

IN PURSUIT OF
EXCELLENCE SINCE 1960

ANNUAL REPORT

2017



JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH



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

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;

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

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

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

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

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

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

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

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

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

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



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



H. E. SHRI KESHARI NATH TRIPATHI

The Hon'ble Governor, Government of West Bengal
Patron-in-Chief, JBNSTS, Raj Bhavan, Kolkata 700 062

MEMBERS OF THE GOVERNING BODY OF JBNSTS

PROF. (DR.) AMITAVA RAYCHAUDHURI

Chairman, JBNSTS and
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Additional Chief Secretary, Government of West Bengal
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SHRI D NARIALA, IAS

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

SHRI BHASKAR PRAMANIK

Chairman, Microsoft Corporation (I) Pvt. Ltd.
10th Floor, Tower B & C, DLF Building No.5 (Epitome)
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SHRI Y. C. DEVESHWAR

Chairman, ITC Limited, Virginia House
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SHRI SAMAR GHOSH, IAS

Member, State Administrative Tribunal,
West Bengal Administrative Tribunal
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PROF. (DR.) AMITA CHATTERJEE

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Jadavpur, Kolkata 700 032

PROF. (DR.) PARTHA P MAJUMDER

Distinguished Professor, National Institute of Biomedical Genomics
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DR. SUDIP CHATTERJEE

Hon. Professor VIMS, Kolkata
Park Clinic, 4 Gorkey Terrace, Kolkata 700 017

PROF. (DR.) MAITREE BHATTACHARYYA

Director and Member-Secretary Ex-officio, JBNSTS
1300 Rajdanga Main Road, Kasba, Kolkata 700 107

Obituary



Mrs. Deepawati Sen (Oct.7, 1935 - Oct 28, 2017), Director of JBNSTS during the period of 1976 to 2000, passed away after prolonged illness at her residence in Kolkata, amongst her family and friends. Her demise has created an irreplaceable void in our hearts and what remains is an unparalleled legacy of work, effort and love for students and colleagues.

An avid advocate of gifted education, she touched and changed the lives of so many gifted students. Mrs D Sen took JBNSTS to unprecedented heights through her pioneering work in program development for the gifted and talented. She designed the JBNSTS Scientific Creativity Test that till date is the unique signature of JBNSTS for identification of talent.

All of us pray for her soul to Rest in Peace and continue to guide us in spirit. Our heartfelt condolences to her family.



Chairman's message to the new Awardees



Today we are here to warmly welcome a new group of JBNSTS Awardees to this elite group. Congratulations! You are special for many qualities: your intellect, clarity of thought, and problem solving skills. These are, indeed, what will propel you to greater heights in your life. It is just the beginning. We have high hopes.

While the highest credit goes to you, we must bear in mind and also congratulate the parents, guardians and the teachers who have lit the flame in you and allowed it to develop.

Please always do remember that being chosen for this prestigious scholarship also sets you up for a challenge. Previous JBNSTS awardees have been extremely successful in their chosen professions, be it science, engineering, medicine, or beyond. They have spread worldwide and risen to the topmost echelons. I am sure they will serve as a beacon for you and your performance will bring greater glory to JBNSTS.

Many past JBNSTS awardees maintain a close link with the organisation and assist it in diverse ways to expand its activities. JBNSTS looks forward to you too playing such a role in the future.

Needless to say, the powerhouse schools are, as always, excelling in their science grooming of the young. An evolving encouraging trend however is that several scholarship winners are now also emerging from relatively remote and less prominent schools in the districts. It is my hope that this trend will continue to grow and I consider this as an indication of a brighter science base for the region in future.

The expansion of JBNSTS over time is a tribute to the vision of the organisation and its leadership. What started as a scholarship program for exceptional science, engineering, and medical students at the school-leaving stage has now emerged as a platform for the encouragement of excellence in science and its teaching in the state. Today the diverse array of scholarships – the flagship senior level, the junior level, and the scholarships for girls – still remain the cornerstone. At the same time other nurture programs for students, teacher training workshops, creativity programmes, motivating camps in diverse locations are all contributing to the development of a firmer science base. One must thank the funding agencies, especially the Government of West Bengal, for coming forward with financial support for this enlarged role of JBNSTS.

Let me end by extending my congratulations to the past and present members of JBNSTS, the JBNSTS awardees of the past years who are present with us, the teachers, guardian, and well-wishers who are also here today.

