantial interest amongst the students from rural areas of our state who participated in all the programs through electronic devices procured even from their neighbors, friends and family. This particular initiative may be defined as a leap towards sustainability in science education wherein JBNSTS had left an indelible mark in the pasture of science education in the state.

Whereas mentoring remains the cornerstone of the institute, JBNSTS developed unique pedagogical tools of online classroom space that are intertwined in an interdisciplinary spirit complementing the prevalent academic curricula. Teachers Training Program, Talent Enrichment Program and Biotechnology Programs are some of the remarkable initiatives being held during the entire span of 2021 for the science teachers and student scientists of our state on the JBNSTS digital platform. The Teachers' Training Program invoked significant interest amongst the science teachers of our state. More than 250 science teachers of our state participated in each of the web-based sessions. Such prodigious involvement in terms of science faculty development initiatives was not otherwise possible in physical mode. Such commendable initiative has been featured in several media reports and coverage during the last year. Our sincere acknowledgement to the gamut of teachers, faculty resource persons and all other concerned for creating such a vibrant platform which led to a heartening and diligent interaction.

Consequent upon the paradigm change in the academic discourse, JBNSTS modeled the scholarship examinations on digital platform. I am happy to inform that we have accomplished the home-based online proctored examination in an efficient manner along with utmost



academic integrity. The unique methodology employed in the talent search tests ensured the safety of their home for the applicants at a time when the society was shrouded by the threat of the pandemic.

Thriving upon the meritocracy of the talented science aspirants of our state we have selected 200 Junior Scholars, 50 Junior Bigyani Kanya Medha Britti awardees, 50 Senior Scholars and 50 Senior Bigyani Kanya Medha Britti awardees and 50 Encouragement Awardees for the year, 2021. We are thankful to the Department of Science and Technology and Biotechnology, Government of West Bengal for their unhindered financial patronage towards all the scholarship programs.

In today's world, women health and hygiene in respect of cancer assumes paramount importance. We organized a web-based seminar exclusively for all the girl scholars and awardees from previous batches of the institute who hails from all across the state. The program was partaken by acclaimed oncologists, eminent cancer awareness activists etc. The participating budding women student scientists of our state were enriched by the in-depth analysis and unbiased interaction of the manifold forms of cancer, early detection, diagnosis of symptoms and response mechanism towards the disease. JBNSTS formulated a series of online counseling sessions coordinated by eminent mental health experts for our scholars which addressed their vulnerabilities in the stressful situation of the pandemic and consequent restrictions.

I would like to take this opportunity to announce that construction of annex building is over and ready to function. I acknowledge the support of the Department of Higher Education, Government of West Bengal for their funding to sustain the infrastructure. The extended edifice of JBNSTS in the existing campus houses modernized classrooms, high-tech laboratories, library, and excellent archive of science books, journals, research papers etc. JBNSTS aims to groom young students from districts and remote areas of West Bengal through experiential activity-based learning which will kindle their innovative skills by cultivating the joy of science learning amongst the students and enhance their knowledge in STEM education.

We owe our journey which has been a story marked with undulating hopefulness and development of continual support provided by the Department of Higher Education and Department of Science and Technology and Biotechnology, Government of West Bengal. The dedication of my colleagues has been an integral part in the organizational perspective of JBNSTS throughout the year, whose presence has been invaluable in creating and upholding the values that our beloved institution stands for.

Finally, I would take this opportunity to humbly assert that all of you have aptitude and capabilities which very few possess. Our nation needs talent like you. My dear scholars and awardees, you are already integrated to the hall of fame of the institute that comprises globally acclaimed alumnus of JBNSTS, who are currently involved in various groundbreaking activities in the large science diaspora of the world. All of you are being vested with the responsibility of carrying the illustrious legacy forward by being the ambassadors of JBNSTS and torch bearers of the society in STEM education and research, thereby contributing to the global scientific ecosystem through your talent, ingenuity and competence.

Best wishes and thank you all!!

Prof. (Dr.) Maitree Bhattacharyya

Director, JBNSTS Kolkata

VISION

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

MISSION STATEMENT

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

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

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

OUR MANIFOLD ACTIVITIES

- Senior Scholarship Program
- Senior Bigyani Kanya Medha Britti
- Junior Scholarship Program
- Junior Bigyani Kanya Medha Britti
- West Bengal District School Program
- Teachers' Training Program
- Talent Enrichment Program
- Biotechnology Program for Students
- JBNSTS- Vigyan 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



Ms. Sanchari Chattopadhyay



Mr. Puskar Naskar



OUR JBNSTS TEAM



Mr. Sudip Das



Mr. Ranjit Kumar Mallik



Ms. Puspa Biswas



Dr. Sunandana Mandal



Dr. Rituparna De



Ms. Sweta Chakraborty



Ms. Shrayasi Chatterjee



Dr. Turban Kar



Ms. Paromita Majumder



Mr. Debmalya Chowdhury



Ms. Prakriti Saha



Mr. Subhadeep Banerjee



Mr. Debnarayan Mukherjee



Mr. Sukanta Manna



Mr. Mahadev Das



JBNSTS SENIOR SCHOLARSHIP PROGRAM

The novel talent search program
upholding a legacy of more than sixty years;
even in the time of pandemic!!

A Program supported by
Department of Science and Technology
and Biotechnology,
Government of West Bengal



Senior Talent Search Test

Our cult initiative in STEM learning

Genesis of the program

In spite of our country making significant strides in reforming science education, the existing curricula is characterized by limited scope of activity-based learning in STEM which contributes to the deficiency of students to perceive science in their formative years. The nation's scientific temper thrives upon the younger generation of science aspirants who requires to be cultivated and enriched with the transnational dynamic matrix of STEM education and research for carving a niche for themselves and making our country proud in the global arena.

The Senior Scholarship Program is the primordial initiative of JBNSTS which was modeled on the founding principles namely, identification, motivation and nurture of science aspirants to groom them into global leaders in the field of science, technology and medicine. We are thankful for the relentless support of the Department of Science and Technology and Biotechnology, Government of West Bengal in the past glorious six decades of the program.

Outcomes of this initiative

- ❖ **Unmatched academic exposure for the talented students:** In today's era of globalization, JBNSTS has strived continuously for sustenance and enhancement of quality of the premier student scientists of West Bengal in every field of STEM.
- ❖ **Setting remarkable example of academic excellence:** The exclusive features of this program are modern student centric teaching methodologies, application based education, guided research projects leading to publication of research paper for budding student scientists of our state.
- ❖ **Financial support and benefits:** Providing substantial financial resource for the talented science researchers through the means of scholarship grants which assists their academic needs and complete the career requirements.
- ❖ **Catalyzing Innovation and Research:** JBNSTS believes in imparting relevant knowledge along with the university prescribed syllabus in the form of innovative incubations to bridge the gaps between the theoretical syllabus and the practical aspects of science education.

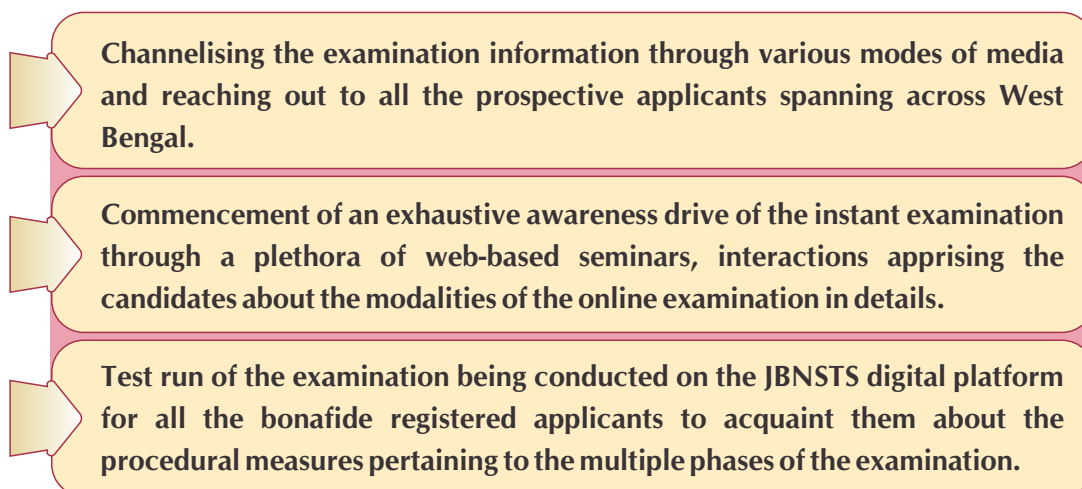
The recurring batches of JBNSTS senior scholars are integrated to the robust pool of dynamic and qualified illustrious alumni of the institution spanning across the entire globe.

Identification of JBNSTS Senior Scholars – 2021

Basic Eligibility Criteria: Candidates who have qualified 12th standard board examination from any recognized board, viz. WBCHSE/ CBSE/ ISC in the year 2021 and currently pursuing curriculum in Basic Sciences (Hons.)/ Engineering/ Medicine/ BS-MS (Integrated) in the undergraduate scheme of studies in 2021 in West Bengal were eligible to appear for the Senior Talent Search Test 2021.

Highlights of 61st edition of Senior Talent Search Test

In this time of pandemic, this examination has been designed to be a home-based proctored online examination. We are really happy that large number of students has participated in the Senior Talent Search Examination, 2021. JBNSTS conducted the online scholarship examination in MCQ format that the students from all across our state could partake in their respective electronic devices. The pen sketch drawn below clearly explicates the process of applying for the Senior Talent Search Test 2021 and its modalities.



Specifics of JBNSTS Senior Scholarship-2021

Entitlement of financial grant by scholars pursuing undergraduate studies in Engineering and Medicine	<ul style="list-style-type: none"> ● Scholarship amounting to Rs. 4,000/- along with one time Rs. 5,000/- as Book Grant for 4/5 years till the completion of their studies in undergraduate framework. ● This particular segment of scholarship is tendered under the financial patronage of the Department of Science and Technology and Biotechnology, Government of West Bengal.
INSPIRE Fellowship	Rs. 60,000/- + Rs. 20,000/- per annum is awarded to JBNSTS Senior Scholars till completion of Masters' degree in Basic Sciences governed by DST INSPIRE norms, Government of India.

It is imperative to mention that a student gaining scholarship from any other sources is however not eligible to avail the financial benefits of this particular scheme.

Special award for Top Ten

In pursuant to the academic requirements and need of education on the web-based interface, JBNSTS awards state-of-the-art laptop along with licensed software to top ten boys and top ten girl scholars based on the final merit list of Senior Talent Search Test. This initiative is financed by the Department of Science and Technology and Biotechnology, Government of West Bengal.

Pictorial depiction of 61st Senior Talent Search Test – 2021

Date of Written Examination (Home based online proctored examination)

- 21st day of November, 2021 (Sunday)

Dates of Online Interview held on the JBNSTS digital platform

- 3rd day of December 2021 to 7th day of December, 2021

Total Number of Candidates applied in STST 2021

- 2832

Total number of selected JBNSTS Senior Scholars 2021: **58**



List of 2021 batch of JBNSTS Senior Scholars (Rank wise)

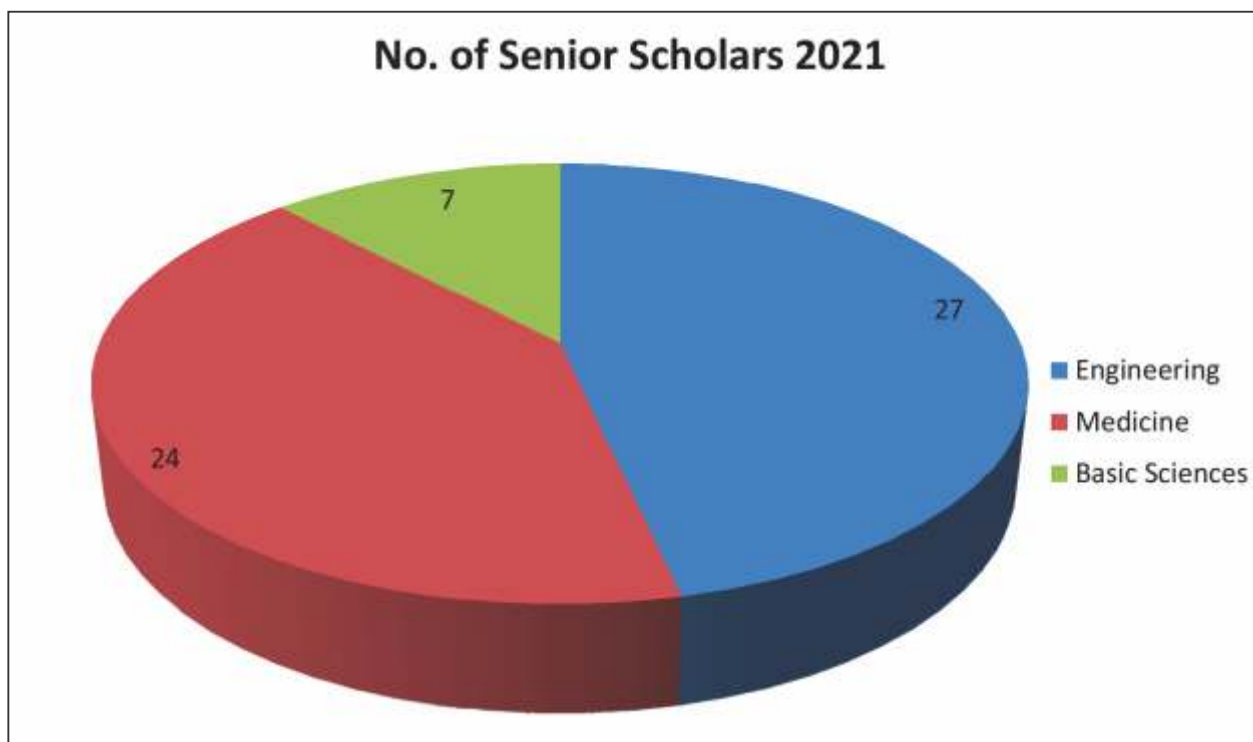
Scholars Name	Present Institute	Course / Stream of Study
Priyajit Ghosh	Jadavpur University	Electronics and Tele-Communication Engineering
Bratin Mondal	IIT Kharagpur	Computer Science & Engineering
Archis Mukhopadhyay	IISER Kolkata	BS MS
Smarak Kanjilal	IIT Kharagpur	Electronics and Electrical Communication Engineering
Anirban Pal	R. G. Kar Medical College, Kolkata	MBBS
Adipta Halder	Indian Institute of Technology, Kharagpur	Electronics and Electrical Communication Engineering (Dual Degree)
Puspal Hazra	N R S Medical College, Kolkata	MBBS
Paramananda Bhaskar	IIT Kharagpur	Computer Science & Engineering (Dual Degree)
Arijoy Majumdar	Jadavpur University	Computer Science & Engineering
Swagata Ghosh	Calcutta National Medical College, Kolkata	MBBS
Debmitra Mukherjee	IIT Kharagpur	Chemical Engineering
Mitadru Datta	IIT Kharagpur	Aerospace Engineering
Ahana Pal	AIIMS, Kalyani	MBBS
Sagnik Chowdhury	I P G M E & R, Kolkata	MBBS
Sarannya Bhattacharya	Jadavpur University	Physics Hons.
Debopriyo Sinha	NRS Medical College, Kolkata	MBBS
Aryarshi Chattaraj	Bankura Sammilani Medical College, Bankura	MBBS
Soumyadeep Roy	IIT Kharagpur	Electrical Engineering. (Dual Degree)



Scholars Name	Present Institute	Course / Stream of Study
Soumya Das	Presidency University	Physics
Agniva Mukhopadhyay	IIT Kharagpur	Chemical Engineering
Avik Halder	IIT Kharagpur	Electrical Engineering (Dual Degree)
Swastik Bhagat	Medical College, Kolkata	MBBS
Tiyasa Chandra	R. G. Kar Medical College, Kolkata	MBBS
Aditya Banerjee	Medical College, Kolkata	MBBS
Debayan Ghosh	IPGME&R, Kolkata	MBBS
Rishav Chakraborty	IIT Kharagpur	Agricultural and Food Engineering (Dual Degree)
Aviroop Mitra	Jadavpur University	Computer Science and Engineering
Tapojyoti Bhowmik	AIIMS, Kalyani	MBBS
Camelia Roy	Indian Institute of Technology Kharagpur	Computer Science and Engineering (Dual Degree)
Indrajit Das	Medical College, Kolkata	MBBS
Saurashis Sinha	IISER Kolkata	BS-MS
Sauhardya Dutta	IIT Kharagpur	Electrical Engineering (Dual Degree)
Chandrima Halder	NRS Medical College, Kolkata	MBBS
Arkan Maity	Medical College, Kolkata	MBBS
Aritra Kundu	IIT Kharagpur	Chemical Engineering
Abhraneel Ghosh	IIT Kharagpur	Instrumentation Engineering
Arnab Sarkar	IIT Kharagpur	Aerospace Engineering
Amrisha Chowdhury	R. G. Kar Medical College, Kolkata	MBBS
Debaditya Das	IIT Kharagpur	Mechanical Engineering
Aniket Das	Shri Ramkrishna Institute of Medical Sciences and Sanaka Hospitals	MBBS

Scholars Name	Present Institute	Course / Stream of Study
Saptashwa Bhattacharjee	IIT, Kharagpur	Electronics and Electrical Communication Engineering
Abhradeep De	Indian Institute of Technology Kharagpur	Electronics and Electrical Communication Engineering (Dual Degree)
Ratul Sen	R. G. Kar Medical College, Kolkata	MBBS
Anupam Maity	Medical College, Kolkata	MBBS
Udayan Das	IEST Shibpur	Aerospace Engineering
Sayanho Biswas	Indian Institute of Science Education and Research Kolkata	BS MS
Swapnamoy Garai	Jadavpur University	Printing Engineering
Debmalya Saha	NRS Medical College, Kolkata	MBBS
Soham Shyamal	Malda Medical College, Kolkata	MBBS
Soham Barik	I P G M E & R, Kolkata	MBBS
Shibashis Mukhopadhyay	IISER Kolkata	BS -MS
Anwesa Chattopadhyay	Presidency University	Life Science
Arghyadeep Malakar	Jadavpur University	Electrical Engineering
Arpan Koley	Jadavpur University	Computer Science & Engineering
Parijat Prasad Sarkar	AIIMS, Kalyani	MBBS
Shameek Saha	Indian Institute of Technology, Kharagpur	Civil Engineering
Navonila Sinharay	Medical College, Kolkata	MBBS
Jeniva Mortuja	Jadavpur University	Computer Science and Engineering

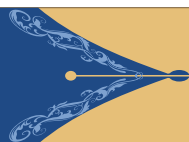
Scholars distribution based on their present stream of study



School award in Senior Scholarship category: Year 2021

The following school has been adjudged for best school award category under senior scholarship program.

Award for Best School



**Hem Sheela Model School, Durgapur,
Paschim Bardhaman**



JBNSTS
SENIOR BIGYANI KANYA
MEDHA BRITTI PROGRAM

Crowning the Women Talents in
STEM Research and Education



Senior Bigyani Kanya Medha Britti Program Enhancement of academic careers of women in science

Foundational premise of this initiative

Girls and women are systematically tracked away from science and mathematics throughout their education limiting their access, preparation and opportunities to explore these fields as adults. Women make up a meager 28 percent of the workforce in science, technology, engineering and mathematics (STEM) and men vastly outnumber women majoring in most STEM fields in college. The discrimination which starts at the elementary level of academics has a lot more to do with the prevailing mindsets, several socio-economic reasons, thus resulting in skewed gender ratio in education, which is being reflected in science education as well.

Women are still under-represented in fields such as computing, engineering, mathematics and physics. JBNSTS focuses on sustained growth and development of science education amongst women to encourage more girl students in STEM education. Thus, an admirable scholarship program titled “Bigyani Kanya Medha Britti” was initiated in 2017 under the financial sponsorship of the Department of Science and Technology and Biotechnology, Government of West Bengal.