Prof. (Dr.) Amitava Raychaudhuri
Chairman, JBNSTS



“Dream is not the thing you see in sleep
but is that thing that doesn't let you sleep.”

– A. P. J. Abdul Kalam

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From the Director's Desk



I consider this as a great privilege to be with all of you in such an occasion where the budding scientists, doctors and engineers of our State will be felicitated in presence of such august gathering and luminaries of our country. I take this opportunity to present before you the progress and achievements of our beloved institution during last one year.

I deeply mourn the sad demise of our former Director, Mrs. Deepawati Sen (1976-2000), who passed away on Oct 28, 2017. She was the architect of present JBNSTS, she was a great visionary to design the programs for talented minds. Our heartfelt condolence to her family, scholars, and education community.

I am happy at the same time humble to submit before you that with the help and support of Department of Higher Education, Science & Technology and Biotechnology, Government of West Bengal, our friends, patrons and all of you, it became possible for us to break the old record of growth and touch new mile stone. We have progressed further in the path of development like previous two years since we started expanding the ambit of the organisation about three years back.

In this journey myself and my colleagues at JBNSTS acknowledge with all humility and respect, the encouragement, support, guidance and help, that we always receive from Hon'ble Chief Minister of West Bengal, Smt. Mamata Bandopadhyay, our mentor and guide in all our activities. In spite of her extremely busy schedule and workload, she always keeps track of all our activities and guide us at all junctures. She is the inspiration behind all our activities.

You all know that one of the major activities of JBNSTS since inception is to find out the talented students of our state and thereafter nurturing them to develop the scientific and technological manpower of this State, so to say the entire country, and even the world. Senior Talent Search Test (STST) is being conducted by JBNSTS since 1960. This year also STST was carried out from August to October with the financial support of the Department of Higher Education, Science & Technology and Biotechnology. This examination is unique in its kind since the talented students are identified through three fold examinations, written, viva-voce and scientific creativity test. Altogether 90 number

of scholars have been identified through this exercise who are being awarded today. Among them 40 scholars are pursuing their carrier in basic science while rest 50 scholars are either from Engineering or from Medicine discipline.

All of us are aware that merit of the multi phased talent search test of STST has been recognized at the national level by Ministry of Science & Technology, Government of India and all the successful STST scholars from basic science are included under INSPIRE scholarship. For the rest of the scholars, it will be provided by JBNSTS with the financial support from Higher Education, Science & Technology department, Government of West Bengal. I am happy to inform you that from this year the scholarship amount for these scholars has been further enhanced to Rs. 4,000/- per month. The book grant for all the scholars have also been increased to Rs. 5000/- per annum. We are grateful to Department of Higher Education, Science & Technology and Biotechnology, Government of West Bengal for this additional grant.

I am also happy to inform you that this year 1471 number of students have participated in STST examination, which is about two fold increment than the number of participants in the last year. Number of centres for this examination has also been increased and I am happy that students from remote villages which hardly gets illuminated with lights of development and information, also participated and some of them also gets through this examination. Our target is to reach every nook and corner of this State to bring out the talents. Because , it is not only the identification , we regularly nurture these scholars with different enrichment programs to build up the world's brightest minds.

A nation can develop only with an inclusive vision for all sections of our society. It is a matter of regret that even after 70 years of independence, participation of girls and women in the field of basic science is not up to the mark in India. Of course there are exceptions, but those are only silver lines and cannot be generalised for the entire society. Keeping this in mind, from this year we have started a new scholarship “Bigyani Kanya Medha Briti” to encourage girl students who are pursuing Medicine, Engineering or Basic science in their graduation. 50 girl students, who have fared well in the STST examination, but could not reach to the final list of awardees, will be encouraged with this scholarship of Rs. 2,000/- per month. Department of Higher Education, Science & Technology and Biotechnology, Government of West Bengal has readily come forward to provide funds for this scheme.

JBNSTS believes in nurturing the talented students through exposures to the world of science. In the modern world, it is unthinkable to pursue science without having the facilities for global networking and connection. Top ten boys and top ten girls from the STST awardees are being encouraged with a laptop and licensed software for pursuing their future career with the fund provided by Department of Higher Education, Science & Technology and Biotechnology, Government of West Bengal.