Distinguishing features of this program

- ❖ Since scholarships alone cannot address the gender disparity, JBNSTS had undertaken special handholding sessions for the talented girl students that will enhance their innovative acumen through activities like career counseling, internships, mentoring programs specifically focusing on women health, environment etc.
- ❖ JBNSTS provides academic support to the talented girl science aspirants from all across West Bengal to complement their academic endeavor through lectures by renowned scientists and laboratory based hands-on training.
- ❖ JBNSTS aspires to create role models in science out of meritorious girl scholars of our state who would bear the mantle of the institute in solving the real-life and manifold problems of the society.

Scholarship structure and mandatory requirements of Bigyani Kanya Medha Britti– 2021

The Bigyani Kanya Medha Britti program is integrated with Senior Scholarship program of JBNSTS which shortlists the awardees from the Senior Talent Search Test 2021. To avail the scholarship, the applicants need to apply for the Senior Talent Search Test, 2021. The number of awardees under this initiative is around 50 (fifty) who would be awarded with the JBNSTS Senior Bigyani Kanya Medha Britti Award. The criteria for availing the scholarship is broadly discussed below.

Metrics of Eligibility for the year 2021

- ❖ Girl students having qualified higher secondary final examination or equivalent from any government recognized board namely, WBCHSE/ CBSE/ ISC in the year 2021 were eligible to appear for the Senior Talent Search Test 2021.
- ❖ Moreover they would have to study/ aspire to study undergraduate education in Basic Sciences (Hons.), Engineering, Medicine, BS-MS (Integrated) course in 2021 within West Bengal.

Scholarship Details

- ❖ Under this scheme, the beneficiaries are liable to receive Rs. 4,000/- on a monthly basis for a period of 05 (five) years in case of Masters' Degree with regard to Basic Sciences including Integrated studies and 04 (four) years in case of Bachelors' qualification vis-à-vis Medicine and Engineering disciplines, respectively.
- ❖ Furthermore, Rs. 5,000/- is given on a yearly basis for a definite period – 05 years till completion of Masters' degree (Basic Sciences Hons.) and 04 years till qualifying Bachelors' degree in the disciplines of Engineering and Medicine, respectively.

List of 2021 batch of JBNSTS Senior Bigyani Kanya Medha Britti Awardees

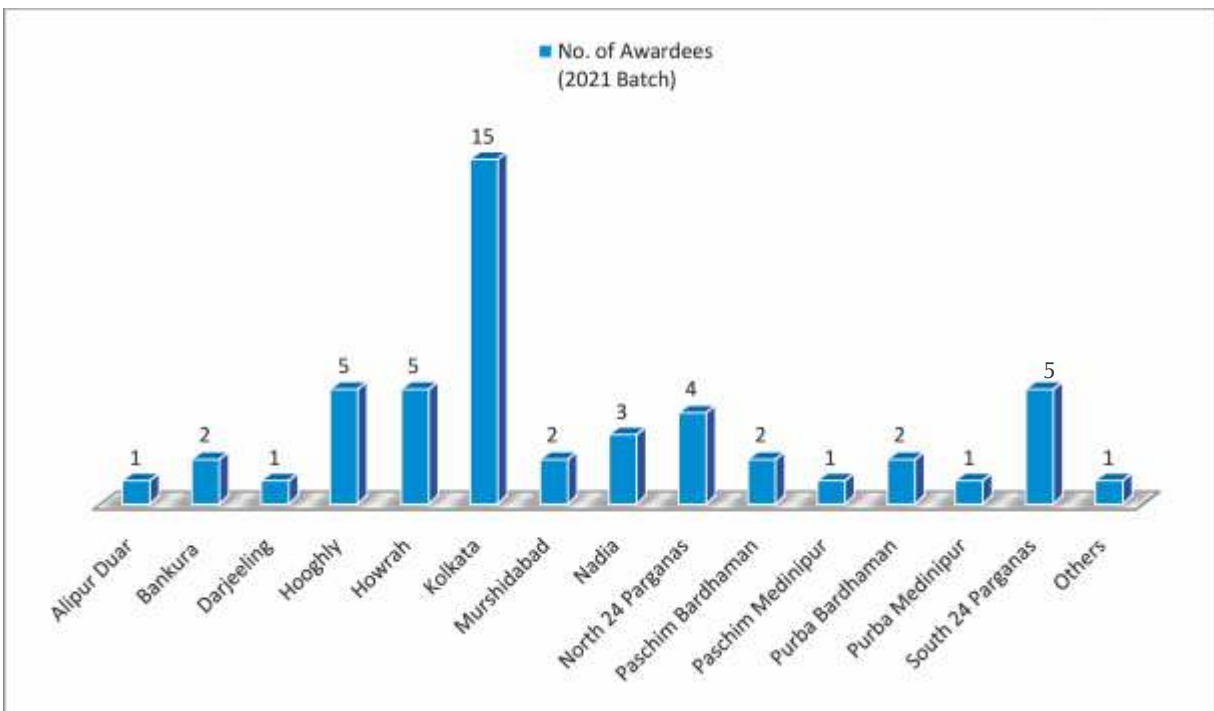
Sl No	Name of Awardees	Present Institution	Subject/ Stream of Study
1	Aheli Poddar	Bethune College	Mathematics (Hons.)
2	Amisha Sadhukhan	Indian Institute of Engineering Science and Technology, Shibpur	Information Technology
3	Amrita Dasgupta	Jadavpur University	Mechanical Engineering
4	Ankita Das	University of Calcutta	B.Tech (Computer Science And Engineering)
5	Atrayee Samanta	Indian Institute of Engineering Science and Technology, Shibpur	Mechanical Engineering
6	Bhumika Chakraborty	Serampore College	Chemistry(Hons.)
7	Bihu Bhattacharyya	Syamsundar College	Physics(Hons.)
8	Debanjana Chakraborty	R.G.Kar Medical College	MBBS
9	Debdatta Majumdar	Jogamaya Devi College	Mathematics (Hons.)



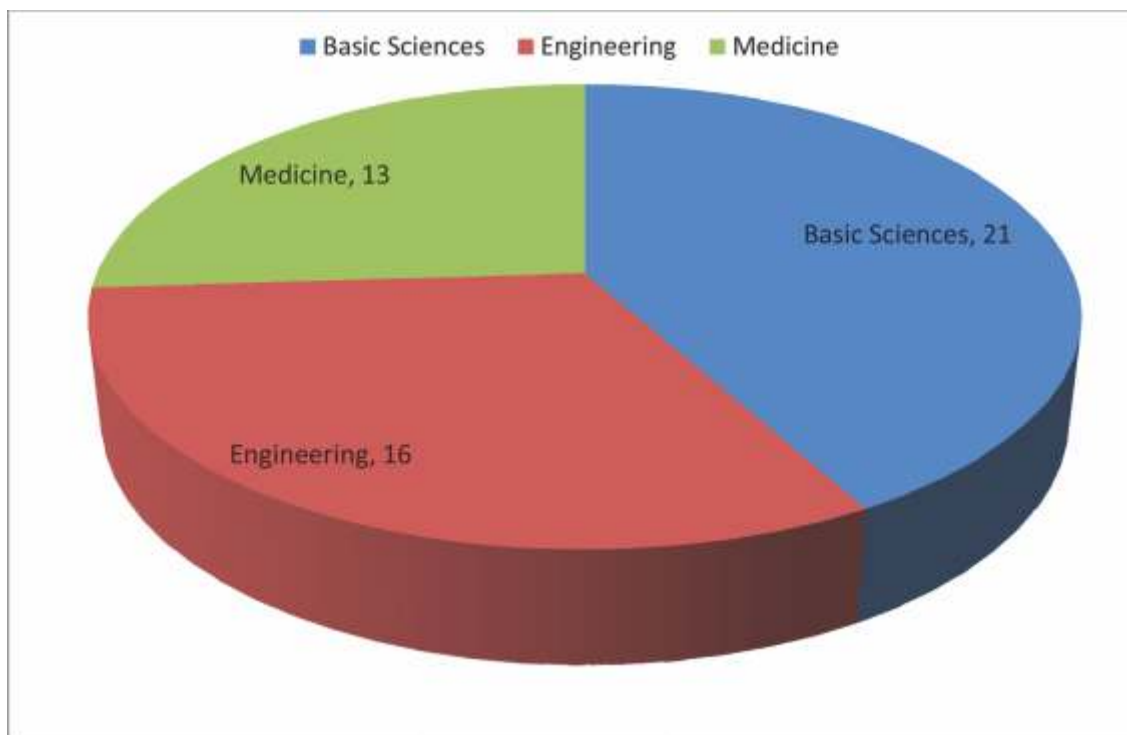
Sl No	Name of Awardees	Present Institution	Subject/ Stream of Study
10	Ifza Parvin	Institute of PG Medical Education and Research, Kolkata	MBBS
11	Irin Sultana	Hooghly Engineering and Technology College	Computer Science and Engineering
12	Kristina Das	St. Xavier's College (Autonomous), Kolkata	Integrated M.Sc Biotechnology
13	Moumon Basu	Presidency University, Kolkata	Life Sciences (Hons.)
14	Mukulita Som	IIT Kharagpur	Electronics and Electrical Communication Engg.
15	Nilakshi Bhaumik	IPGME&R and SSKM Hospital	MBBS
16	Prerana Mitra	St. Xavier's College (Autonomous), Kolkata	Mathematics (Hons.)
17	Pritha Das	Midnapore Medical College	MBBS
18	Pritha Jana	Midnapore College (Autonomous)	Mathematics (Hons.)
19	Pritha Seth	NRS Medical College, Kolkata	MBBS
20	PritiKajli	Brainware University	Computer Science and Engineering (Data Science)
21	Provati Nath	Calcutta National Medical College, Kolkata	MBBS
22	Riddhita Goswami	Raja Narendralal Khan Women's College (Autonomous)	Botany (Hons.)
23	Rima Chowdhury	R. G. Kar Medical College and Hospital	MBBS
24	Rinita Samanta	IIT, Kharagpur	B Tech (Mechanical Engineering)
25	Rupsa Singha	St. Xavier's College (Autonomous), Kolkata	Physics (Hons.)
26	Sagarika Pal	City College	Physiology (Hons.)
27	Sampritee Dey	Institute of Engineering and Management, Salt Lake, Kolkata	BTECH (Computer Science and Engineering)
28	Sampurna Maiti	Lady Brabourne College	Chemistry (Hons.)
29	Saptami Kundu	Rampurhat Govt. Medical College and Hospital	MBBS
30	Sharanya Bhattacharjee	Indian Institute of Engineering Science and Technology, Shibpur	BTECH, Electrical Engineering

Sl No	Name of Awardees	Present Institution	Subject/ Stream of Study
31	Sharanya Pradhan	Indian Association for the Cultivation of Science, Kolkata	BS-MS (Dual)
32	Shinchani Kundu	Haldia Institute of Dental Sciences and Research	B.D.S
33	Shrestha Dutta	Rampurhat Govt. Medical College and Hospital	MBBS
34	Shriya Das	Jadavpur University	B.E. Electronics and Telecommunication Engineering
35	Somjita Sen	Presidency University	Life Sciences (Hons.)
36	Soumi Sharma	National Institute of Technology, Durgapur	Computer Science and Engineering
37	Sourima Das	Maharaja Jitendra Narayan Medical College and Hospital	MBBS
38	Sreeja Sarkar	Presidency University	Life Sciences (Hons.)
39	Srestha Howly	Calcutta National Medical College, Kolkata	MBBS
40	Srijani Paul	College of Medicine & J.N.M Hospital, Kalyani, Nadia	MBBS
41	Suhana	Berhampore Girls College	Chemistry (Hons.)
42	Supriti Sarkar	Jadavpur University	B.E. Chemical Engineering
43	Tanisha Halder	Jogamaya Devi College	Zoology (Hons.)
44	Twameka Sinha	Indian Institute of Engineering Science and Technology, Shibpur	B.Tech, Civil Engineering
45	Ujani Pal	St. Xavier's College (Autonomous), Kolkata	Chemistry (Hons.)
46	Ananya Sutradhar	Indian Institute of Engineering Science and Technology, Shibpur	Information Technology
47	Meghna Santra	St. Xavier's College (Autonomous) Kolkata	Physics(Hons.)
48	Prerana Garai	Krishnath College	Chemistry(Hons.)
49	Raina Roy	Indian Institute of Engineering Science and Technology, Shibpur	Civil Engg.
50	Anukriti Mishra	St. Xavier's College	Statistics (Hons.)

Districtwise distribution of the Awardees – 2021



Distribution of Awardees based on their present stream of studies



School awards in Senior Bigyani Kanya Medha Britti Program: Year 2021

The following schools have been selected for best school award category under Senior Bigyani Kanya Medha Britti Program.

Award for Best School

- ❖ Delhi Public School, Ruby Park, Kolkata
- ❖ South Point High School, Kolkata
- ❖ Our Lady Queen of the Mission School, Salt Lake



“Science and everyday life cannot and should not be separated.”

– Rosalind Franklin

Legend of Glory



**Our first batch
of Scholars**

**Ms. Papiya Sengupta receiving insignia
from Hon'ble Prime Minister
Pandit Jawaharlal Nehru
in 1960**





JBNSTS JUNIOR SCHOLARSHIP PROGRAM

A dynamic platform of
nurturing science aspirants
at a young age



Junior Scholarship Program

Integration of knowledge, skills, attitudes and values

Inception of the initiative

JBNSTS was established with a demonstrated commitment to fostering and developing world class talents in the discipline of science. The unique positioning of JBNSTS as a part of larger ecosystem of science education in our country in past sixty years committed to overcoming the manifold barriers of science education in our society. Thus a group of young talents are identified each year who would be India's best resource on the global platform.

Since 2015, JBNSTS had embarked on a journey of grooming science aspirants of higher secondary standard of West Bengal. In the last seven years of its existence, the Junior Scholarship Program under the auspices of the Department of Science and Technology, Government of West Bengal has been phenomenal in shaping the academic careers of multitude of students in the trajectory of STEM education and research.

Major objectives of the initiative

- JBNSTS personifies a unique academic environment in +2 level framework of science education providing a platform for invention and innovation in science among the brilliant minds.
- Financial support towards the junior scholars complementing the academic endeavors and activities in the form of scholarship and annual book grant.
- The unique teaching learning process is a combination of classroom teaching, laboratory based activities and online training in the form of web based classes during pandemic, seminars along with real-time learning at the hands of acclaimed experts, scientists and teachers.
- The noble endeavor aims to invoke the spirit of scientific temper and develop aptitude towards science from early stages of their academic career.



Scholarship details at a glance for the year 2021

JBNSTS Junior Scholarship	<ul style="list-style-type: none"> ● Scholarship awardees receive scholarship of Rs.1250/- per month for two years. ● Annual book grant of Rs. 2500/- for two years.
JBNSTS Encouragement Award	Fifty candidates selected as JBNSTS Encouragement Awardees are entitled to receive one time book grant of Rs. 5000/-.

Junior Talent Search Test 2021

Precursor to the seventh edition of JTST 2021: Home based proctored online examination

Examination notification was published in the month of September 2021 in all leading newspapers along with all the important details.

A consistent awareness campaign being initiated on the JBNSTS digital platform, contacting DI of schools, email and telephonic communication to the HM's and teachers of schools towards the prospective candidates of the instant examination.

A series of mock tests were being held for the bonafide registered candidates to make them conversant with the modalities of home-based online proctored examination.

Separate online web-based seminars were coordinated by JBNSTS for applicants who had qualified for further phases of the examination.

All the activities undertaken by JBNSTS as a prelude to the examination in the new normal era were particularly directed towards the convenience of the students/ candidates from all across West Bengal while appearing for the bi-phased examination on the JBNSTS digital platform. The overwhelming participation of the students clearly indicates the success of conducting talent search examination during the pandemic on the part of the institute when regular academic activities remained suspended for an indefinite period of time.

Relevant details of 7th edition of Junior Talent Search Test 2021

Prerequisites for appearing in the examination:

- Students who have passed 10th standard Board Examination from government recognized board (WBBSE/ ICSE/ CBSE) in the year 2021 with minimum 75 percent marks (equivalent CGPA) in overall aggregate were eligible to apply for the examination.
- Furthermore, they would have to pursue science in eleventh standard (class XI) with at least three subjects from Physics, Chemistry, Mathematics, Biology, Statistics and Computer Science in any institute within West Bengal.

Particulars	Details
Date of Written Examination (Home based online proctored examination)	21st November, 2021
Dates of Online Interview (held on JBNSTS digital platform)	11th December, 2021 to 14th December, 2021
Total Number of candidates applied for 1st phase of JTST 2021	10,800
Number of candidates qualified for the interview	371
Total Number of identified JBNSTS Junior Scholars	205
Total Number of identified JBNSTS Encouragement Awardees	50



JBNSTS Junior Scholars : 2021 Batch

Name of the Scholars	Name of the Present Institution
Aatish Gupta	Delhi Public School, Ruby Park
Abhik Kumar Maji	DAV Public School
Abhradeep Basu	Bhavans Gangabux Kanoria Vidyamandir
Adiptoo Mitra	St. Stephens School
Aditya Ghosh	South Point High School
Adree Mandal	South Point High School
Adrija Das	Modern High School For Girls
Adriyo Kumar Dey	Krishnagar High School
Agnirup Chakraborty	Aditya Academy Secondary
Agrik Majumdar	Bhavans Gangabux Kanoria Vidyamandir
Aindree Chatterjee	South Point High School
Aishee Bhattacharya	Naihati Narendra Vidyaniketan
Aishi Dey	Bhavans Gangabux Kanoria Vidyamandir
Alekhya Jana	Tamluk Hamilton High School
Alekhya Kundu	Sri Aurobindo Vidyamandir Chandannagar
Amitesh Mahato	Delhi Public School, Ruby Park, Kolkata
Amogh Lal	Narayana School
Amrita Samanta	Vidyasagar Vidyapith Girls High School
Amritam Halder	Jodhpur Park Boys School
Angik Ghosh	Vivekananda Mission School
Anibha Modak	G.D. Goenka Public School
Aniket Maity	DAV Model School, IIT Kharagpur
Anirban Das	South Point High School
Anirbed Sen	Delhi Public School
Ankan Samanta	DAV Public School
Ankana Pari	Beachwood School
Ankita Mandal	Beachwood School
Anoushka Chatterjee	Delhi Public School, Ruby Park, Kolkata
Antareep Roy	Springdale High School
Anubhav Ganguly	Delhi Public School Ruby Park, Kolkata
Anuprovo Debnath	St. Judes High School



Name of the Scholars	Name of the Present Institution
Anwish Mahato	Y S S K Vidyapith Lakhanpur
Apala Panja	Rajkumari Santanamoyee Girls High School
Apurba Mondal	Burdwan CMS High School
Aranya Pramanik	Tamluk Hamilton High School
Aratrika Sarkar	Springdale High School
Archita Barman Roy	Kalyani Central Model School
Arghadip Chowdhury	Sister Nivedita Public School
Arijit Mandal	Hem Sheela Model School
Aritra Ambudh Dutta	Narayana School Kalyani Expressway
Aritra Ghosh	Narayana School
Aritrabha Majumdar	Ramakrishna Mission Vivekananda Vidyamandir, Malda
Arka Bhattacharyya	Ramakrishna Mission Vidyalaya
Arkadeep Saha	Ramakrishna Mission Boys Home High School HS
Arkadip Ghosh	Gorabazar Iswar Chandra Institution
Arkajit Kayal	M.P Birla Foundation H.S. School
Arkajyoti Santra	Hem Sheela Model School
Arkaprati Dey	Ramakrishna Mission Vidyalaya, Narendrapur
Arkaprava Biswas	Kalyani Public School
Arti Mondal	Guskara P.P. Institution
Arunabha Pal	WWA Cossipore English School
Arunangshu Karmakar	Salt Lake School (English Medium)
Arya Samaddar	Beachwood School
Aryaan Sinha	Aditya Academy Secondary
Atin Datta	Porabazar R D M U Vidyalaya
Avilasha Banerjee	DAV Public School
Ayan Goswami	Hem Sheela Model School
Ayan Mandal	Bankura Zilla School
Ayush Bit	Dav Model School
Ayush Chatterjee	Baranagar Ramakrishna Mission Ashrama High School H.S.
Bipayan Banerjee	Barasat Peary Charan Sarkar Govt. High School
Bipradeep Biswas	Krishnagar High School
Bitan Bhakta	Midnapore Collegiate School