JBNSTS was set up with the tag line “*Help students to realize the importance of excellence in the scientific world and try to cultivate this in their own lives as students of science.*” Keeping the tradition of the previous years, this year also we made the arrangements for enrichment program for the Senior Scholars to visit different best laboratories of our country, located in Bengaluru. We are grateful to the scientists and authorities of these laboratories for their extended support to interact with our scholars. The fund was provided by Department of Higher Education, Science & Technology and Biotechnology, Government of West Bengal.

Junior Talent Search Test (JTST), which was introduced only two years back to “Catch them Young” was successfully conducted with a record participation of 6678 number of students. Students who are



in the 11th Standard pursuing in Science discipline and passed the class X examination with 75% marks are only eligible to sit for this examination. This year, number of scholarships have been further increased from 125 to 200. *The book grants to the scholars have also been increased to Rupees two thousand five hundred per annum. In addition, 50 students, who have fared well in the written test and viva-voce combined, will get one-time encouragement award of two thousand rupees.*

We have organised nurturing camps for both the two groups of scholars in the last year where eminent scientists, researchers, even famous personalities from other fields of life participated to broaden the canvas of our scholars.

West Bengal District School Scheme is a continuous programme in which we take up a number of schools for one year and nurture the pre-secondary students belonging to class VIII and IX throughout the year by organising series of training workshops of five days duration. Secondary schools from remote areas and backward areas are normally selected. This year, we have covered 16 schools from Darjeeling and other Districts. This program is also supported by Department of Higher Education, Science & Technology and Biotechnology, Government of West Bengal.

A good teacher can inspire hope, ignite the imagination, and instill a love of learning. Teachers training program is a part and parcel of JBNSTS activities since it is the teachers who ultimately ignite creativity amongst the talented students. Thus, developing motivation and imparting skills on science education is very much needed. This year we have already organised several teachers' training workshop. Normally, these three to five days workshops were organised at Kolkata at JBNSTS building only, where the teachers from different parts of West Bengal participated. But, from this year we have decided to organise such training even in districts with the fund sanctioned by Ministry of Science & Technology, Government of India. So far, we have organised such three-day workshops at Jhargram, Muragachha of Nadia District, Siliguri, Suri of Birbhum, etc. Another such program will be organised at Berhampore, Murshidabad District from 18th December, 2017, just one day after this ceremony. Another such training programme will be organised at Sagar, South 24-pargans District at the end of January, 2018. The teachers of the respective districts are extremely happy, since experts from different parts of West Bengal use to travel and share their experiences with them. These training programs have definitely helped us to reach the rural students and to create interest amongst the teachers and students of far away districts regarding JBNSTS and its programs.

Success of the Teachers Training programs has also been recognised by different quarters. JBNSTS has been selected as the Mentor for Science Teachers Training in Kolkata District under Sarva Siksha Mission and Rashtriya Avishkar Abhiyan program from this year. We hope this program will motivate the teachers to design innovative methods of joyful teaching-learning interactions .

JBNSTS is pioneer in organising 5-day long INSPIRE camps where the INSPIRE scholars are nurtured and motivated by very eminent scientists, *awardees of Padmasree, Bhatnagar and Swarnajayanti etc. JBNSTS has the credit of successfully organising 55 such camps since this program started.*

JBNSTS was also the co-organiser for organising State Level Youth Science Fair, 2016 and successfully organised "Meet the Scientists" programme during the fair.

The construction of annex building for expansion will start shortly. The work is being carried out by Hooghly River Bridge Construction. All statutory clearances from different quarters have already been obtained. The progress of work is being closely monitored by us along with Department of Higher

Education, Science & Technology and Biotechnology, Government of West Bengal. We are grateful to Hon'ble Chief Minister of West Bengal to take special initiative to set up this Innovation Centre for young talents after visiting our campus in June, 2015.

In the meantime, there is extreme shortage of space in the old building, the third floor of the existing building is being constructed by Public Works Department (PWD) with temporary structure. The work is expected to be completed in next three to four months. Two class rooms and one medium size meeting room will be created through this construction. Tender for this has already been advertised. Fund has been provided by Department of Higher Education, Science & Technology and Biotechnology, Government of West Bengal.