Name of the Scholars	Name of the Present Institution
Bodhisatwa Kundu	Welland Gouldsmith School
Chayan Mandal	Bankura Zilla School
Debabrata Mandal	Bankura Hindu High School
Debanjan Bhattacharjee	Uttarpara Govt. High School
Debarghya Adhikari	Salt Lake School English Medium
Debarshi Basak	Ramakrishna Mission Boys Home High School
Debarun Patra	South Point High School
Debottam Sarkar	Bengai High School H.S.
Devanshi Das	Delhi Public School
Dhrubaksha Roy	Rahara Ramakrishna Mission Boys Home High School
Dhwani Singh	DAV Model School, Durgapur
Dipankar Koley	Dumdum Kishore Bharati High School
Dipayan Nandi	South Point High School
Dipjyoti Dash	KTPP High School
Inesh Chattopadhyay	Ramakrishna Mission Boys Home High School H.S.
Ishan Biswas	Baranagore Ramakrishna Mission Ashrama High School H.S.
Ishita Dutta	South Point High School
Jeet Das	Baranagar Narendranath Vidyamandir
Jyotishikha Roy	Suniti Bala Sadar Girls High School
Karubaki Nag	Hariyana Vidya Mandir
Kaveri Sinha Mahapatra	North Point Senior Secondary Boarding School
Kinkini Paul	Rathipur Barada Banipith HS
Kinnar Halder	Narayana Educational Institutions
Kirit Maitra	Ramakrishna Mission Vidyalaya
Koushiki De	Pathfinder HS Public School Midnapore
Lord Sen	Gitanjali Public School
Maloncho Sen	DPS Ruby Park
Mayukh Kundu	Bankura Zilla School
Md Arman Ansary	Bishnupur High School
Md. Sahil Akhtar	Delhi Public School Ruby Park Kolkata
Mohar Kanti Biswas	Narayana School
Mohok Bhaduri	South Point High School



Name of the Scholars	Name of the Present Institution
Moulik Das	Tamluk Hamilton High School
Mrinal Varun Pal	DAV Public School Haldia
Nandita Mukherjee	Hem Sheela Model School
Nirnita Ghosh	Raiganj Coronation High School
Paveet Singh Saluja	St Patricks Higher Secondary School
Piasee Ghosh	Delhi Public School
Pinaki Mukherjee	Bankura Banga Vidyalaya
Poulastya Pratim Mandal	Kalyani Central Model School
Pranjal Sengupta	Ram Mohan Mission High School
Pratyay Das	Kanchrapara Harnett High School
Pratyay Ganguly	South Point High School
Priyarup Chakraborty	Central Model School, Barrackpore
Rachayetri Mitra	Ashok Hall Girls Higher Secondary School
Rahul Konar	Delhi Public School Ruby Park, Kolkata
Rahul Mondal	M. P. Birla Foundation Higher Secondary School
Rajarshi Panja	Dav Modal School
Rajdeep Jash	Burdwan Municipal High School
Rajobrata Mukherjee	Don Bosco School Bandel
Rakhi Ghosh	Hariyana Vidya Mandir
Raktim Majumder	Katwa Kashiram Das Institution
Rangit Bhattacharya	UP Public School
Ranjini Sinha Biswas	South Point High School
Rhitambhar Choudhury	South Point High School
Ridhima Radhakrishnan	Akshar School
Riju Paul	Nimtala High School
Ritama Sanyal	Delhi Public School, Ruby Park
Ritesh Pramanik	Salboni High School
Ritoban Sinha	Nava Nalanda High School
Rommyarup Das	South Point High School
Sagnik Mazumdar	Midnapore Collegiate School
Sagnik Ray	Poura Pathabhaban
Sagnik Roy	South Point High School

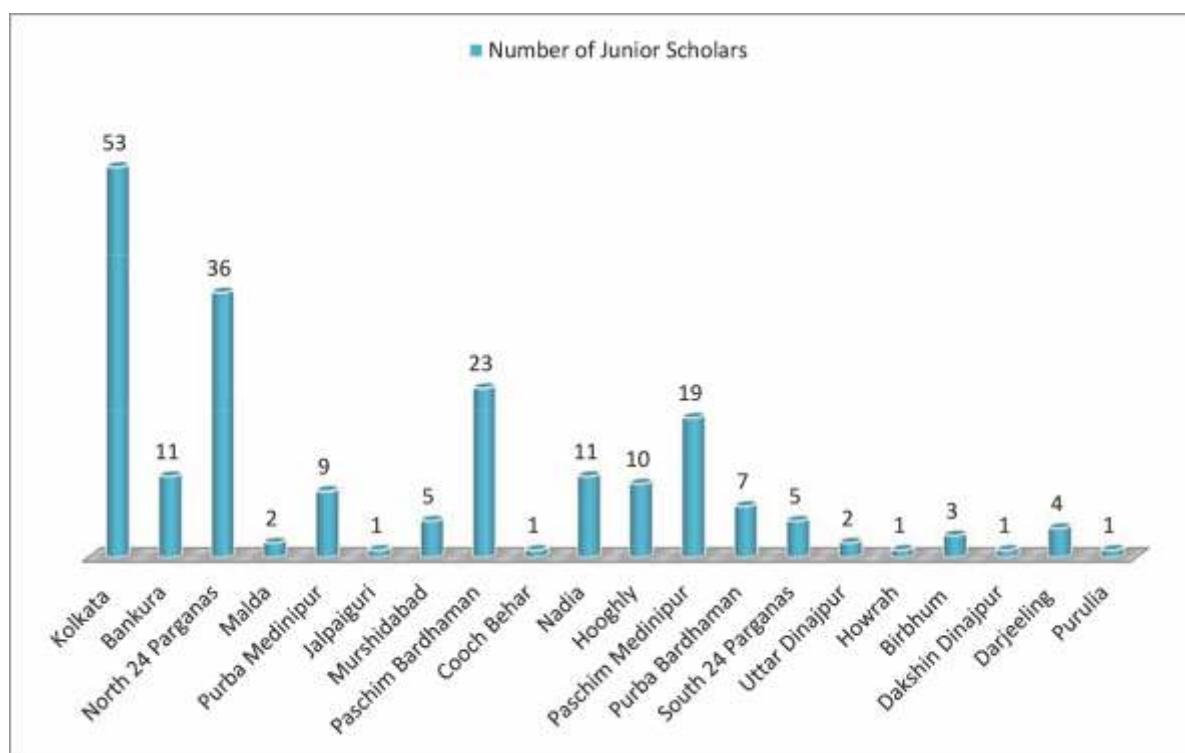
Name of the Scholars	Name of the Present Institution
Samparka Sadhukhan	Bholananda National Vidyalaya
Samridhi Verma	La Martiniere For Girls
Sankhadipto Ghosh	Baranagar Narendranath Vidyamandir
Saptak Hazra	Vidya Sagar Sishu Niketan
Saptaparna Bagchi	Hariyana Vidya Mandir
Sara Mukherjee	Bankura Banga Vidyalay
Saranya Ray	Vivekananda Mission School
Saswata Bose	Atreyee DAV Public School
Sawini Jana	South Point High School
Sayak Maji	DAV Model School, Durgapur
Sayan Mishra	Hem Sheela Model School
Sayan Sekhar Ghosh	Hem Sheela Model School
Sayani Debnath	Beltala Girls High School
Sharbba Sengupta	The Newtown School, Kolkata
Sharmishtha Das	Sekendra High School
Shayandeep Barman	Raiganj Coronation High School
Shibendu Nath	Ramakrishna Mission Vidyalaya , Narendrapur
Shohom De	Central Model School
Shourya Sarkar	Manisha International School
Shrawon Dey	Vidyasagar Shishu Niketan
Shrestha Banerjee	St. Joseph's Convent
Shubhajit Sarkar	Satish Chandra Memorial School
Shubhojyoti Sadhu	Ramakrishna Mission Boys Home High School, Rahara
Shubhradip Ghosh	Memari V.M Institution Unit-2
Shuvam Das	Memari V M Institution Unit 1
Sk Mahammad Anish	Bhogpur Kenaram Memorial High School
Sneha Ray	Hem Sheela Model School
Snehasis Mondal	India International School, Asansol
Snehasish Bala	India International School, Asansol
Soham Acharya	Patha Bhavan
Soham Chatterjee	Dwarahatta Rajeswari Institution
Soham Das	Delhi Public School, Ruby Park, Kolkata



Name of the Scholars	Name of the Present Institution
Soham Dutta	DPS Ruby Park Kolkata
Soham Mondal	DAV Model School
Soubarna Mukhopadhyay	Springdale High School (H.S.)
Souhardya Dandapat	Midnapore Collegiate School
Souhardyo Dasgupta	South Point High School
Soumendu Jana	Panchberia Ramchandra Smriti Sikshamandir
Soumendu Sinha	Aditya Academy Senior Secondary
Soumesh Kundu	Lalgopal HS School
Soumya Chanda	Ramakrishna Mission Boys Home High School
Soumyadeep Bhunia	Bankura Zilla School
Soumyadeep Paul	St. Patricks Higher Secondary School
Soumyadip Das	Tamluk Hamilton High School
Soumyajit Mandal	Bankura Banga Vidyalaya
Sounak Barick	DAV Model School Durgapur
Souradeep Chakraborty	DAV Model School, IIT Kharagpur
Sourajya Ray	Bhavans Gangabux Kanoria Vidyamandir
Sourashmi Shil	Bodhicariya Senior Secondary School
Souriyok Ghosh	Vivekananda Academy
Souro Chakraborty	Ramakrishna Mission Vidyalaya, Narendrapur
Souvik Modak	Bankura Banga Vidyalaya
Sreejan Panja	Ramakrishna Mission Vidyalaya, Narendrapur
Sreejoyee Sensharma	South Point High School
Sreenjoy Chakraborty	South Point High School
Srijan Bhowmick	Delhi Public School, Siliguri
Sriraj Chandra	Holy Angels School
Sthitapragyan Mallick	Delhi Public School Ruby Park
Subhraneel Bhadury	Delhi Public School
Sudipto Sarkar	Gobardanga Khantura High School
Sukanya Ghosh	Howrah Jogesh Chandra Girls High School
Sumesh Ranjan Majee	DAV Model School
Sumit Mukherjee	Rampurhat JI Vidyabhaban
Suparno Ghosh	St. Augustines Day School, Shyamnagar

Name of the Scholars	Name of the Present Institution
Suryadipta Ghosh	Kendriya Vidyalaya IIT Kharagpur
Swapnajit Das	Kalyani Central Model School
Swapnanil Datta	Tirol High School
Swaraj Dian	DAV Model School
Swarnava Chakraborty	Hariyana VidyaMandir
Swastik Biswas	Kalyani Central Model School
Taneesha De	Vidyasagar Shishu Niketan
Tanmay Roy	Siliguri Baradakanta Vidyapith
Tanmoy Maji	BRS Burnpur
Tasnia Yeasmin	Berhampore Maharani Kashiswari Girls High School
Tridibesh Sarkar	Ramakrishna Mission Vidyalaya, Narendrapur
Tuhin Ranjan Adhikari	Daspur Vivekananada High School (H.S.)
Upolobdhi Karmakar	Garden High School
Writipriya Paul	Newtown Girls High School

Districtwise distribution of JBNSTS Junior Scholars (2021 Batch)



**JBNSTS Encouragement Awardees : 2021 Batch**

Name of the Candidates	Name of the Present Institution
Aaditya Tewary	India International School Asansol
Abhiraj Mandal	Garden High School
Alankrit Saha Chaudhuri	La Martiniere For Boys Kolkata
Anjan Sadhukhan	Howrah Zilla School
Anurag Gupta	Don Bosco Liluah
Aritra Chatterjee	Hariyana Vidya Mandir
Arjab Ray	Jenikns School Coochbehar
Arkajyoti Dey	Bongaon High School
Arkaprabha Chanda	Ramakrishna Mission Vidyalaya, Narendrapur
Debanka Halder	Ramakrishna Mission Vidyalaya, Narendrapur
Debashis Dey	Nalhati Hiri Prasad High School
Debayan Bar	Beachwood School
Debmalya Dasgupta	Delhi Public School, Ruby Park
Deepon Halder	Hariyana Vidya Mandir
Krishanu Banerjee	Sudhir Memorial Institute
Kushankur Kulavi	Vivekananda Mission High School
Manas Prakriti Mandal	Gurudham S. B. Vidyabhaban
Md Hasan Akhtar	La Martiniere For Boys, Kolkata
Md Saif Ali Molla	Basirhat Town High School
Nilangshu Ghosh	Chakdaha Ramlal Academy
Nilava Maity	Contai Public School
Nirjhar Datta	G D Goenka Public School, Dakshineswar
Om Choudhary	Satish Chandra Memorial School
Prantik Das	Narayana School
Pratibho Karmakar	South Point High School
Raktim Datta	Ramakrishna Mission Vidyalaya, Narendrapur
Ratnadeep Sahoo	Contai Model Institution
Rishit Dutta	Delhi Public School Ruby Park

Name of the Candidate	Name of the Present Institution
Ronil Mukherjee	Bharatiya Vidya Bhavan Salt lake
Ronit Ghosh	South Point High School
Rupankar Ghatak	Burdwan Municipal High School
Sahil Islam	Nava Nalanda High School
Saptarshi Datta	Vivekananda Mission School
Sarthak Mazumder	Burdwan Municipal High School
Sauptik Parai	Dabuapukur High School
Sayan Paul	Delhi Public School , Ruby Park , Kolkata
Shilajit Mukherjee	Garden High School
Shusmit Sarkar	The Future Foundation School
Sohan Kar	Ramakrishna Mission Vidyalaya, Narendrapur
Soumyadeep Kolay	Nava Nalanda Santiniketan High School
Soumyadeep Nandy	Mahesh Sri Ramkrishna Ashram Vidyalaya H.S.
Srinjan Pal Chaudhuri	South Point High School
Sunanda Mondal	Ramakrishna Mission Boys Home High School HS
Suprativ Bhandary	Burnpur Riverside School, Burnpur
Swarup Mondal	Ramakrishna Mission Vidyalaya
Swastik Jana	Serampore Union Institution
Swastik Maiti	Disari Public School
Tapas Kumar Ghorai	Midnapore Collegiate School
Trishit Pal	The Frank Anthony Public School
Utsa Ghosh	Adamas International School

School awards in Junior Scholarship Category: Year 2021

Award for Best School	<ul style="list-style-type: none"> • South Point High School, Kolkata • Delhi Public School, Ruby Park, Kolkata
Special Award for District Schools	<ul style="list-style-type: none"> • Ramakrishna Mission Vidyalaya Narendrapur South 24-Parganas • Ramakrishna Mission Boys Home High School (H.S), Rahara • Hem Sheela Model School, Durgapur, Paschim Bardhaman

An outline of nurturing programs held on the digital platform

The severity of the pandemic had made graveinroads into the regular course of academic activities of the world. In this perspective, JBNSTS had always organized continuous nurturing



programs, workshops, and counseling sessions for the young scholars located in several parts of West Bengal. An excerpt of the web based seminars is given below.

Topic/ Title of Lecture	Name of the speakers
Magical Mathematics of Ramanujan	Prof. A K Mallik Former Professor, Department of Mechanical Engineering, IIT, Kanpur
Search for a simpler theory to explain how the universe works	Dr. Arnab Rudra Assistant Professor, IISER-Bhopal
Molecular Machines	Dr. Subhajit Bandyopadhyay Professor, IISER-Kolkata
Chemical Engineering: Scope and Career opportunities	Dr. Arnab Atta Associate Professor, Chemical Engineering, IIT Kharagpur





Students enjoying hands-on activity in JBNSTS





JBNSTS
JUNIOR BIGYANI
KANYA MEDHA
BRITTI PROGRAM

A pivotal platform for science aspirant young girls aiming to nurture their inherent talent and out of the box ideas

Junior Bigyani Kanya Medha Britti Program

Reimagining girls' education through STEM

Foundational premise of the program

The last 25 years has been a steady growth in girl's access to education around the world. But for girls and women, the crisis includes difficulty accessing quality learning opportunities in Science, Technology, Engineering and Mathematics (STEM). Girls continue to be under-represented amongst top performers in STEM.

JBNSTS, a distinguished organization in the discipline of science education and research had promulgated a unique scholarship program titled “Junior Bigyani Kanya Medha Britti” which places particular emphasis on higher education of girl students in our state who are pursuing science in plus two framework of education in West Bengal. The entire program has been formulated under the financial support of the Department of Science and Technology and Biotechnology, Government of West Bengal.

Major interventions of this initiative

- JBNSTS aims to groom a substantial number of brilliant girl students currently pursuing science in plus two level subjects and STEM workforce. Thus, Bigyani Kanya Medha Britti is a strong step to overcome this tremendous waste of talent and human potential.
- JBNSTS would provide financial support in the form of scholarship and bookgrant to facilitate the Bigyani Kanyas in their academic pursuits.



- Participation in nurturing programs, throughout the year through exposure to phenomenal theoretical lectures by renowned scientists and experiential activities in state-of-the-art JBNSTS laboratories.
- They also get the benefit of regular counseling sessions for their academic performance and career guidance by experienced experts.

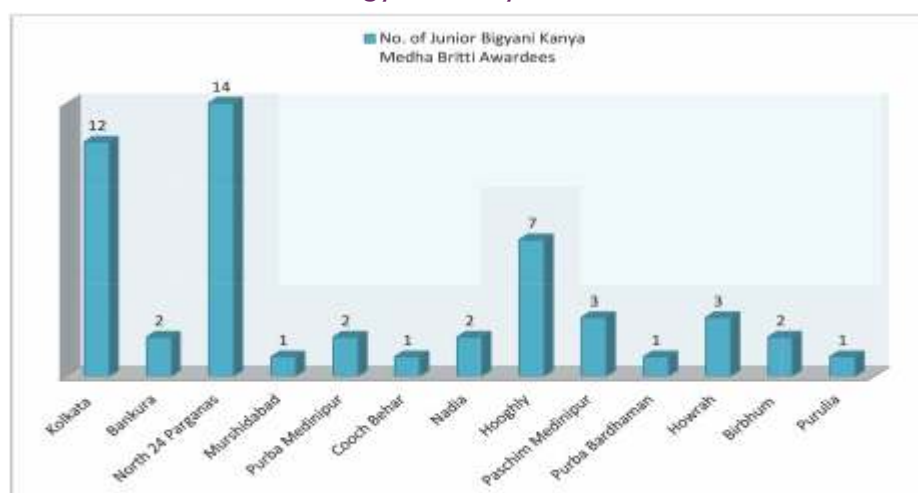
JBNSTS plays a crucial role in terms of being a model institution of our society by performing activism in the areas of gender parity and inclusivity which will be a landmark in the academic stratosphere of women education in our country.

Framework of Junior Bigyani Kanya Medha Britti Program

The selection of the awardees under this program has been made through Junior Talent Search Examination, 2021 which is a bi-phased examination. Fifty (50) numbers of awardees would be identified under this particular scheme.

Basic Eligibility Criteria	<p>Girl students having qualified final examination of secondary standard in 2021 from any government recognized Board (WBBSE/ CBSE/ ICSE) were eligible to apply for Junior Talent Search which is the mandatory requirement in this context. They would have to pursue science in (10 + 2) standard from any recognized institution within West Bengal.</p>
Details of Scholarship	<ul style="list-style-type: none"> ● The JBNSTS Junior Bigyani Kanya Medha Britti awardees are entitled to receive Rs. 1,250/- per month for the next two years till completion of higher secondary studies. ● In addition to that, all the awardees would be provided with Annual Book Grant amounting to Rs. 2,500/- for the same number of years.