A state of art Biotechnology laboratory is being set up for the Secondary and Higher Secondary students to create interest regarding biotechnology. Practical classes for the Secondary and Higher Secondary students will be organised here during Students' camps. I am happy to inform you that erstwhile Biotechnology Department, now merged and emerged as Department of Higher Education, Science & Technology and Biotechnology, Government of West Bengal has not only provided fund for augmentation of the laboratory, but also provided a Project Scientist and two project assistants for coming five years for mentoring and looking after this laboratory. The work of laboratory is almost completed and will start functioning shortly.

Albert Einstein once said "Imagination is more important than knowledge". Unfortunately the burden of syllabus and peer pressure for so called "achievements" in examinations is forcing our young talents to forget all imagination and to pursue in a mechanical manner for carrier building. In JBNSTS, we on the other hand, want to ignite imagination among these young talents for building up a strong and well-built scientific manpower base for our nation. I really dream that with participation, support and encouragement of all sections of Society, it will be possible for us to produce many such talents who will rule the world of science and JBNSTS will be acclaimed universally for creating such scientific manpower.

"You may say I'm a dreamer. But I'm not the only one. I hope some day you'll join us."

Thank you all!!!

Prof. (Dr.) Maitree Bhattacharya

Director of JBNSTS

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 ACTIVITIES

- ✓ The JBNSTS Senior Talent Search Test
- ✓ The JBNSTS Junior Talent Search Test
- ✓ The JBNSTS District Schools Program
- ✓ The JBNSTS Teacher Training Program
- ✓ Scholars' Nurture Program
- ✓ JBNSTS-DST-INSPIRE Science Camps
- ✓ Research and Innovation



Dr. Paromita Roy



Prof. (Dr.) Maitree Bhattacharyya



Mr. Joydip Das



Dr. Abhijit Kar



संस्कृतं विद्यायां विद्यायां विद्यायां



Dr. Smarajit Manna



Mr. Prasenjit Chakraborty

ORGANISATIONAL STRUCTURE OF JBNSTS



Mr. Basudeb Dutta



Mr. Dipankar Sarkar



Dr. Pijush Basak



Ms. Swapna Dey



Ms. Puspa Biswas



Mr. Tanmoy Paul



Mr. Ranjit Kumar Mallick



Mr. Pushkar Naskar



स जीवति मनो यस्य मननेन हि जीवति



Mr. Sougata Roy



Mr. Sudip Das

ORGANISATIONAL STRUCTURE OF JBNSTS



Ms. Sanchari Chattopadhyay



Ms. Sweta Chakraborty



Mr. Sanjay Dutta



Ms. Paromita Majumder



Mr. Debnarayan Mukherjee



Ms. Monalisha Char



Mr. Mahadev Das



THE JBNSTS SENIOR TALENT SEARCH TEST

**Starting from 1958,
this talent search
test is a unique
one to identify the
original talents**

JBNSTS SENIOR TALENT SEARCH TEST

Jagadis Bose National Science Talent Search (JBNSTS), an autonomous institute under Department of Higher Education, Government of West Bengal, conducts the Senior Scholarships Test, since 1958. JBNSTS is the oldest and first Talent Search Institute of India and this very prestigious scholarship is very well recognized across the globe. This Senior Scholarship program is unique of its nature and very thoughtfully designed to motivate, identify and nurture Undergraduate Students studying Basic Sciences, Engineering & Medicine in the recognized institutes of West Bengal. Talented students are identified through a unique and rigorous process followed by series of different research and nurturing activities. This talent search test has been recognized by DST, Govt of India.

JBNSTS SCHOLAR SELECTION PROCESS

Selection of JBNSTS scholars takes place through multi-phased selection process which includes the following:

<p>(Written Test (First Phase) 100 Marks</p>	<ul style="list-style-type: none"> • Three hour written test takes place at several examination centres across West Bengal. • JBNSTS designed their own method of testing & identification of talented students of STEM and it is very well recognized for its uniqueness, nationally & internationally
<p>Personal Interview (Second Phase) 100 Marks</p>	<ul style="list-style-type: none"> • After got screened through the written examination students are exposed before the nationally & internationally acclaimed scientists who judge their level of confidence & ability to think differently & innovatively & identify the scientific talent and curiosity of the students toward research/ technology • During this personal interaction students are encouraged to activate their capacity to think on their own & defend their ideas towards the innovation and developments of science & technology.
<p>Scientific Creativity Test (Third phase) 100 Marks</p>	<ul style="list-style-type: none"> • Finally the students who succeed the first two phases are called for this third phase known as “Scientific Creativity Test”. Here the ability of the candidate is judged via handling of scientific problem which may or may not have any definite standard solution. This is an open book residential test, candidates are asked to spend 36 hours at our centre to think/work on different challenging problems given to them. He/she is allowed to consult books and allowed to discuss with other candidates in a relaxed manner. The candidate presents and defends on his/her chosen problem on the next day before a panel of judges, the mode of approach to solve the problem by the candidate is evaluated by panel members.