Districtwise distribution of Junior Bigyani Kanya Medha Britti Awardees (Batch – 2021)





JBNSTS Junior Bigyani Kanya Medha Britti Awardees

Name of the Awardees	Name of the Present Institute
Abhishruti Sarkar	Cooch Behar New Town Girls High School
Aditi Ghosh	Our Lady Queen Of The Missions School
Adrija Chatterjee	South Point High School
Adrija Saha	Hariyana Vidya Mandir
Ankita Sarkar	Rahara Bhabanath Institution For Girls
Anuja Aich	St.Joseph Convent Chandannagar
Anushka Mandal	Vidyasagar Shishu Niketan
Anwayee Das	Delhi Public School Ruby Park
Arna Bhattacharya	Delhi Public School Ruby Park
Arpita Kundu	Halisahar High School
Asmita Pal	Ashok Hall Girls Higher Secondary School
Atmaja Banerjee	Sibpur Hindu Girls High School
Avisikta Sen Mazumdar	Chinsurah Balika Bani Mandir
Banhi Kana Das	B.D.M. International
Bitasta Mahakur	Vidyasagar Shishu Niketan
Dipshikha Murmu	A.G.P.N Convent and Eklabya Residential School
Fatima Ramiza	Dharsa Azad Sikshayatan
Kankana Bera	Aligunj Rishi Rajnarayan Balika Vidyalaya
Koushiki Bhattacharyya	Pathfinder Higher Secondary Public School Jodhpur Park
Meghamitra Banerjee	Kendriya Vidyalaya No.2, Salt Lake
Nandita Sen	Calcutta Girls High School
Pratishta Shaw	Shri Shikshayatan School
Pratiti Bhattacharjee	Mahadevi Birla World Academy
Rajeswari Biswas	Hariyana Vidya Mandir
Rijuta Das Adhikari	Hariyana Vidya Mandir
Riti Biswas	Dhubulia Deshbandhu High School
Rupashmi Sarkar	Barasat Girls High School

Name of the Awardees	Name of the Present Institute
Salma Sultana	Sian Yusuf High School
Samadrita Gupta	Kendriya Vidyalaya Berhampore
Sanchari Ghosh	Techno India Group Public School, Bolpur
Sangaa Chatterjee	La Martiniere For Girls
Saranya Bhattacharya	La Martiniere For Girls
Shreyasi Saha	South Point High School
Shrinjana Ghosh	Modern High School For Girls
Simrin Khatun	St Thomas High School
Sneha Modak	Dreamland School
Sneha Panda	South Point High School
Sohini Ghosh	Agrasain Balika Siksha Sadan
Sohini Sau	Jhatulal High School
Soniya Roychowdhury	Sainthia High School
Soumi Ghosh	Satish Chandra Memorial School
Soumili Saha	Habra Kamini Kumar Girls High School HS
Srijita Biswas	Auxilium Convent School
Srijoni Mondal	South Point High School
Sritama Senapati	Mother International School
Sumana Ray	Vivekananda Academy
Sunidhi Karmakar	Bankura Banga Vidyalay
Swastika Khan	Bholananda National Vidyalaya
Tamannaa Shaikh	Central Model School, Barrackpore
Taniska Biswas	Bholananda National Vidyalaya
Ushosi Chakraborty	The Future Foundation School



**Vibrant young students
in JBNSTS**





JBNSTS WEST BENGAL DISTRICT SCHOOL PROGRAM

A program dedicated to the young science aspirants of our society through handholding measures ensuring sustainability



West Bengal District School Program

Kindle of life through the cradle of science

Distinguishing qualities of the program

In spite of our country making significant strides towards the philosophy of inclusive education in the ranks of the society, science education particularly has been observed in a nonchalant progress in the grass root level of the society which have triggered an obnoxious paradox resulting into disinterest amongst the middle school students to perceive science in their later phase of life. Having established on the cardinal principles of identifying, nurturing and motivating talents from all over West Bengal, the district school program was introduced in the year 2000 and since then the initiative has made science accessible to the students of each and every districts of West Bengal through creation of a congenial environment of joyful learning which essentially imparts a value based knowledge of science to the middle school students portraying science to solve manifold practical problems of the society and environment.

Due to the unprecedented pandemic scenario, most of the district school programs were held on the JBNSTS digital platform. The students were provided with internet data pack so that they can access the classes with mobile phones and computers.

Major thrust areas of the initiative

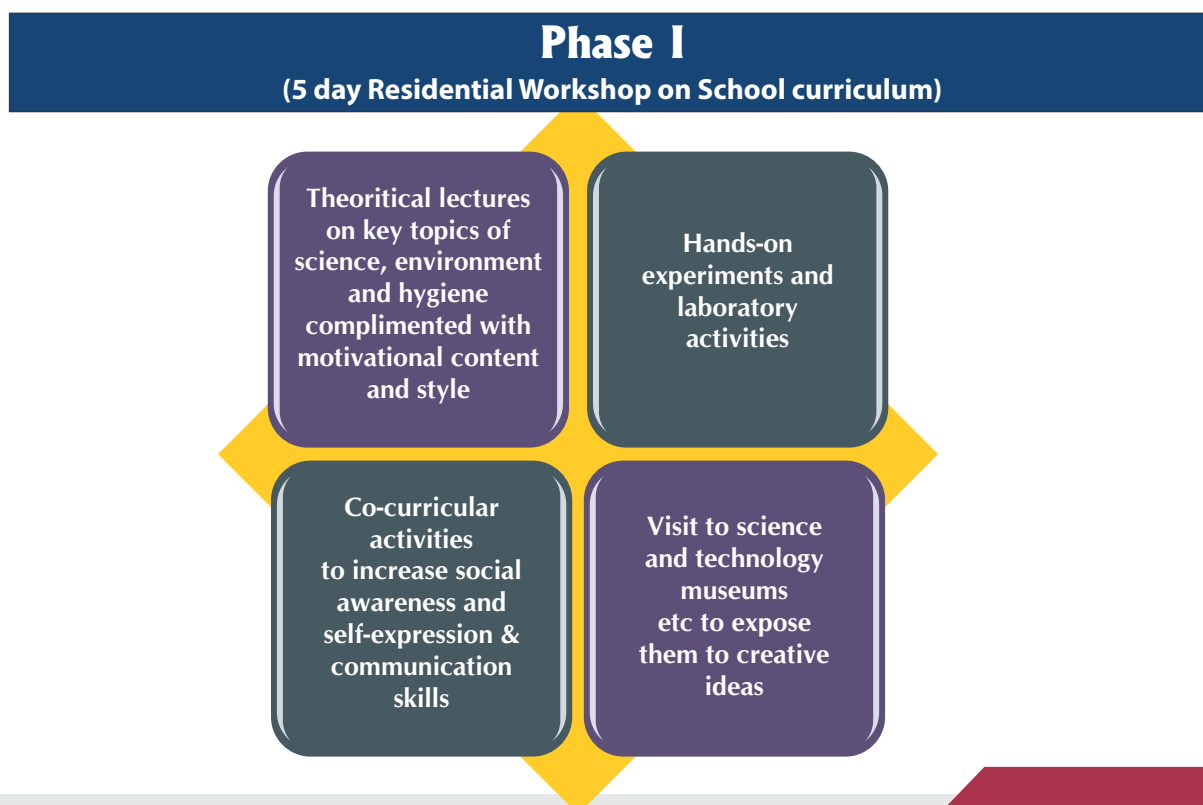
- **Detonation of young minds through exciting lectures:** Lectures both in physical and hybrid form are being held as a process to enthuse the talented students over myriad avenues of science which renders them necessary knowledge about emerging and transnational subjects of science as a whole at an early age which is never possible in their existing curricula.



- **Landmark initiative towards digital education and gender inclusivity in science education:** JBNSTS programs have established a platform where the students can learn science through the mobile phones. The program particularly ensures substantial participation of young middle school girl students from all across our state which addresses the need of gender equity in science.
- **Creation of interesting lesson modules:** This program effectively pronounced innovative learning modules which are framed moving beyond the airtight declaration of science subjects and rote method of learning pertaining to the existing school curriculum.
- **Guided hands-on experimental sessions:** The students are being trained with experimental learning of various science subjects in the state-of-the-art laboratory facilities of JBNSTS. The talented minds are exposed to group activity based projects which imparts them the skills of cooperation, coordination and teamwork.
- **An ideal edifice of holistic development in the nascent years:** JBNSTS has developed a phenomenal edifice of personality development through regular counselling sessions which breaks apart the uptightness of the district students of our state. Deeply rooted in the platform of science, the young minds are bestowed with the opportunity to interact with eminent professionals from various fields addressing their array of concerns. These activities ensure overall development of students in early years of their professional career.

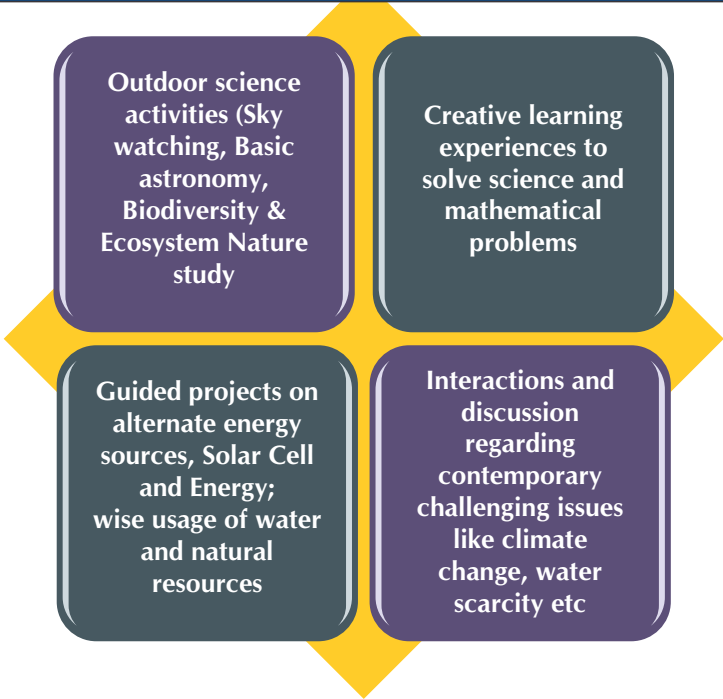
Modus operandi of the program

The standardised process of nurturing young talents in the middle school curricula across West Bengal is delineated below.

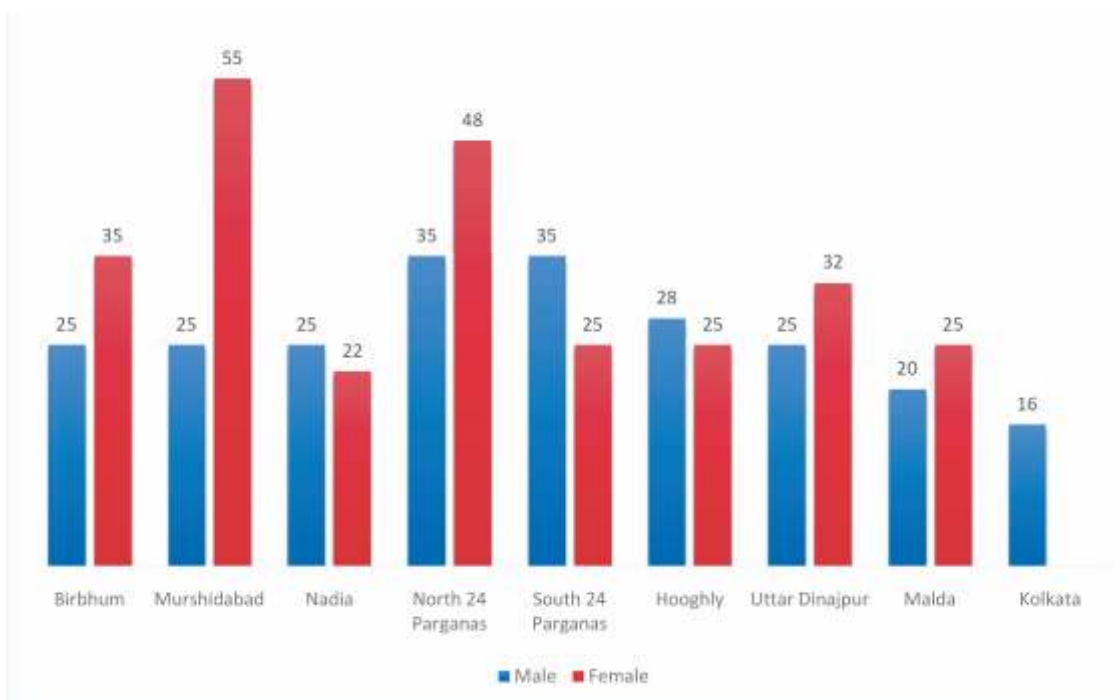


Phase II

(5 day Advanced Residential Workshop on Science Curriculum)



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



Snippets of Topics discussed and Experiments performed on the digital platform

Physical Sciences	<ul style="list-style-type: none"> ✳ Biomechanics ✳ Concept of Light ✳ Study of Chemical Reactions in our life ✳ Energy and its various forms ✳ Introducing Periodic Table ✳ Fundamentals of Heat ✳ Force and Pressure ✳ Expedition to Antarctica ✳ Chemical Effect of Electric Current and Its Applications ✳ Concept of Lightning and Thunder ✳ Autobiography of a Plastic Bottle
Life Sciences	<ul style="list-style-type: none"> ❖ Soil Structure and study of Crops ❖ Importance of Water in human physiology ❖ Nutrition for the teenager students ❖ Cell Structure ❖ Reaching the age of adolescence ❖ Reproduction in the animal kingdom
Mathematics	<ul style="list-style-type: none"> ⌘ Rational Numbers ⌘ Study of Different Angles ⌘ Algebraic Expressions and Identities ⌘ Understanding Quadrilaterals ⌘ Data handling of varied proportions

List of Mentors and Resource Persons

- Dr. Abhishek Mukherjee, Moulana Azad College, Kolkata
- Dr. Chaitali Mukherjee, Santoshpur Rishi Aurobinda Balika Vidyapith, Kolkata
- Dr. Paromita Roy, JBNSTS Kolkata
- Dr. Smarajit Manna, JBNSTS Kolkata
- Dr. Subhankar Ghosh, St. Xavier's College, Kolkata
- Ms. Sanchari Chattopadhyay, JBNSTS Kolkata



- Prof. Swati Sircar, Azim Premji University, Bengaluru
 - Sri Milan Chandra Gain, Retd. Headmaster of Rabindranagar High School, Dum Dum
 - Sri Partha Pratim Roy, South Point High School, Kolkata
 - Sri Arup Sengupta, Garfa DNM High School, Kolkata
 - Dr. Punarbasu Chaudhuri, University of Calcutta, Kolkata
 - Sri Pintu Kumar Sinha, Katwa Kashiram das Institution, Purba Bardhaman
 - Sri Saptarshi Mondal, Tangrakhali P.J. High School (HS), South 24 Parganas
 - Sri Subir Bhattacharya, Dum Dum Kishore Bharati High School, Kolkata
 - Dr. Pijush Basak, JBNSTS
 - Dr. Arnab Pramanik, JBNSTS
 - Ms. Prakriti Saha, JBNSTS
 - Sri Pushkar Naskar, JBNSTS
 - Sri Sudip Das, JBNSTS Kolkata
- and many more...

Re-imagining science education for district school students of West Bengal

The unbridled wrath of the pandemic had afflicted excruciating agony upon the talented young students of our state in the form of uncertainty over regular school practice. Possibly, the pupils hailing from the remote areas of our country are subjected to the threat of Digital Divide due to inaccessibility towards quality science education on account of the pandemic. With the lockdown restricting their movement leaving them in the lurch, the students lacked the joy of learning science.

Thus, the modules of online sessions were designed in conformity to the existing school curricula of eight–nine standards. The curriculums were presented with demonstrations, and experiments which students can perform by themselves in their home. Furthermore, counselling sessions were also conducted to empower the young minds with several coping strategies rising out of the pandemic. At the end of the program, JBNSTS awarded the students certificate of participation, school bag, exercise books and other study materials facilitating their academic pursuits.



Schedule of the online sessions	Total number of participants	Participating Schools
June 07 -18, 2021	58	<ul style="list-style-type: none"> ● Rajnagar High School, Malda ● Sirsha Sailajakanta High School, Birbhum ● Hemtabad Adarsha Vidyalaya, Uttar Dinajpur ● Birgram High School, Uttar Dinajpur
June 21 - July 02, 2021	69	<ul style="list-style-type: none"> ● Bira Ballavpara High School, North 24 Parganas ● Chandannagore Kanailal Vidyamandir (French Section) Hooghly ● Taki S L Girls High School, North 24 Parganas
July 05 - 16, 2021	87	<ul style="list-style-type: none"> ● Diamond Harbour Girls High School, South 24 Parganas ● Jaynagar Institution, South 24 Parganas ● Kulpi Kalika Vidyapith (H.S.), South 24 Parganas ● Krishna Bhabini Nari Siksha Mandir, Hooghly
July 26 - August 06, 2021	92	<ul style="list-style-type: none"> ● Ranaghat Brojobala Girls High School, Nadia ● Chakdaha Ramlal Academy, Nadia ● Tokipur Rajlakshmi High School, North 24 Parganas ● Chatra Nandalal Institution, Hooghly
August 09 - 21, 2021	86	<ul style="list-style-type: none"> ● Taki Government High School, North 24 Parganas ● Naihati Narendra Vidyaniketan, North 24 Parganas ● Behrampore Girls Mahakali Pathshala, Murshidabad ● Lipika Memorial Girls High School, Murshidabad
August 31 - September 10, 2021	112	<ul style="list-style-type: none"> ● Egra Jhatulal High School, Purba Midnapore) ● Baita Mahendranath High School, PaschimMidnapore ● Hijli High School, PaschimMidnapore ● Chakdaha Basanta Kumari Balika Vidyapith, Nadia ● Bahalalpur R D High School, Bankura
September 20- October 01, 2021	75	<ul style="list-style-type: none"> ● Naktala High School, Kolkata ● Chuanpur Vidyaniketan Girls High School (HS), Murshidabad ● Bhagabangola High School (HS) Murshidabad ● B.K. T.P.P. Prabir Sengupta Vidyalaya, Birbhum



Learning fundamentals of Science necessitating capacity building of the students





JBNSTS TALENT ENRICHMENT PROGRAM

A heritage program dedicated
to harness the talented minds
and develop scientific temper

Talent Enrichment Program

Germinating ground of India's finest student scientists

Amongst a gamut of nurturing programs of JBNSTS, the Talent Enrichment Program deserves special mention which aims to nurture the talented science aspirants of our state to the premier pedestal of STEM education. Science encompasses theoretical knowledge as well as activity based learning in its elementary form and complex avenues which requires adequate training and constant exposure to silhouettes of transnational characteristics of science education in various mediums towards the young generation of this country for accumulation of India's best minds in the discipline of science who would contribute effectively in the growth trajectory of our motherland.

But this is an exceptional year; the world faced an unprecedented situation in the form of pandemic leading to suspension of all the academic activities in our country. Young scholars hailing from both rural and urban areas faced with immense crisis with regard to education, learning and laboratory exposure. JBNSTS had nothing to do rather than introducing various programs on the digital platform.

Distinctive features of this program

- A phenomenal platform of exposure to global and emerging trends of STEM education in early stages of the career of the students through workshops, seminars and symposia.
- Guided short-term projects for the talented science students in undergraduate and post graduate framework along with mentorship by JBNSTS in formulating research papers at an initial phase of their academic career.



- Opportunity to interact with globally acclaimed scientists, technologists, teachers, researchers and establishing linkage with the scientific community which is undoubtedly an excellent prospect in the formative years of the students.
- Academic visits to eminent research establishments, institutions of national importance to impart the skills of setting up of world-class laboratory and learning of know-how of working in any state-of-the-art facilities.
- Sessions on team building, team work, discussion on global important issues, data interpretation and problem solving approach for the student scientists of West Bengal to accentuate their existing skills for addressing the practical problems of the society.

Outline of digitally enabled academic programs by JBNSTS

The pandemic had wrecked apart the service delivery system of the society and science education suffered setback in terms of making the lessons on intricate topics of science inaccessible to the students of our state. JBNSTS like the preceding year designed a series of web-based programs in symbiosis with world acclaimed scientists, researchers, mental health practitioners and institutions of national importance to deliver lecture on interdisciplinary attribute of science education and research. Excellent interactive sessions transpired in the JBNSTS digital platform through a host of questions posed by the participating scholars located at various remote areas of our state. They are students of current and preceding batch of JBNSTS senior scholars and Bigyani Kanya Medha Britti awardees currently pursuing science in undergraduate and postgraduate levels in the disciplines of Basic Sciences, Engineering and Medicine in universities/ institutions across West Bengal. All the online programs supplemented the normal curricula in STEM education much to the benefit of the talented minds of our state. Pen picture of a few of the web-based seminars is laid underneath.

Title of the Webinars	Speakers
In Search of the Drivers	Prof. Partha Pratim Majumder National Science Chair, Government of India
Nano Scale Piezoelectricity for Self Powered Electronics	Prof. Dipankar Mandal Institute of Nano Science and Technology, Mohali
Nanotechnology for Sustainable Energy and Environment	Prof. Amit Chakraborty National Institute of Technology, Durgapur, West Bardhaman
Impact of Stress and Anxiety on Mental Health- Know Yourself	Dr. Mithun Barik Addiction Psychiatrist, NHS Ayrshire and Arran, Scotland



National seminar on different disciplines of science in collaboration with IISER Bhopal

A national program was organized by JBNSTS in collaboration with Indian Institute of Science Education and Research (IISER), Bhopal from 27 September, 2021 to 30 September, 2021 for the Junior Scholars, Senior scholars & Bigyani Kanya Medha Britti Awardees of the current and previous batches. Snapshot of the lecture topics and speakers is mentioned below.

Title of the Webinars	Speakers
Chemistry the Central Science-Philosophy and the way forward	Dr. Abhijit Patra Department of Chemistry and Dean Alumni & International Relations, IISER Bhopal
Mathematics behind the Seeing and Unseen	Dr. Sombuddha Bhattacharyya Department of Physics, IISER Bhopal
Roles of B Pox Proteins in Light and Dark	Dr. Sourav Datta Department of Biological Sciences, IISER Bhopal
Gene Editing with CRISPR- CAS System	Dr. Debasish Manna Department of Chemistry, IISER Bhopal
Quantum Mechanics and Relativity all set to Revolutionise Electronic Devices	Dr. Nirmal Ganguly Department of Physics IISER Bhopal
Ripples that became a wave	Dr. Ritam Mallick Department of Physics, IISER Bhopal
Looking beyond the Euclidean Geometry	Dr. Atreyee Bhattacharyya Department of Mathematics IISER Bhopal

Special hand holding counselling session for the scholars

The raging pandemic has taken a toll on the minds of our talented students who are pursuing science in their formative years. The digital divide and gender divide are two important issues which also added stress to the young scholars. Thus, to address the mental health degradation of our young scholars JBNSTS organised a trail of regular counselling sessions conducted by mental health experts for all the scholars and Bigyani Kanya Medha Britti awardees. Classification of stress symptoms, emotional resilience through the prism of Bio psychosocial model, anger stress response mechanisms, core coping strategies and ways of nurturing a progressive mind were broadly explained to the students in a solicitous, affable manner. The participants were duly informed about panic responses leading to therapeutic strategies which play a pivotal role in the cognitive/ behavioural system. The scholars and

awardees were immensely benefitted by such sessions which have instilled in them the confidence to stand apart in the hither and thither storms of life.

Cancer and its plight amongst women: Awareness Promotes Victory

Empowering the budding women scientists

JBNSTS had organized an online program dedicated exclusively to the budding women scientists of our state. They are Bigyani Kanya awardees studying Basic Science, Medicine, and Engineering in reputed colleges, universities and institutions of West Bengal from all over the state. The program was effectually coordinated by Director of the institute, Prof. (Dr.) Maitree Bhattacharyya. The program was embellished by the presence of eminent women scientists, doctors and counsellors namely; Dr. Rosina Ahmed, Senior Consultant of Breast Onco-surgery Department of Tata Medical Centre, Kolkata, Professor Sharmila Sengupta of National Institute of Biomedical Genomics (NIBMG), Kalyani, Ms. Sutapa Biswas, Co-founder and Executive Director of Cancer Foundation of India and Dr. Basumita Chakraborty, consultant of the Department of Gynecological Oncology of Tata Medical Centre, Kolkata respectively.

The learned deliberation laid forth by the noted speakers encompassed over type, stages of cancer, risk factors associated with the disease in the form of family history, age, reproductive history etc. along with explanation of different types of therapeutic intervention in the form of surgery, radiotherapy, chemotherapy and more. The esteemed medical professionals delved into the pertinence of self-examination of the disease which is ideal to understand reduce the risk of breast cancer. Also, a lucid explanation was rendered by the doctors over the molecular basis of Human Papiloma Virus (HPV)



Infection, HPV screening, testing as well as the total anatomy of cervix. The experts emphasized over the need of HPV vaccine which should be given to girl children within thirteen years of age for prevention of cancer for their entire life. A plethora of questions posed by the women participants greeted the experts which followed the lecture. Subsequent challenges stemming from the overall treatment of cancer resonates in the form of clinical depression, anxiety (over the outcome of treatment) during different therapies which disrupts the social life of a concerned woman patient and lands her in dire straits with regard to disruption in her regular exchanges with her family and society, by and large. The participating girl students were enriched by the unprejudiced discussion of the session revolving around investigation of the disease, its implication and methods of prevention.



Our Senior Scholars in an educational tour



BIOTECHNOLOGY ON JBNSTS PLATFORM

Exploring the contours
of Modern Biology through
state-of-the-art facilities

Biotechnology for Student Scientists

Scientific concept correlating laboratory research techniques

Perspective

The high school curriculum in Biological sciences is marked with lack of exposure of the young talents in terms of performing experiments in laboratories. This creates hindrance for the young science aspirants in perceiving the theoretical concepts of scientific topics of the subject and its associated laboratory based activities. The hands-on training modules of Biotechnology workshops on physical and virtual mode has been designed to comprehensively address the needs of the students pursuing science in (10+2) framework, considering evolving technological trends in biotechnology and its implications.

The state-of-the art biotechnology laboratory in JBNSTS is rechristened after legendary scientist Rosalind Franklin has been established under the financial support of the Department of Science and Technology and Biotechnology, Government of West Bengal which aims to expose the students to different basic processes and basic techniques used in Biotechnology. This particular initiative has been instrumental in developing conceptual competence amongst the students which provides them with idea about the professional courses in future career.

Objectives and features of the Initiative

- ❖ To enable better understanding of topics pertaining to biotechnology in high school level by the young students under mentorship of expert teachers.



- ❖ To conduct specialised training programs both on physical and virtual mode for students, teachers, project trainees, research scholars in several avenues of the subject and to facilitate their participation in research activities of Biotechnology.
- ❖ Anchoring young talents of West Bengal and build capacity in research, education and innovation from various disciplines of Biotechnology.
- ❖ To understand the role of Biotechnology industry and its impact on the society.
- ❖ To understand the role of Biotechnology to cure diseases and developing vaccines.

Standardised model of nurturing young talents in Biotechnology workshop

Theoretical lectures and knowledge sharing about application of Biotechnology product development in agriculture and to cure diseases.

Innovative guided projects and experiential learning on practical aspects of Biotechnology through cutting-edge techniques and equipments. Hands on work experiences independently and individually

Report preparation, presentation and certification.

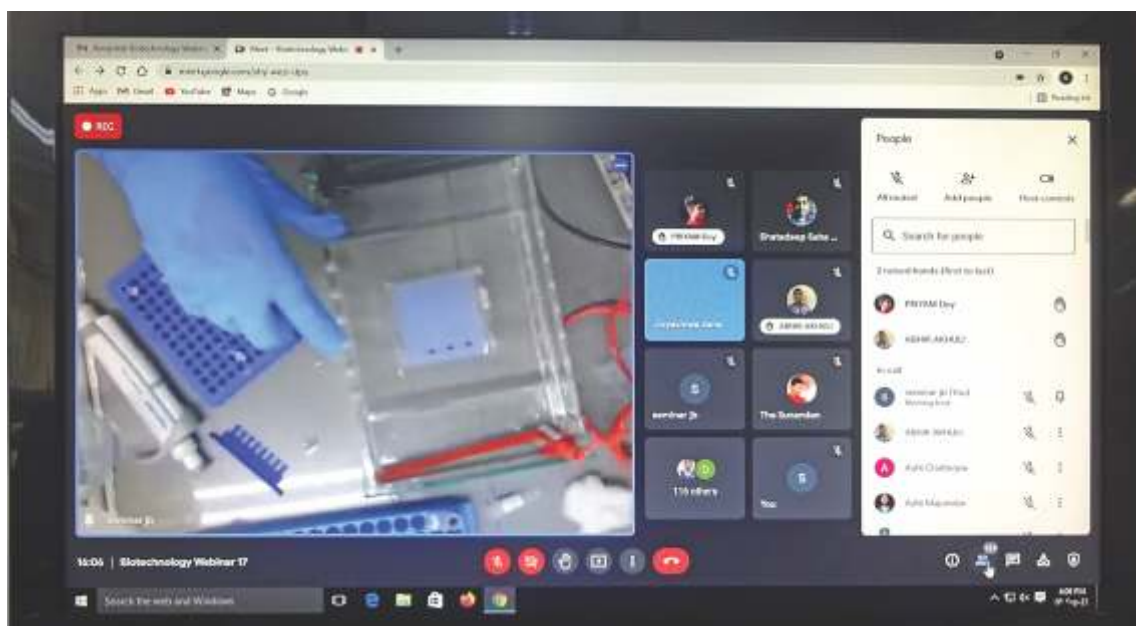


JBNSTS Biotechnology programs in the new normal

Since inception, the nurturing programs in Biotechnology were being held in the Rosalind Franklin Biotechnology laboratory of the institute. During the pandemic, JBNSTS framed unique methodology with regard to Biotechnology workshops to nurture the talented student scientists of our state on the institute's digital platform. The three pronged structural interface of the activities comprised of relevant discussions on Biotechnology and its judicious application in health, agriculture, and climate followed with demonstration of complex experiments from the Rosalind Franklin Biotechnology Laboratory transmitted through real-time google meet platform to numerous students and teachers located across the state. The follow-up discussion by the participants related to the experiments performed by eminent JBNSTS resource persons in real-time mode was never possible in normal school scheme during the new normal period. The hallmark of this endeavour is integration of science students from all across West Bengal in JBNSTS Biotechnology pedestal under the sponsorship of the Department of Education and Science and Technology and Biotechnology, Government of West Bengal which was carried out with immaculate precision.

Course curriculum covered in Biotechnology web-based programs

- ❖ *Biotechnology: Improving the Quality of Life*
- ❖ *Application of Biotechnology: Clean up our Environment*
- ❖ *Biotechnology and its Applications in Agriculture*
- ❖ *Biotechnological tools for the Genetic Engineering*
- ❖ *Biotechnology: The Scope and Applications*
- ❖ *Biotechnology Techniques to Solve Social Life Problems*
- ❖ *Biotechnology Application for Medical Research*



List of experiments performed

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





List of participating schools vis-à-vis districts

<ul style="list-style-type: none">● Gorabazar Silpa Mandir Girls High School● Sagardighi S.N. High School	Murshidabad
<ul style="list-style-type: none">● Mathurapur BSS High School● Jaynagar Institution● Kulpi Kalika Vidyapith (H.S)	South 24 Parganas
<ul style="list-style-type: none">● Jahangirpur High School● Balurghat High School	Dakshin Dinajpur
<ul style="list-style-type: none">● Searsole Raj High School● Raniganj High School● Durgapur M.A.M.C Township Modern High School (H.S.)	Paschim Bardhaman
<ul style="list-style-type: none">● Hooghly Jyotish Chandra Vidyapith High School● Kailash Chandra Sadhukhan High School	Hooghly
<ul style="list-style-type: none">● Mugkalyan High School● Howrah High School● Kalidaha Gohaldaha Rasiklal Memorial High School	Howrah
<ul style="list-style-type: none">● Vidyamandir High School for Girls● Chittaranjan High School● Harinavi D.V.A.S High School● Rajpur Vidyanidhi High School● Balia Nafar Chandra Balika Vidyalaya● Baranagar Rajkumari Memorial Girls' High School	Kolkata
Bankura Mission Girls High School	Bankura
<ul style="list-style-type: none">● Santamayee Girls' High School● Puruliya Netaji Vidyapith	Purulia
<ul style="list-style-type: none">● Nimpura Aryya Vidyapith● Midnapore Town School● Midnapore Collegiate Girls High School● Midnapore Collegiate School● Kharagpur Atulmoni Polytechnic High School● Dasagram S. S. Sikshasadan● Baita Mahendranath High School	Paschim Midnapur

<ul style="list-style-type: none"> ● Ramakrishna Mission Vidyabhavan (H.S.) ● Kuikota Shankari Vidyaniketan ● Dantan High School (H.S) 	
<ul style="list-style-type: none"> ● Ranaghat Debnath Institution for Girls (H.S.) ● Bishnupur High School 	Nadia
<ul style="list-style-type: none"> ● Kultikri S.C. High School (H.S), ● Sankrail Rohini C. R. D. High School ● Sankrail Dahijuri Mahatma Vidyapith (H.S.) ● Jhargram Asoke Vidyapith ● Jhargram Nanibala Vidyalaya ● Ashui Pallimangal Vidyapith ● Panchkahania High School 	Jhargram
<ul style="list-style-type: none"> ● Khandaghosh High School ● Kalna Mahismardini Girls Institution ● Kanchannagar D.N. Das High School ● Torkona Jagabandhu High School 	Purba Bardhaman
<ul style="list-style-type: none"> ● Satmile High School ● Kolaghat Thermal Power Plant High School ● Mahishadal Raj High School ● Egra Jhatulal High School ● Mahishadal Gayeswari Girls' High School ● Panchetgarh High School ● Nachinda J.K. High School ● Contai Model Institution (H.S.) ● Srirampur Uttamasundari Girls' High School ● Uttar Jianda High School 	Purba Medinipur
<ul style="list-style-type: none"> ● Barasat Mahatma Gandhi Memorial High School ● Takipur Rajlaxmi High School ● Bahira Bhagyabantapur B.M. High School (HS) ● Taki Government High School 	North 24 Parganas
Bidhannagar Santoshini Vidyachakra High School (H.S)	Darjeeling



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

– Louis Pasteur



JBNSTS TEACHERS' TRAINING PROGRAM

Developing new pedagogy
and learning modules in
STEM teaching

Teachers' Training Program

Innovative methods of teaching involving interaction between teachers and students

Science education over the years has undergone a sea change in our society related to new scientific discoveries and information. India had pledged to focus on basic science education in its various legislations which strengthened the nation's endeavour for elementary education in middle and high school pupils. The recent cognizable changes in science education have perhaps created a colossal shift from the traditional methods of learning science to technology driven academic interface.

In other words, the pandemic has triggered a substantial collapse of education in the realm of middle and high school science curricula which had percolated to the level of dissonance leaving the students of our state wanting of quality science education in early stages of their career. JBNSTS had organised series of online workshops for teachers' orientation program to bridge the gap between learning and teaching in this period.

Major objectives of the program

- The JBNSTS Teachers Orientation Program is a perpetual professional development program of science teachers of our state which aims to train the faculties of becoming innovators in STEM education and not merely being the end users of existing academic materials.



- Introduction of ICT based science curriculum for the middle and high school teachers in West Bengal which effectively bridges the digital divide in science education in our state.
- Mentoring the teachers to inculcate hands on activities to introduce joyful learning in basic and applied science subjects which will sustain the interest of their pupils in science education.
- Mentoring the teachers to engage with the students for addressing their needs in a tumultuous time such as the pandemic, thereby helping the students to develop problem solving approach on their own beyond the periphery of school classroom.
- To motivate teachers for introducing innovative teaching materials to develop the cognitive aptitude and constructivism among the students.

Standardised methodology formulated by JBNSTS for grooming our science teachers





Overview of online Faculty orientation program on JBNSTS digital platform

The ravaging pandemic had elicited an impasse in the science education of West Bengal since the last two years. The web-based teachers grooming programs undertaken by JBNSTS focussed on unique methodology to be deployed while making topics on physical sciences, biological sciences and mathematics interesting towards the school students intertwined with the existing school syllabus.

The teachers are to be geared up for facing the upcoming challenges in the rigid classroom settings. They need to be oriented so that they can realise, education should not be the filling of a pail but the lighting of a fire. Three online teachers training programs held in the year 2021, accounted for nearly 1000 high school and middle school science teachers encompassing all the districts of West Bengal.

A glimpse of the lectures

Title of the lectures/ Topics	Speakers
Science Teaching and Society	Prof. (Dr.) Maitree Bhattacharyya Director, JBNSTS Kolkata
How to be a Good Teacher	Prof. (Dr.) Dhruvajyoti Chattopadhyay Vice Chancellor, Sister Nivedita University
Learning Mathematics in easy way for school students	Dr. Rupa Pal Department of Mathematics, Bethune College
How to teach Mathematics in easy way to school students	Dr. Partha Karmakar Joint Director Public Instruction & Advisor at West Bengal Central School Service Commission, WB.
Basic Algebraic Operation for school students	Dr. Gopal Chandra Ghosh Rishi Bankim Chandra College Naihati
Science with Low Cost- No Cost Material	Sri Samar Bagchi Former Director, BITM Kolkata
Types of Chemical Reactions	Dr. Debajyoti Ghosal Department of Chemistry, Jadavpur University
Life Sciences Teaching: Innovative Ideas and Practices in the Classroom	Dr. Sutapa Sanyal Department of Zoology, Krishnagar Government College
Let's present the Science of Life- In a more Lively Way	Dr. Swagata Basak Headmistress G.S.M.S. Boys Taki House, Kolkata



JBNSTS CELEBRATION OF SPECIAL EVENTS

Kaleidoscopic portrayal of
science as a toolkit for holistic
development and upholding
of myriad Human Rights and
Inclusive Values in the
society

Science Day Celebration at JBNSTS

A virtual journey exploring the contours of Antarctica

Science day marks a renaissance in the heritage of science and technology of India which commemorates the invention of Raman Effect by celebrated Indian Scientist Sir Chandrasekhara Venkata Raman in India. Each year, this glorious occasion is being duly observed by JBNSTS with grandeur. This year, due to the vagaries of the pandemic, the institute was compelled to observe the occasion on the virtual medium. An exceptional online discussion was organised by JBNSTS titled “**Life and Biodiversity of Antarctica**” on zoom platform which accounted for participation of several school children studying in middle and senior standards in the state along with scholars and teachers from all across West Bengal, leaving them enthralled.

JBNSTS initiated all possible efforts to ensure participation of young talented boys and girls studying science in Kolkata and rural belt of our state. The keynote speaker of the program was Prof. (Dr.) Punarbasu Chaudhuri, Professor, Calcutta University an environmental scientist and professor of University of Calcutta. The speaker initiated a virtual tour with the audience positioned in remote terminals across West Bengal. The program was telecasted in real-time mode that produces excellent broadcast of the discussion. The Indian Scientific Expedition to Antarctica (ISEA) comprised of Dr. Chaudhuri along with a talent pool comprising scientists, engineers, doctors, and technicians, who began their journey in MV Vasilii Golovnin, a chartered ice-class vessel from the Mormugao Port of Goa to Antarctica reaching its destination Bharati station and Maitri station in Antarctica, which are India's permanent research base stations. The program emerged to be a huge learning curve for all the audience who were never exposed to such orientations in regular scheme of education.

An exciting quiz session about science was also organised for the participants from all across the state. The theme of the quiz emphasised on manifold contributions by the Nobel Laureate C.V. Raman and other stalwarts along with various topics, discoveries and inventions in the realm of science and technology. The overwhelming response from all the participants, teachers and students made the special event a grand success.