Finally the students who qualify in the SCT are identified as JBNSTS scholars.

AWARDS OF JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH SENIOR SCHOLARSHIP TEST

These scholars are awarded with the certificate and insignia during our Annual Award Ceremony every year.

- The selected candidates of batch 2017 will be awarded a scholarship amount of Rs. Four Thousand (Rs. 4000/-) per month in case of students of medicine and engineering, till they complete their graduation. These scholars' from medicine & engineering will receive the Annual Book Grant Rs. Five Thousand (5000/-) per annum. All these scholarships are sponsored by Dept. of Higher Education Science & Technology and Biotechnology, Govt. of West Bengal.



- Since the DST-INSPIRE Govt. of India, recognized JBNSTS talent search examination, the candidates selected from basic science are entitled to avail the DST-INSPIRE scholarship & research grant of Rs. Eighty Thousand (Rs.60,000/- + Rs. 20,000/-) per annum till completion of Masters degree.

The scholars are assigned to carry out a short & innovative research project for one year after their selection and on final presentation; the best three projects gets the MEDHA SAMMAN award every year.

ELIGIBILITY FOR JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH SENIOR SCHOLARSHIP TEST

- (1) The applicant must be Indian National
- (2) The applicant must have passed the Higher Secondary or equivalent exam in the year of application and must be studying B.Sc. (Hons.), Engg. or Medicine in any institution which is registered in West Bengal.

APPLICATION PROCEDURE FOR JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH SENIOR SCHOLARSHIP TEST

IMAGINATION IS MORE IMPORTANT THAN KNOWLEDGE. KNOWLEDGE IS LIMITED BUT IMAGINATION ENCIRCLES THE WORLD.

Albert Einstein

Eligible candidates are required to apply for the examination. Details of the examination schedule etc. are advertised in the leading newspaper after the publication of result of plus two level examination in West Bengal state and also at our website i.e. www.jbnsts.org Interested and eligible student can download the application form and the admit card from our official web portal.

The students can also collect the application form and admit card by post and from our office. If the candidate needs more details regarding this Senior Scholarship Test, they may contact the JBNSTS office, or write to scientific officer/ in-charge of the examination.



FACT SHEET FOR JBNSTS SENIOR TALENT SEARCH TEST 2017

The list of centres in 2017 is provided below :

Sl. No.	Centre
1	A B N Seal College, Coochbehar
2	APC Roy Govt. College, Siliguri
3	Balurghat College, Balurghat, DakshinDinajpur
4	Bidhannagar College, Kolkata
5	Burdwan Raj College, Burdwan(East)
6	BarrackporeRashtraguruSurendranath College, North 24 Parganas
7	BankuraSammilani College, Bankura
8	Barasat Govt. College, Barasat, North 24 Parganas
9	Dhablat L.P. High School, South 24 Pgs
10	DumDumMotijheel College, North 24 Parganas
11	Eklavya Model Residential School, Jhargram
12	Fakir Chand College, Diamond Harbour, South 24 Parganas
13	Gupta College of Technological Sciences,Asansol, Burdwan(West)
14	Hooghly Mohsin College, Chinsurah, Hooghly
15	Indian Institute of Technology,Kharagpur,PaschimMidnapore
16	J. K. College, Purulia
17	Jadavpur University, Kolkata
18	Krishnagar Collegiate School, Nadia
19	Krishnath College, Berhampore, Murshidabad
20	Midnapore College, PaschimMidnapore
21	Muragachha Govt. College, Nadia
22	Malda College, Malda
23	NarasinhaDutt College, Howrah
24	NIT, Durgapur,Burdwan (East)
25	Prabhat Kumar College, Contai, PurbaMedinipur
26	Presidency University, Kolkata
27	R.K.M. Vidyamandira,Belurmath, Howrah
28	R. K. M. Residential College, Narendrapur, South 24 Parganas
29	RaiganjSurendranathMahavidyalaya
30	VisvaBharati, Shantiniketan
31	Vidyasagar College, Kolkata