Annual Award Ceremony In The New Normal Felicitation of young talents on the virtual medium

The Annual Award Program is a yearly ceremonial practice of JBNSTS which beholds a congregation of all newly selected scholars, awardees, teachers, esteemed scientists, parents and eminent persons from various walks of society. The onslaught of the pandemic had compelled the institute to organise the 61st edition of the program on the digital platform on 20th day of March, 2021. The scholars, awardees and students from all across West Bengal and their parents were duly informed beforehand about live streaming of the program ensuring their participation on the virtual medium. JBNSTS welcomed all the scholars, students and awardees by initiating a virtual tour of the institute.

Prof. (Dr.) Maitree Bhattacharyya in her welcome address outlined the multitude of academic activities which JBNSTS had undertaken in the preceding year during the entire pandemic phase at the behest of students, science aspirants from several parts of our state. Prof. Sourav Pal, Director of IISER, Kolkata and a distinguished Professor of Chemical Sciences, was the chief guest of the occasion. The legendary scientist initiated a scintillating online discourse titled “*Research Innovation: Importance of Inter-Disciplinary Science*” which substantially invoked the rationale of inter-disciplinary mode of education in science in the further academic pursuits of the talented scholars. This was followed by a plethora of questions by the audience who were duly apprised about the scope of such form of education in basic sciences and applied sciences.

In the further stages of the program, Dr. Anindya Narayan Biswas (Commissioner- School Education, Government of West Bengal) described the new program titled “Vidyasagar Science Olympiad” examination for school students of West Bengal to be held later under the abled disposition of JBNSTS. In the subsequent segment of the online program, names of all the scholars were announced accompanied with digital version of the certificates as a means to render them with the fervour of physical form of certificate which are normally presented to all the recipients (during regular scheme of the program) which led to fanning of the scholars and awardees present at the program. In his presidential address, the Chairman of JBNSTS Prof. (Dr.) Amitava Raychaudhuri a scientist of global repute humbly reminded the young student scientists about their social obligation in the coming days dedicating their innovation and inventions towards the nation development. Towards the closure of the illustrious program, Dr. Paromita Roy, Deputy Director, JBNSTS Kolkata offered the vote of thanks to the keynote speaker, distinguished guests and the rest of the spectators. Finally, National Anthem was sung by the audience on the virtual platform which marked the formal closure of curtains of a memorable event.





JBNSTS VIGYAN PRASAR PLATFORM

Science communication
and
popularisation in Bengali



JBNSTS - Vigyan Prasar Initiative

Connecting Science with Society



VIGYAN PRASAR

Genesis of the initiative

Seventy-five years ago, our country made a tryst with destiny. The founding fathers of our nation pledged to develop scientific temper in the society which would usher a wide spectrum of societal developments in the following days. Our society is plagued with vivid, dogma, malnutrition, ignorance and superstition. The malady however, remains in the existence of gap between the haves' and have not's in the society which can only be addressed through judicious application of science in solving the myriad problems of the society.

Synthesis of common attributes of JBNSTS and Vigyan Prasar

JBNSTS upholds an illustrious legacy of six decades dedicated to the objective of nation building through a plethora of socially inclusive programs and initiatives under the aegis of the Department of Higher Education, Government of West Bengal. Vigyan Prasar on the other hand, was established to popularise science amongst the masses through a gamut of regional languages. Both the organisations had collaborated to work in unison to bring science closer to the doors and make science accessible to the eclectic end users.

Key outcomes that this program intends to achieve

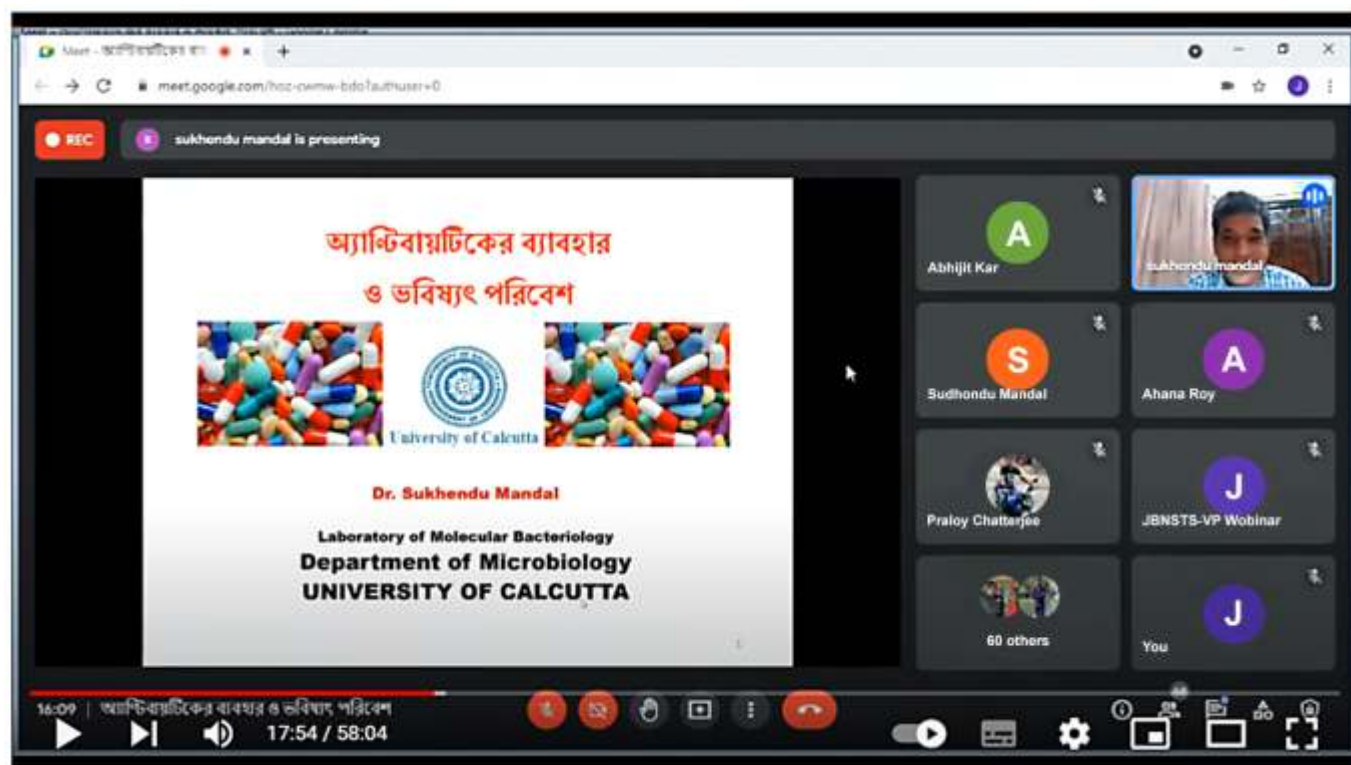
JBNSTS and Vigyan Prasar have jointly taken up the onus of training science communicators to spread over the rural areas and urban societies to eliminate the gap between laboratory and the society. Furthermore, the important objectives that this collaboration aims to fulfil are as follows:

- Popularising science in regional vernacular language through several programs on the digital/ electronic media mainly through social networking platform.
- Translation of English books on science into Bengali language to keep the audience in tune with the science related activities and inventions.
- Conducting workshops on science communication skills for the society for channelizing the solemnity of science from the corridors of laboratories to the premises of household.

Since inception of this project, during the entire span of the pandemic, this endeavour has assumed importance to have conducted a potpourri of web-based seminars over varied topics and subjects; some glimpse of the existing webinars is drawn below.

Title of the Talk	Speaker
Science of Playing with cards and dice	Prof Bikash Sinha Retired Professor of Statistics, Indian Statistical Institute, Kolkata
Super Bug: The End of Antibiotics	Dr. Subho Sankar Ghosh Senior Curator, Science City Kolkata
Science Fiction and Reality	Dr. Manas Pratim Das Producer in All India Radio, Kolkata
Biology in Everyday Life and its awareness through Theatrical Presentation/ Life Science in everyday life: Medium Theatre	Dr. Nandan Bhattacharya Asstt. Professor/Asstt. Director, UGC – Human Resource Development Centre, Jadavpur University
The Science of Corona Virus and Vaccines	Prof. Sutapa Ghosh Biocuration specialist at the RCSB Protein Data Bank, Rutgers University, New Jersey, USA
Fear of Mathematics and its Remedies	Dr. Partha Karmakar WBES, Joint Director Public Instruction, GOWB & Advisor at W.B. Central School Service Commission
সুন্দরবন ও পরিবেশ	Dr. Punarbasu Chaudhuri Department of Environmental Science, University of Calcutta, Kolkata
সত্যেন্দ্রনাথ বোস ও অ্যালবার্ট আইনস্টাইন : একটি ভিন্ন ধর্মীয় বৈজ্ঞানিক মেলবন্ধন	Dr Bhupati Chakraborty Retired Professor, Department of Physics, City College, Kolkata
ক্যান্সার : বিদ্রোহ যখন আপন কোষে	Dr. Manas Ranjan Ray Former Assistant Director Chittaranjan National Cancer Institute, Kolkata
Importance of Safe drinking water & possible purification processes	Dr. Neeloy Samaddar Manager- Operations & Quality, Food and Water Division; Ncourage Social Enterprise Foundation, Tata Chemicals Ltd.

বিষাক্ত পদার্থের সহজ সনাক্তকরণ : ফ্লুরোসেন্ট কেমোসেন সারের সূচনা	Dr. Prithidipa Sahoo Assistant Professor, Department of Chemistry, Siksha Bhavana (Institute of Science), Visva-Bharati, Santiniketan
The Story of Alice and Bob (অ্যালিস এবং ববের গল্প)	Dr. Dhiman Saha, Assistant Professor, EECS, Indian Institute of Technology, Bhilai
Is Plastic PPE: A Pollution to Planet Earth	Dr. Debolina Sinha Assistant Professor, Department of Zoology, Vidyasagar College, Kolkata
Butterfly Conservation	Mr. Judhajit Dasgupta Science Writer & Journalist, Desh Patrika
Bird Conservation	Dr. Subhadeep Sarker Associate Professor, Department of Zoology, Serampore College Hooghly
Snake Conservation	Vishal Santra Herpetologist and Member of IUCN SSC Viper Specialist Group, Co-founder and Co-Director, Captive & Field Herpetology, UK



Activity Calendar 2021

January 2021

12.01.2021 - 16.01.2021: Online JTST Interview for 2020 batch for selected **415** candidates

18.01.2021 – 22.01.2021: Online STST Interview cum scientific creativity Test for 2020 batch for selected **325** candidates.

February 2021

05.02.2021: Online web seminar on **Biotechnology-8 [Hands on experience for a day]:** "Biotechnology and its applications" for high school students from Murshidabad, West Bengal.

25.02.2021: Online web seminar on **Biotechnology-9 [Hands on experience for a day] :** "Biotechnology and its applications" for high school students from Murshidabad, West Bengal.

28.02.2021: Online web seminar on **National Science Day** entitled " Climate emergency and its impact on Antarctica" for middle school teachers of West Bengal.

March 2021

12.03.2021: Online web seminar on **Biotechnology-10 [Hands on experience for a day]** for high school students

16.03.2021 - 18.03.2021: JBNSTS Teachers Training Program for middle & high school science teachers of West Bengal

20.03.2021: Virtual JBNSTS Annual Award Ceremony 2020.

May 2021

06.05.2021: Online web seminar entitled "**Sprints and Hops the Global Journey of a Mutant Coronavirus**" for JBNSTS Senior Scholars and BigyaniKanyaMedhaBritti Scholars.

07.05. 2021: Online web seminar entitled "**Fight Against Viruses**" for JBNSTS Senior Scholars and BigyaniKanya Medha Britti Scholars.

June 2021

02.06.2021–04.06.2021: JBNSTS Teachers Training Program for middle & high school science teachers of West Bengal



07.06.2021 – 18.06.2021: JBNSTS - WBDS Program2 2021, **Series - 1** (Supported by Dept. of Higher Education, Govt. of West Bengal) for class VIII students of Uttar Dinajpur, Maldah&Birbhum districts of West Bengal

19.06.2021: Special lecture session on **Awareness Promotes Victory: Cancer in Women** for female scholars only.

21.06.2021 –02.07.2021: JBNSTS - WBDS Program 2021, **Series - 2** (Supported by Dept. of Higher Education, Govt. of West Bengal) for class VIII students of North 24 Parganas& Hooghly districts of West Bengal

23.06.2021: Online Web-Seminar for JBNSTS Junior Scholar of Batch 2019 on **“Magical Mathematics of Ramanujan”**

July 2021

05.07.2021 – 16.07.2021: JBNSTS - WBDS Program 2021, **Series - 3** (Supported by Dept. of Higher Education, Govt. of West Bengal) for class VIII students of South 24 Parganas of West Bengal .

07.07.2021 : Online Web-Seminar for JBNSTS Junior Scholar of Batch 2019 on **"Search for a simpler theory to explain how the universe works"**

08.07.2021: Online Web-Seminar for JBNSTS Junior Scholar of Batch 2020 on **"From Mathematics to Data Science: A Directional Change"**

14.07.2021: Online web seminar on **Biotechnology-13 [Hands on experience for a day]** : for high school students

19.07.2021: Online web seminar for JBNSTS Junior Scholars of batch - 2019 on **"Molecular Machine "**

23.07.2021-26.07.2021: Four DayNational Web-seminar on **Recent Advances in Science & Technology** for Junior and senior scholars & BKMB awardees.

26.07.2021 –06.08.2021: JBNSTS - WBDS Program 2021, **Series - 4** (Supported by Dept. of Higher Education, Govt. of West Bengal) for class VIII students of North 24 Parganas, Nadia and Hooghly districts of West Bengal

August 2021

04.08.2021: Online web seminar on **Biotechnology-14 [Hands on experience for a day]** : for high school students.

09.08.2021 – 20.08.2021: JBNSTS - WBDS Program 2021, **Series - 5** (Supported by Dept. of Higher Education, Govt. of West Bengal) for class VIII students of North 24 Parganas, Nadia and Howrah districts of West Bengal.

18.08.2021: Online web seminar on **Biotechnology-15 [Hands on experience for a day]** : for high school students.

30.08.2021 - 10.09.2021: JBNSTS - WBDS Program 2021, **Series - 6** (Supported by Dept. of Higher Education, Govt. of West Bengal) for class VIII students of Nadia, Bankura, Purba and Paschim Midnapore districts of West Bengal.

September 2021

01.09.2021: Online web seminar on **Biotechnology-16 [Hands on experience for a day]** for JBNSTS Junior Scholar 2020 batch.

08.09.2021: Online web seminar on **Biotechnology-17 [Hands on experience for a day]** for JBNSTS Junior Scholar 2020 batch.

14.09.2021 – 16.09.2021: JBNSTS online Teachers Training Program for middle & high school science teachers of West Bengal.

20.09.2021 - 01.10.2021: JBNSTS - WBDS Program 2021, **Series - 7** (Supported by Dept. of Higher Education, Govt. of West Bengal) for class VIII students of Birbhum, Murshidabad and Kolkata districts of West Bengal

22.09.2021: Online web seminar on **Biotechnology-18 [Hands on experience for a day]** for JBNSTS Junior Scholar & Encouragement awardees 2019 batch.

24.09.2021: Online Web-Seminar for JBNSTS Junior Scholars & Encouragement Awardees of Batch 2020 on **“Chemical Engineering : Scope and opportunities”**.

27.09.2021 – 30.09.2021: A four-day online national seminar on **Different Disciplines of Science** for JBNSTS Senior Scholars and Bigyani Kanya Medha Britti awardees.

October 2021

05.10.2021: Online web seminar on **Biotechnology-19 [Hands on experience for a day]** : for high school students.

November 2021

21.11.2021: Remotely proctored MCQ based online Junior Talent Search Test & Senior Talent Search Test 2021 for **10800** & **2832** candidates respectively

December 2021

03.12.2021-07.12.2021: Online Interview cum scientific creativity Test for **258** selected candidates of Senior Talent Search Test 2021

11.12.2021-14.12.2021: Online Interview for **371** selected candidates of Junior Talent Search Test 2021.



JBNSTS Scholars' Achievements

- **Aditya Basu**, a Junior Scholar of 2017 batch and student of Indian Institute of Science, Bangalore has been selected by the Cargill Global Scholars Program (CGSP) 2021 as one of the ten 'Cohort 9' scholars from India. He had held the post of Co-leader of iGEM (International Genetically Engineered Machine competition) IISc 2021, and proposed the research idea titled "A Functionalized Bacterial Cellulose Filter for Combating Organophosphate Pollution".
- **Debbani Patra**, a Senior scholar of 2019 batch & Junior scholar 2017 batch currently pursuing MBBS in Nil Ratan Sircar Medical College, Kolkata received Gold Medal in Anatomy and had been awarded Grand Honours in MBBS 1st Professional University examination with highest total marks in all of West Bengal. She is also a recipient of Certificate of Honours in Physiology (second in Physiology Gold Medal Examination).
- **Akash Das**, a Senior Scholar of 2019 batch and currently student of Electronics and Communication Engineering of Institute of Engineering and Management, Kolkata participated in India International Science Festival, wherein, his projects namely Drone with SpiderBot swarm and Wireless Motion Controller got selected within top 50 projects in IISF 2021 and got honored to showcase them in international program in Goa.
- **Debopam Sil**, a Senior Scholar of 2019 batch presently studying medicine in Medical College and Hospital, Kolkata achieved 3rd position in Pan Memorial Dissection competition (2019-20). Debopam has been selected for Research Presentation at the Walter E. Dandy Neurosurgical Society and also received First Certificate of Honours in Physiology Gold Medal examination.
- **Utsav Thakur**, a Senior Scholar of 2019 batch attained the position of semifinalist in IIM Materials Quiz 2018 and achieved 10th position in Elsevier Basic Sciences Olympiad 2020 (EBSO).
- **Arijit Saha**, a Senior Scholar (Batch: 2019), presently a student of Jadavpur University, Kolkata had earlier attained the rank of 756 (AIR) in KVPY (SX) (2018) examination and 468 (AIR) in KVPY (SA) (2017) respectively.

and several other student scientists...

Research and Development Activities

Dr. Paromita Roy

Publications

- 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*, Issue 6 (1), pp. 5-7. **Nurturing Talents Recognition Award 2019**
- 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)*.
- Cross, J. R., Cross, T. L., O'Reilly, C., Roy, P., Mishra, A., & Nambiar, A. [Manuscript under review] Cross-Cultural Comparison of the Psychology of Irish and Indian High Ability Students. *High Ability Studies*.
- 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).

Prof. Maitree Bhattacharyya and Biotechnology Research group

Publications

1. 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 and X-ray Dynamic Therapy. Ria Ghosh, Susmita Mondal, Dipanjan Mukherjee, Aniruddha Adhikari, Maitree Bhattacharyya, Samir Kumar Pal. *Current Drug Delivery*, 2022, DOI: 10.2174/1567201819666220328142620
2. Host-assisted delivery of a model drug to genomic DNA: Key information from ultrafast spectroscopy and in silico study. Ria Ghosh, Soumendhra 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. *Chem Bio Chem*, 2022, <https://doi.org/10.1002/cbic.202200109>.



3. Human peripheral blood mononuclear cells targeted multidimensional switch for selective detection of HSO₃ – anion. Sangita Das, Partha Pratim Das, James W Walton, Kakali Ghoshal, Lakshman Patra, Maitree Bhattacharyya, Tapan Kumar Mondal, Sabu Thomas. *Dyes and Pigments*, 2022,198, 109966.
4. The drug resistance mechanisms in *Leishmaniadonovani* are independent of immunosuppression. Baibaswata Saha, Kalpana Pai, Shyam Sundar, Maitree Bhattacharyya, Neelam Prakash Bodhale. *Cytokine*, 2021,145,155300.
5. Redox nanomedicine ameliorates chronic kidney disease (CKD) by mitochondrial reconditioning in mice. Aniruddha Adhikari, Susmita Mondal, Tanima Chatterjee, Monojit Das, Pritam Biswas, Ria Ghosh, Soumendra Darbar, Hussain Alessa, Jalal T Althakafy, Ali Sayqal, Saleh A Ahmed, Anjan Kumar Das, Maitree Bhattacharyya, Samir Kumar Pal. *Communications biology*,2021,4(1), 1-15.
6. Synthesis and characterization of a nano-formulation for long lasting sterilization effect. Ria Ghosh, Soumendra Singh, Aniruddha Adhikari, Susmita Mondal, Dipanjan Mukherjee, Neha Bhattacharyya, Animesh Halder, Maitree Bhattacharyya, Samir Kumar Pal. *Materials Today: Proceedings*.2021,<https://doi.org/10.1016/j.matpr.2021.05.623>.
7. Supramolecular dipeptide-based near-infrared fluorescent nanotubes for cellular mitochondria targeted imaging and early apoptosis. Pranab Chandra Saha, Tapas Bera, Tanima Chatterjee, Jayeeta Samanta, Arunima Sengupta, Maitree Bhattacharyya, SamitGuha. *Bioconjugate Chemistry*, 2021,2(4),833-841.
8. *Aerofilumfasciculatum* gen. nov., sp. nov. (Oculatellaceae) and *Euryhalinemapallustris* sp. nov. (Prochlorotrichaceae) isolated from an Indian mangrove forest. Sandeep Chakraborty, Veerabadhran Maruthanayagam, Anushree Achari, Arnab Pramanik, Parasuraman Jaisankar, Joydeep Mukherjee. *Phytotaxa*, 2021,522(3),165-186.
9. Cyanobacteria of the Indian Sundarbans: A Potential Source of Powerful Therapeutic Agents. Shayontani Basu, Veerabadhran Maruthanayagam, Sandeep Chakraborty, Arnab Pramanik, Anushree Achari, Parasuraman Jaisankar, Joydeep Mukherjee. *International Journal of Chemical and Environmental Sciences*,2021,2(2),56-61.

Book Chapter

- Green synthesized nanomaterials for greener environment. Sudip Nag, Arnab Pramanik, Maitree Bhattacharyya, *Handbook of Microbial Nanotechnology*, 2022,385-413.



JBNSTS FUNDS AND ACCOUNTS

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



Financial Report

JBNSTS is happy to report its financial progress during the Financial Year 2020-21. Significant receipts were from the Department of Higher Education, Government of West Bengal and Department of Science & Technology and Biotechnology, 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 in both online and offline modes also providing them internet data pack support for carrying out their online educational activities in this current pandemic situation.

The Department of Science & Technology and Biotechnology, Government of West Bengal also sanctioned funds for Junior Talent Search Programme, Senior Talent Search Programme, Bigyani Kanya Medha Britti and Talent Enrichment Programme 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 Senior Scholars have been awarded scholarship of Rs.4,000/- per month with an annual book grant of Rs.5,000/- each and 50 Bigyani Kanya Medha Britti scholarship of Rs.2,000/- per month with an annual book grant of Rs.2,000/- have been awarded. Also top 10 boys and top 10 girls were awarded with laptops according to their ranks in Senior Talent Search Test during the financial year.

The Department of School Education, Government of West Bengal also sanctioned Rs.50,00,000/- for conducting Vidyasagar Science Olympiad for school students of West Bengal.

Vigyan Prasar, DST, Government of India also sanctioned their grant of Rs.14,16,400/- for SCoPE programme for science popularization and promotion in Bengali (regional language) during the year 2020-21.

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

Financial year	2020-21
Department Higher Education, Government of West Bengal	
For Maintenance and salary	Rs. 2,12,66,050/-
West Bengal District Scheme	Rs. 22,42,625/-
Department Science & Technology and Biotechnology, Government of West Bengal	
Senior Scholarship	Rs. 1,59,50,000/-
Junior Scholarship	Rs. 1,55,44,500/-
Bigyani Kanya Medha Britti	Rs. 58,80,000/-
Talent Enrichment Programme	Rs. 35,80,000/-
Teachers Training Programme	Rs. 34,78,000/-
Department of Science & Technology, Government of India	
Vigyan Prasar	Rs. 14,16,400/-

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, 2021, 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 and Overspent 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 is taking efforts to settle these balances in FY 2021-22.



Sl. No.	Name of the Project	Overspent	Unspent
1	Junior Talent Search Test (DHE - JTST)		24,71,458.00
2	WB Academy of Science & Technology (WAST)		30,000.00
3	DST - (WAST)		2,831.75
4	Maulana Abul Kalam Azad Instt. of Asian Studies (MAKAIAS) Dr. Paromita Roy		1,658.00
5	Ministry of North East Region (MDoNER)		1,08,311.75
6	Department of Science & Technology (DST)		47,293.05
7	Talent Enrichment Programme (CSIR)	9,850.89	
8	Vigyan Prasar (VP)	5,322.00	

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 : 25.08.2021
Place: Kolkata

M. Saha & Co.
Chartered Accountants
Firm Registration No.: 305135E
(CA. Debarshi Saha)
Partner, Membership No.: 061398
UDIN: 21061398AAAAFB5737

**JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH**

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

BALANCE SHEET AS ON 31ST MARCH, 2021

PREVIOUS YEAR		SCHEDULES	CURRENT YEAR
₹			₹
SOURCES OF FUNDS			
46,254,504.42	Land & Building Fund	A	45,466,086.42
19,206,691.20	Movable Properties Fund	B	16,908,987.20
54,073,809.59	Other Funds	C	56,244,367.16
27,858,427.52	Unutilised Grants	D	42,883,209.08
9,762,831.00	Current Liabilities	E	14,581,287.00
518,400.00	Other Deposits	F	458,409.00
157,674,663.73	TOTAL		176,542,345.86
APPLICATION OF FUNDS			
46,254,504.42	Land & Building	G	45,466,086.42
19,206,691.20	Movable Properties	G	16,908,987.20
-	- Land & Building Fund Investments	H	-
-	- Movable Properties Fund Investments	I	-
71,255,415.60	Other Investments	J	92,325,831.06
3,818,582.58	Loans & Advances	K	1,494,707.05
17,139,469.93	Cash & Bank Balances	L	20,346,734.13
157,674,663.73	TOTAL		176,542,345.86
On behalf of the Governing Body		In terms of our report of even date attached herewith For M. Saha & Co. Chartered Accountants FRN: 305135E	
Prof (Dr.) Maitree Bhattacharyya Director		CA. Debarshi Saha Partner Membership No.: 061398 UDIN: 21061398AAAAFB5737	
Kolkata Date: 25th August, 2021			

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, 2021

Previous Year Particulars	Project / Program Activities	Scholars' Reserve Fund	Development Fund	Laboratory Fund	JBNSTS - Own Generation Fund	Staff Welfare & Medical Fund	Infrastructure Development Fund	Total
₹	₹	₹	₹	₹	₹	₹	₹	₹
INCOME								
General :								
54,367,786.85	54,261,333.44	-	-	-	-	-	-	54,261,333.44
695,500.00	-	-	-	-	-	-	-	-
4,280,905.66	-	886,310.19	1,053,054.91	103,218.02	2,539,803.65	70,297.45	73,116.03	4,725,800.26
591,185.00	29,683.00	70,406.00	463,368.31	-	44,318.00	-	-	607,775.31
1,228,615.16	-	-	-	-	1,195,913.00	-	-	1,195,913.00
-	-	-	-	-	-	-	-	-
1,000.00	-	-	-	-	-	-	-	-
18,000.00	-	-	-	-	-	-	-	-
88,773.20	-	-	-	-	-	-	-	-
612,844.00	-	284,581.00	-	-	-	-	-	284,581.00
-	-	203,400.00	-	-	-	-	-	203,400.00
61,884,609.87	54,291,016.44	1,444,697.19	1,516,423.22	103,218.02	3,780,034.65	70,297.45	73,116.03	61,278,803.01
EXPENDITURES								
General :								
55,551,413.85	53,844,274.44	419,000.00	-	-	3,560,000.00	20,000.00	-	57,843,274.44
-	-	-	-	-	-	-	-	-
55,551,413.85	53,844,274.44	419,000.00	-	-	3,560,000.00	20,000.00	-	57,843,274.44
6,333,196.02	446,742.00	1,025,697.19	1,516,423.22	103,218.02	220,034.65	50,297.45	73,116.03	3,435,528.57
Less: Capital Expenses met out of Revenue Income								
-	446,742.00	-	-	-	-	-	-	-
6,333,196.02	Net Surplus for the Year	1,025,697.19	1,516,423.22	103,218.02	220,034.65	50,297.45	73,116.03	2,988,786.57

In terms of our report of even date attached herewith

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: 21061398AAAAFB5737

KOLKATA
The 25th August, 2021



JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH

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

RECEIPTS & PAYMENTS ACCOUNT FOR THE YEAR ENDED 31.03.2021

RECEIPTS	RS	PAYMENTS	RS
Revenue Income		Revenue Payments	
Grant-in Aid from Govt.	54,261,333.44	<u>Establishment Expenses :</u>	
Registration fee's received	1,195,913.00	Salaries & Wages	13,313,063.00
Income from Investments	5,333,575.57	Office and Administrative Expenses	6,763,908.88
Miscellaneous and other receipts	203,400.00	<u>Project Programme Activities</u>	
Liabilities written Back	284,581.00	Expenses funded by Govt.	33,767,302.56
		<u>Scholars Reserve Fund</u>	
		Expenses	419,000.00
		<u>Laboratory Fund</u>	
		Expenses	-
		<u>JBNSTS Own Generation Fund</u>	
		Expenses	3,560,000.00
		<u>Staff Welfare & Medical Fund</u>	
		Expenses	20,000.00
		<u>Loss on Sale of/ Written Off :</u>	
		Investment	-
		Fixed Assets	-
		Movable Properties	-
Capital Income		Capital Payments	
<u>Land & Building Fund :</u>		<u>Fixed Assets Additions</u>	
Donations/Gifts	-	Land & Building (Purchase/Gift)	-
Government/Public Bodies Grants	-	Building (Construction Work in progress)	244,630.00
Income from Investments	-	Electrical Installation & Equipment	-
Investments withdrawn	-	Furniture, Equipment	573,599.00
<u>Movable Properties Fund :</u>		Computers	446,742.00
Donations/Gifts	-	Electrical Equipment & Generator	-
Government/Public Bodies Grants	-	Medical Equipment, Instruments	-
Income from Investments	-	Laboratory Equipments	-
Investments withdrawn	-	Bicycles/Cycle-rikshaws	-
<u>JBNSTS Own Fund :</u>		Motor Cars, Jeeps, etc.	-
<u>Other Investments withdrawn</u>		Buses, Lorries, Tractors, etc.	-
		Library Books	-
		Endow / Permanent Fund Investments	-
		Land & Building Fund Investments	-
		Movable Prop. Fund Investments	-
		Development Fund Investments	698,194.22
		Scholar Reserve Fund Investments	1,025,697.19
		Other Investments	19,346,524.05
<u>Closing Unspent Grant</u>	42,883,209.08	<u>Opening Unspent Grant</u>	27,858,427.52
<u>Opening Grant Receivable</u>	2,770,818.36	<u>Closing Grant Receivable</u>	290,818.36
<u>Closing Sundry Deposits :</u>		<u>Opening Sundry Deposits :</u>	
Caution Money	-	Caution Money	-
Students' Deposits	-	Students' Deposits	-
Security Deposits	458,409.00	Security Deposits	518,400.00
<u>Loans & Advances :</u>		<u>Loans & Advances :</u>	
Others	120,224.95	Electricity Deposit	-
		Others	276,349.42
<u>Closing Current liabilities</u>	14,581,287.00	Sundry Amount Receivable	-
		<u>Opening Current Liabilities</u>	9,762,831.00
TOTAL	122,092,751.40	TOTAL	118,885,487.20
Opening Balance	17,139,469.93	Closing Balance	20,346,734.13
GRAND TOTAL	139,232,221.33	GRAND TOTAL	139,232,221.33
Cash in Hand	17,419.00		
Cheques in Hand	-		
At Banks in SB & CD A/c	20,329,315.13		
Total (Rs)	20,346,734.13		

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: 21061398AAAFB5737

JAGADISH BOSE NATIONAL SCIENCE TALENT SEARCH

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

SCHEDULE - A : Land & Building Fund as at 31.03.2021

PARTICULARS	Land and Building Fund Rs.
Credit Balance as at 01.04.2020	46,254,504.42
ADD	
Capital Grants	
Development Fund (Out of Opening Balance)	244,630.00
Net Surplus as per I/E A/c (II)	
A TOTAL Rs.	46,499,134.42
Less	
Depreciation on Assets (Contra)	1,033,048.00
<u>Transfer to different funds</u>	
Net Deficit as per I/E A/c (II)	
B Total Deduction Rs.	1,033,048.00
Balance as at 31.03.2021 as per Balance Sheet (A-B) Rs.	45,466,086.42

SCHEDULE - B : Movable Properties Fund as at 31.03.2021

PARTICULARS	Movable Properties Fund Rs.
Credit Balance as at 01.04.2020	19,206,691.20
ADD	
Capital Grants	
Transfer From I/E A/c (II) for acquiring Capital Assets	446,742.00
Income from Investments	
<u>Transfer from different funds</u>	
Development Fund	573,599.00
Net Surplus as per I/E A/c (II)	
A TOTAL Rs.	20,227,032.20
Less	
Depreciation on Assets (Contra)	3,318,045.00
<u>Transfer to different funds</u>	
Net Deficit as per I/E A/c (II)	
B Total Deduction Rs.	3,318,045.00
Balance as at 31.03.2021 as per Balance Sheet (A-B) Rs.	16,908,987.20



JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH
1300, RAJ DANGA MAIN ROAD, KASBA, KOLKATA - 700 107
SCHEDULE - C : OTHER FUNDS AS AT 31.03.2021

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 01.04.2020	17,631,900.37	19,557,824.96	1,897,795.89	-	1,000,000.00	11,528,440.56	1,198,396.69	1,250,219.89	9,231.22
ADD									
Capital Grants									
Capital Donations (i.e. Corpus Donations) - Cash									
“ - Kind									
“ - Foreign Contribution									
Transfer From I/E A/c (II) for acquiring Capital Assets									
<u>Transfer from different funds</u>									
JBNSTS Own Generation Fund							100,000.00	100,000.00	
Net Surplus as per I/E A/c (II)	1,025,697.19	1,516,423.22	103,218.02			220,034.65	50,297.45	73,116.03	
A TOTAL Rs.	18,657,597.56	21,074,248.19	2,001,013.92	-	1,000,000.00	11,748,475.21	1,348,694.15	1,423,335.93	9,231.22
Less									
<u>Transfer to different funds</u>									
Out of Opening Balance		244,630.00							
Land & Building Fund		573,599.00							
Movable Properties Fund									
<u>Out of Current Year</u>									
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 Total Deduction Rs.	-	818,229.00	-	-	-	200,000.00	-	-	-
Balance as at 31.03.2021 as per Balance Sheet (A-B) Rs.	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

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, 2021

Particulars	Opening Unutilised Grant as on 01.04.20	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 31.03.2021
	₹	₹	₹	₹	₹	₹	₹	₹	₹	₹	₹	₹	₹
Government of West Bengal													
Dept of Higher Edn. (DHE)- Maint. Grant	6,005,664.49		21,266,050.00			27,271,714.49	13,313,063.00	853,864.00	6,763,908.88	-	20,930,835.88	-	6,340,878.61
West Bengal Distr. Scheme (WBDS)	1,515,178.08		2,242,625.00			3,757,803.08		1,245,858.00			1,245,858.00		2,511,945.08
Junior Talent Search Test (DHE - JTST)	2,471,458.00					2,471,458.00		-					2,471,458.00
Junior Talent Search Test (DST - JTST)	8,595,584.50		15,544,500.00			24,140,084.50		11,658,248.68			11,658,248.68		12,481,835.82
Senior Talent Search Test (DST - STST)	1,599,838.00		15,950,000.00			17,549,838.00		12,582,536.00			12,582,536.00		4,967,302.00
Talent Enrichment Programme (DST - TEP)	3,802,181.00		3,580,000.00			7,382,181.00		180,000.00			180,000.00		7,202,181.00
Teachers' Training Programme (DST - TTP)	475,616.10		3,478,000.00			3,953,616.10		126,298.00			126,298.00		3,827,318.10
Bigyani Kamya Medha Britti (DST)	488,309.00		5,880,000.00			6,368,309.00		5,539,503.00			5,539,503.00		828,806.00
WB Academy of Science & Technology (WAST)	30,000.00					30,000.00							30,000.00
Slate Science Fair 2019	-	6,501.00				(6,501.00)						6,501.00	-
Biotechnology Laboratory (Dept. of Biotechnology)	1,488,498.00					1,488,498.00		1,409,276.08			1,409,276.08		79,221.92
DST - (WAST)	2,831.75					2,831.75							2,831.75
Other Organisations													
Bengal Science Lecture	-					-							-
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							44,431.00
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)	108,311.75					108,311.75							108,311.75
Department of Science & Technology (DST-SEATS)	-	268,127.00				(268,127.00)						268,127.00	-
Department of Science & Technology (DST)	47,293.05					47,293.05							47,293.05
Department of Science & Technology (DST-TTP)	1,026,916.80												
Talent Enrichment Programme (CSIR)	-	9,850.89			29,683.00	1,056,599.80							1,056,599.80
Vigyan Prasar (VP)	-	5,322.00				(9,850.89)						9,850.89	-
Vigyan Prasar (VP) 2020	-	-	1,416,400.00			(5,322.00)						5,322.00	-
KVPY interview 2019	72,896.00		71,460.00			1,416,400.00		617,024.80			617,024.80		799,375.20
Science & Engineering Research Bureau (SERB) u/ DST Dr. Pijush Basak	-	1,017.47				1,436.00		1,436.00			1,436.00		-
Total	27,858,427.52	290,818.36	69,286,115.00	-	29,683.00	96,884,424.63	13,313,063.00	34,214,044.56	6,763,908.88	-	54,291,016.44	290,818.36	42,883,209.08



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
₹		₹
	Deposits for :	
1,697,000.00	Scholarship	760,000.00
331,955.00	Book Grant	139,228.00
1,563,614.00	Bigyani Kannya Medha Brtti	2,954,000.00
-	Talent Enrichment Programme	-
207,903.00	Junior Talent Search Test (DST, GOWB)	34,003.00
15,000.00	Best School Award	15,000.00
23,010.00	Development Fund Expenses (Biotech Lab)	5,775.00
77,276.00	Repair & Maintenance (General)	99,031.00
820.00	Contingency	-
2,360.00	Postage & Telephone	-
33,874.00	WBDS Programme Expenses	-
39,538.00	City Conveyance	-
757,087.00	Repair & Maintenance (Building)	132,759.00
253,893.00	Security Expenses	-
25,830.00	Cleaning Expnses	-
33,640.00	Electricity	50,410.00
16,439.00	Books & Journals	121,712.00
3,500,000.00	Advance Grant from DST,GOWB for Scholarship & Sc. W/s under JTST for next year	8,500,000.00
353,750.00	Interior Decorator & Renovation(Development fund)	353,750.00
-	TDS(Consultancy)	52,778.00
34,796.00	TDS (Contractors)	19,773.00
-	TDS(Staff)	517,640.00
23,904.00	TDS (GST)	59,286.00
9,600.00	DST (SEATS) Expenses	9,600.00
5,138.00	CPF Payable	5,138.00
398,877.00	Senior Talent Search Test	393,877.00
357,527.00	Refundable to DST (SEATS), Govt. of India	357,527.00
9,762,831.00	Total	14,581,287.00

SCHEDULE - "F" : OTHER DEPOSITS

PREVIOUS YEAR		CURRENT YEAR
₹		₹
	Deposits for :	
-	Security Deposit by Electrical Contractor	25,000.00
518,400.00	Security Deposit by Civil Contractor	433,409.00
518,400.00		458,409.00

JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH

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

SCHEDULE - "G" : FIXED ASSETS AS AT 31.03.2021

Description of Assets	Written down values at 01.04.2020 Rs. (Rs.)#	Addition During the Year Out of Revenue Income (Rs.)	From Capital Receipts* Rs.	Discarded, Transferred, Sold during the year (Rs.)#	Amount on which depreciation is charged (Rs.)	Rate of Depreciation	Depreciation for the year Rs.	Written down values at 31.03.2021 Rs.
1. Leasehold Land	2,075,669.00			-	2,075,669.00		-	2,075,669.00
2. Buildings	20,097,003.11			-	20,097,003.11	5%	1,004,850.00	19,092,153.11
3. Rain Water Harvesting System	45,985.65			-	45,985.65	5%	2,299.00	43,686.65
4. Mural	28,977.26			-	28,977.26	5%	1,449.00	27,528.26
5. Biotechnology Laboratory	163,001.40			-	163,001.40	15%	24,450.00	138,551.40
TOTAL Rs.	22,410,636.42			-	22,410,636.42		1,033,048.00	21,377,588.42
II. Construction Work-in-Progress Rs.								
1. Building (Innovation Centre)	23,843,868.00		244,630.00		24,088,498.00		-	24,088,498.00
TOTAL LAND & BUILDING Rs.	46,254,504.42		244,630.00		46,499,134.42		1,033,048.00	45,466,086.42
III. Movable Properties								
Furniture, Equipment, Plant etc.								
1. Electrical Equipment	4,922,376.74			-	4,922,376.74	15%	738,357.00	4,184,019.74
2. Electrical Fittings	122,735.51			-	122,735.51	10%	12,274.00	110,461.51
3. Electrical Fittings funded by GoWB	113,849.25			-	113,849.25	10%	11,385.00	102,464.25
4. Furniture	2,697,962.78		573,599.00	-	3,271,561.78	10%	327,156.00	2,944,405.78
5. Office Equipment	190,550.24			-	190,550.24	15%	28,583.00	161,967.24
6. Science Indoor Exhibits	51,451.26			-	51,451.26	15%	7,718.00	43,733.26
7. Computer	1,108,026.42			-	1,108,026.42	40%	443,211.00	664,815.42
8. Laboratory Equipment	9,141,081.03			-	9,141,081.03	15%	1,371,162.00	7,769,919.03
9. Computer & Accessories funded by GOWB	381,202.24	446,742.00		-	827,944.24	40%	331,178.00	496,766.24
10. Printer/Scanner/Photocopier funded by GOWB	18,605.10			-	18,605.10	40%	7,442.00	11,163.10
11. Air Condition (Dormitory)	395,793.28			-	395,793.28	10%	39,579.00	356,214.28
Assets out of SRF								
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)	-			-	-	0%	-	-
TOTAL MOVABLE PROPERTIES Rs.	19,206,691.20	446,742.00	573,599.00	-	20,227,032.20		3,318,045.00	16,908,987.20



JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH

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

SCHEDULE H: LAND & BUILDING INVESTMENTS AS AT 31.03.2021

PREVIOUS YEAR Rs.	PARTICULARS	Land and Bldg Fund Investment Rs.
	A. FIXED / TERM DEPOSITS	
	A TOTAL Rs.	-
	B. OTHER DEPOSITS	
-	B TOTAL Rs.	-
	C. BALANCE IN SAVINGS BANK	
-	C TOTAL Rs.	-
-	Balance as at 31.03.2020 as per Balance Sheet (A to C) Rs.	-

SCHEDULE I: MOVABLE PROPERTIES FUND INVESTMENTS AS AT 31.03.2021

PREVIOUS YEAR Rs.	PARTICULARS	Movable Properties Fund Investment Rs.
	A. FIXED / TERM DEPOSITS	
-	A TOTAL Rs.	-
	B. OTHER DEPOSITS	
-	B TOTAL Rs.	-
	C. BALANCE IN SAVINGS BANK	
-	C TOTAL Rs.	-
-	Balance as at 31.03.2020 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 31.03.2021

PREVIOUS YEAR	PARTICULARS	Total Other Fund Investments		Scholar Reserve Fund Investments		Development Fund Investments		Laboratory Fund Investments		JB Own Fund Investments		Staff Welfare & Medical Fund Investments		Infrastructure Fund Investments		Other Investments		Total		
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
		A	B	C	D	E	F	G	H=A+B+C+D+E+F+G											
	- A. FIXED / TERM DEPOSITS																			
30,477,344.00	With State Bank of India, Kasba	15,975,157.20	10,167,017.00	1,500,000.00	3,000,000.00			1,969,368.80												32,611,543.00
1,100,000.00	With State Bank of India, Jeevan Deep	1,100,000.00																		1,100,000.00
807,806.00	With State Bank of India, Salt Lake	807,774.00																		807,774.00
36,796,265.60	With United Bank of India	55,732,514.06	(4,978,066.74)	501,013.92	8,548,475.21	1,348,694.15	1,423,335.93	48,889,061.61												55,732,514.06
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
71,255,415.60	A TOTAL Rs.	17,912,931.20	7,232,950.26	2,001,013.92	11,548,475.21	1,348,694.15	1,423,335.93	50,858,430.41												92,325,831.06
	B. OTHER DEPOSITS																			
	- B TOTAL Rs.																			
3,700,666.96	C. BALANCE IN SAVINGS BANK	1,311,592.73	744,666.36																	2,056,259.09
3,700,666.96	C TOTAL Rs.	1,311,592.73	744,666.36																	2,056,259.09
74,956,082.56	Balance as at 31.03.2021 as per Balance Sheet (A to B) Rs.	19,224,523.93	7,977,616.62	2,001,013.92	11,548,475.21	1,348,694.15	1,423,335.93	50,858,430.41												94,382,090.15



JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH

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

SCHEDULE K: LOANS & ADVANCES AS AT 31.03.2021

PREVIOUS YEAR		CURRENT YEAR	
₹		₹	₹
	Security Deposits:		
11,000.00	For Telephone	11,000.00	
916,539.27	For Electricity	<u>916,539.27</u>	927,539.27
	Loans & Advances:		
11,000.00	For Advance against Tour/Program (Staff)	-	
2,079.95	For Advance for Postage	2,079.95	
71,585.00	For Advance to Suppliers	46,585.00	
18,000.00	GST Refund receivable	-	
17,560.00	Tax Deducted at Sources (Refundable)	<u>227,684.47</u>	276,349.42
	Receivables (Grants):		
2,480,000.00	From Deptt of Science & Technology and Biotechnology, Govt of West Bengal (Biotechnology Laboratory)		-
	Over Expenditure Receivables (Grants):		
6,501.00	From Deptt of Higher Education, Govt of West Bengal	6,501.00	
5,322.00	From Govt. of India, Vigyan Prasar	5,322.00	
-	From Govt. of India, Science & Engineering Research Bureau (SERB)	-	
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	268,127.00	
9,850.89	From Council of Scientific & Industrial Research, Govt. of India	<u>9,850.89</u>	290,818.36
3,818,582.58			1,494,707.05

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

SCHEDULE L: CASH AND BANK BALANCES as at 31.03.2021

PREVIOUS YEAR		CURRENT YEAR	
₹		₹	₹
13,020.00	a) Cash in hand (As physically verified)		17,419.00
	b) Cash at Bank : (Held in Savings Bank Accounts with)		
1,081,742.80	State Bank of India, Kasba(GAP02-PR)	1,111,464.80	
63,249.28	State Bank of India, Kasba(GAP03-AK)	64,986.28	
13,085.25	State Bank of India, Kasba(GAP01-PB)	504,999.25	
2,240,904.13	State Bank of India, Kasba, (A/c No 10415825348)	1,311,592.73	
1,459,762.83	State Bank of India, Kasba, (A/c No 10415825360)	744,666.36	
1,328,272.56	State Bank of India, Kasba, (A/c No 10415825359)	2,100,617.76	
9,460,612.06	United Bank of India, Bosepukur Rajdanga, (A/c No 5486)	13,023,068.93	
454,929.52	State Bank of India, Saltlake, (A/c No 10836429242)	521,149.52	
			19,382,545.63
	c) Cash at Bank : (Held in Current Accounts with)		
1,020,875.50	State Bank of India, Kasba, (CA-35061192770)	943,461.50	
-	State Bank of India, Kasba, (Current Account No. 33224282758)	-	
			943,461.50
	d) Interest Accrued on Savings Bank Deposits		
532.00	State Bank of India, Kasba(GAP02-PR)	493.00	
31.00	State Bank of India, Kasba(GAP03-AK)	29.00	
6.00	State Bank of India, Kasba(GAP01-PB)	561.00	
1,085.00	State Bank of India, Kasba, (A/c No 10415825348)	574.00	
709.00	State Bank of India, Kasba, (A/c No 10415825360)	581.00	
653.00	State Bank of India, Kasba, (A/c No 10415825359)	839.00	
-	State Bank of India, Salt Lake, (A/c No 10836429242)	231.00	
			3,308.00
17,139,469.93			20,346,734.13



JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH

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

SCHEDULE - "M"

ESTABLISHMENT

PREVIOUS YEAR		CURRENT YEAR
₹		₹
9,988,198.00	Salary & Allowances	13,313,063.00
-	Leave Salary	-
51,380.00	Contribution to Provident Fund (Office)	
10,039,578.00	TOTAL	13,313,063.00

SCHEDULE - "N"

PROGRAMME EXPENSES

PREVIOUS YEAR		CURRENT YEAR
₹		₹
I. Expenses funded by Deptt of Higher Education, Govt. of West Bengal		
175,521.00	Annual Award Ceremony	703,851.00
24,954.00	Books & Journals	150,013.00
200,475.00	Sub Total	853,864.00
II. Expenses funded by Deptt of Higher Education, Govt. of West Bengal (WBDS)		
-	Academic Meeting	84,000.00
3,242,625.00	Science /Advanced Science Workshop	1,161,858.00
3,242,625.00	Sub Total	1,245,858.00
III. Expenses under Govt. of West Bengal [DHE - Junior Talent Search Test (JTST)]		
-	Awareness Programmes	-
-	Contingencies	-
-	Science Workshop	-
-	Talent Search Tests	-
-	Sub Total	-
IV. Expenses under Govt. of West Bengal [DST - Junior Talent Search Test (JTST)]		
	Annual award Ceremony	
30,000.00	Best School Award	35,000.00
260,000.00	Encouragement award	235,000.00
1,110,000.00	Book Grant	1,007,500.00
5,358,000.00	Scholarship	5,785,000.00
1,361,722.00	Science Workshop	458,500.00
2,437,143.00	Talent Search Test	1,405,353.68
362,284.00	Awareness Programm	1,100,108.00
-	Teaching Aid	214,606.00
921,794.00	Remunerations	972,000.00
326,799.00	Contingencies	445,181.00
12,167,742.00	Sub Total	11,658,248.68

V. Expenses under Govt. of West Bengal [DST - Senior Talent Search Test (STST)]		
790,000.00	Book Grant	970,000.00
1,245,282.00	Laptop Distribution to Scholars	1,274,700.00
7,200,000.00	Scholarship	9,352,000.00
2,541,865.00	Talent Search Test	985,836.00
11,777,147.00		12,582,536.00
VI. Expenses under Govt. of West Bengal [DST - Teachers' Training Programme (TTP)]		
-	Fooding, Lodging & Refreshment Expenses	26,298.00
-	Consumables	-
-	Honararium to Resource Personnel	40,000.00
-	Meeting Expenses for Workshop Planning	60,000.00
-	Travel for Mentors & Peticipants	-
-		126,298.00
VII. Expenses under Govt. of West Bengal [DST - Talent Enrichment Programme (TEP)]		
59,015.00	Seminar & Workshops	-
180,000.00	Manpower costs	180,000.00
1,075,098.00	Visit to research & Sc. Establishment	-
-	Contingencies	-
1,314,113.00		180,000.00
VIII. Expenses under Govt. of West Bengal [DST - Bigyani Kanya Medha Britti]		
302,000.00	Book Grant	394,000.00
3,552,000.00	Scholarship	4,704,000.00
330,000.00	Manpower Costs	330,000.00
-	Workshop Expenses	7,553.00
133,079.00	Teaching Aids & Accessories	103,950.00
4,317,079.00		5,539,503.00
XI. Expenses under Govt. of India [DST - SEATS]		
650,000.00	Science Camps (INSPIRE)	-
650,000.00		-
XVI. Expenses funded by Indian Council of Medical Research (ICMR)		
421,600.00	Fellowship Stipend (Senior Research Fellow - Mr. Rudradip Pattanayak)	-
30,389.00	Contingencies	-
451,989.00		-



JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH

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

SCHEDULE - "O"

PREVIOUS YEAR		CURRENT YEAR
₹		₹
OFFICE & ADMINISTRATIVE EXPENSES		
213,704.34	Postage, Telegram & Telephone	228,695.70
71,600.00	Audit Fee	41,300.00
179,118.51	Contingency	221,562.38
766,320.00	Electricity	406,971.80
241,731.00	Printing & Stationery	36,781.00
660,542.00	City Conveyance	279,950.00
408,571.00	Property Tax	374,720.00
288,279.00	Pronouncement & Publicity	8,638.00
433,490.00	Repairs and Maintenance (Computer & other equipment)	262,740.00
328,858.00	Repairs and Maintenance (General)	505,760.00
2,020,652.00	Repairs and Maintenance (Building)	1,309,114.00
10,800.00	Legal and Filing Fees & Expenses	84,500.00
1,501,744.00	Security Expenses	2,054,467.00
570,839.00	Cleaning Expenses	481,773.00
8,846.00	Staff Welfare Expenses	114,616.00
342,000.00	Salary(Contractual)	352,320.00
8,047,094.85		6,763,908.88
EXPENSES UNDER SCHOLARS' RESERVE FUND		
Rs.		Rs.
1,098,000.00	Scholarship	391,000.00
50,000.00	Book Grant	28,000.00
-	Encouragement Award	-
1,148,000.00		419,000.00
EXPENSES UNDER BIOTECHNOLOY LABORATORY		
Rs.		Rs.
1,064,968.00	Remuneration to Contractual Employees at Biotechnology Laboratory	1,080,000.00
167,235.00	Repair & Maintenance	237,810.00
136,004.00	Science Workshop Biotechlaboratory	20,860.08
232,089.00	Consumables Biotech Laboratory	70,606.00
1,600,296.00		1,409,276.08
EXPENSES UNDER LABORATORY FUND		
Rs.		Rs.
-	Laboratory Fund Expenses	-
-	Repair & Maintanance	-
-		-
EXPENSES UNDER VIGYAN PRASAR		
Rs.		Rs.
-	Contingency	2,772.00
-	Honorarium	20,487.80
-	Manpower	325,161.00
-	Overhead	203,400.00
-	Science Workshop/seminar	21,018.00
-	Teaching & learning Aid	44,186.00
-		617,024.80

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, 2021

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. Where-ever 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:
 - i. 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.
 - ii. 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 2020-21 the Society paid the 1st Installment of Rs 35,60,000/- and debited the same to its Revenue Accounts under JBNST Own Fund, vide resolution passed in Governing Body Meeting dated 19.03.2021. The balance liability shall be provided for in FY 2021-22 on payment basis.
 - iii. 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 1st September, 2016 through the kind approval of the Accountant General (A & E), West Bengal to that effect. Since the Institution is being funded by the Department of Higher Education, Govt. of West Bengal since its inception in the year 1958, no provision towards Provident Fund dues has been made in the current year.

13. Provisions, Contingent Liabilities and Contingent Assets :

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

C. Notes on Accounts

1. 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.
2. In consonance with resolution passed in the AGM held on 10th December, 2019 for FY 2019-20, Liabilities towards Scholarship of Rs 1,66,000/- and Book Grants of Rs 1,18,581/- being unclaimed amounts till 2014 have been written back to our Revenue Accounts during the year 2020-21 and the same has been transferred to Scholar Reserve Fund which will be utilized in future for any purpose related to the academics of the scholars.
3. For FY 2019-20, State Bank of India (here-in after referred to as the “Bank”) before the date of signing our Financial Statements i.e. 03.09.2020, deducted Income Tax of Rs 8,430/- on total FD Interest of Rs 19,60,405/-, as was apparent from the Annual Tax Statement Form 26AS, downloaded from TRACES during that time. The said TDS was recorded in the books for FY 2019-20, claimed in ITR and accordingly refund was received by us. In December 2020, the Bank suddenly further debited our account by Rs 1,87,613/- as TDS recovery for FY 2019-20. After prolonged persuasion with the Bank, the additional TDS is now reflecting in Form 26AS for the AY 2020-21 relevant to FY 2019-20. This additional TDS has been debited to TDS Refund Receivable Account. The Society is taking appropriate steps to recover this additional TDS as Income Tax Refund from the IT Department.
4. The following Grant Unspent and Overspent 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 is taking efforts to settle these balances in FY 2021-22.

Sl. No.	Name of the Project	Overspent	Unspent
1	Junior Talent Search Test (DHE - JTST)		24,71,458.00
2	WB Academy of Science & Technology (WAST)		30,000.00
3	DST - (WAST)		2,831.75
4	Maulana Abul Kalam Azad Instt. Of Asian Studies (MAKAIAS) Dr. Paromita Roy		1,658.00
5	Ministry of North East Region (MDoNER)		1,08,311.75
6	Department of Science & Technology (DST)		47,293.05
7	Talent Enrichment Programme (CSIR)	9,850.89	
8	Vigyan Prasar (VP)	5,322.00	



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 25th day of August, 2021

Place: Kolkata

On behalf of the Governing Body

Sd/-

Prof. (Dr.) Maitree Bhattacharyya
(Director)

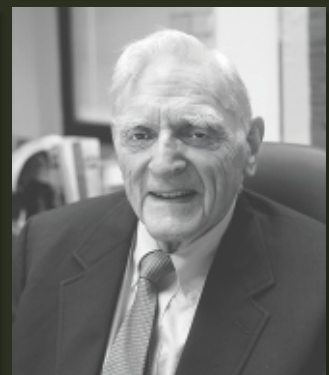
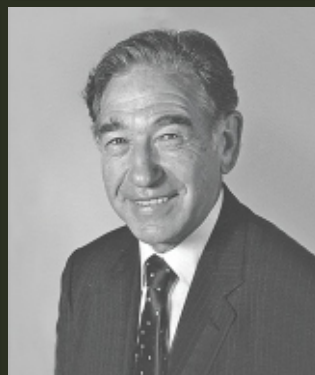
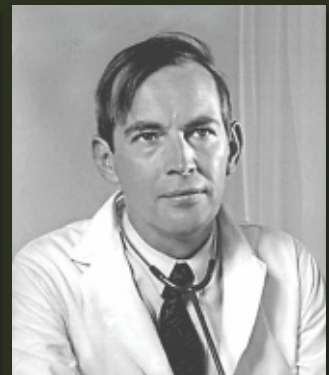
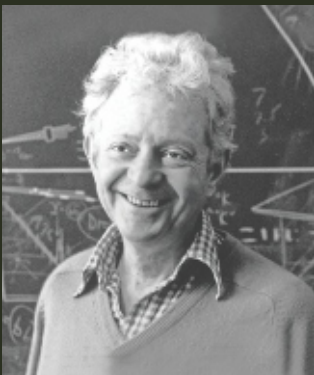
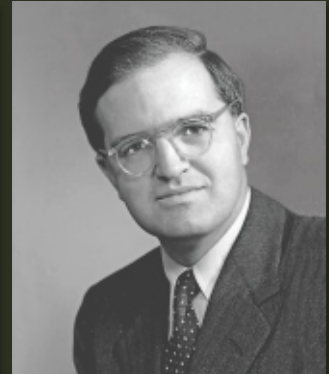
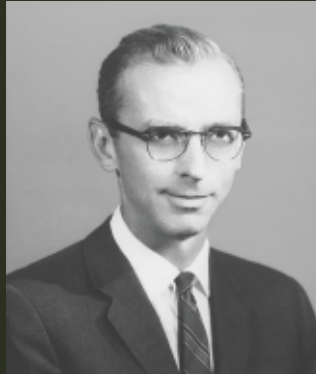
For, M. Saha & Co
Chartered Accountant Firm
Regn. No. : 305135E

Sd/-

CA Debarshi Saha
Partner
(Memb. No: 061398)

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