Timeline for the Senior Talent Search Examination

PHASE OF TEST	DATE	NUMBER OF CANDIDATES APPEARED
Written Test	20/08/2017	1471
Interview	09/09 - 10/09/2017	295
Scientific Creativity Test	13/10 - 15/10/2017	125

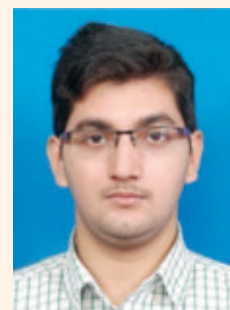
Results of the 58th STST was published on 24th October, 2017 and 90 students were selected to be JBNSTS scholar which included 40 students from Basic Sciences, 20 students from Medicine and 30 students from Engineering. These 90 students also include 22 girls and 68 boys.

BATCH OF JBNSTS SENIOR SCHOLARS 2017


SOUNAK MAJUMDER
MECHANICAL ENGG.
JADAVPUR UNIVERSITY,
KOLKATA



ANIRBAN MAJUMDER
CHEMICAL ENGG.
IIT, KHARAGPUR



VISHAL RAJ
ELECTICAL ENGG.
IIT, KHARAGPUR



SOURAV KUMAR
COMP. SCIENCE & ENGG.
JADAVPUR UNIVERSITY,
KOLKATA



ANNESYA BANERJEE
ELECT. & TEL. COMM. ENGG
JADAVPUR UNIVERSITY,
KOLKATA



ANUSKA DAS
ELECTRICAL ENGG.
JADAVPUR UNIVERSITY
KOLKATA



RANI CHATTERJEE
MBBS
NRS MEDICAL COLLEGE & HOSPITAL,
KOLKATA



SHARMISTHA CHOUDHURY
MBBS
MEDICAL COLLEGE,
KOLKATA



SUPRATIM SARKAR
MBBS
MEDICAL COLLEGE,
KOLKATA



DEBAJIT GHOSH
MBBS
NRS MEDICAL COLLEGE & HOSPITAL,
KOLKATA



RAMA RATHI
CHEMISTRY
KANDI RAJ COLLEGE,
MURSHIDABAD



UTSAV MISTRI
MBBS
MED. COLLEGE,
KOLKATA



SOHAM DAS
B. STAT
ISI, KOLKATA



ADARSH PATNAIK
MECHANICAL ENGG.
IIT, KHARAGPUR



ANINDYA MAITI
MBBS
MED. COLLEGE, KOLKATA



AGNIVO BANERJEE
BS-MS
IISER, KOLKATA



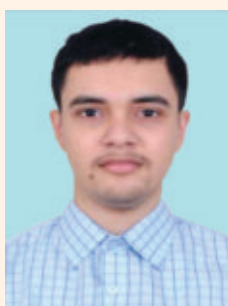
RAJNANDINI SAMANTA
BDS
GURUNANAK INST. OF DENTAL SC.
& RESEARCH, KOLKATA



SAYANTAN DAS
MBBS
R G KAR MEDICAL COLLEGE
AND HOSPITAL, KOLKATA



ARNAB ROY
MATHEMATICS
RK MISSION RESIDENTIAL COLLEGE,
NARENDRAPUR



ASIMPUNYA MITRA
EXPLORATION GEOPHYSICS
IIT, KHARAGPUR



WRICHEEK DUTTA
MBBS
CALCUTTA NATIONAL MED.
COLLEGE, KOLKATA



RUPAK MAJUMDER
PHYSICS
RK MISSION RESIDENTIAL COLLEGE,
NARENDRAPUR



SWASTIK BISWAS
CHEMISTRY
PRESIDENCY UNIVERSITY,
KOLKATA



DEBJIT GOSWAMI
MBBS
MED. COLLEGE KOLKATA



IMAN BURMAN
ELECTRONICS & ELECT.
COMM. ENGG.
IIT, KHARAGPUR



SRIJITA KARMAKAR
BS-MS
IISER, KOLKATA



ANANDA SHANKAR LAHA
MECHANICAL ENGG.
JADAVPUR UNIVERSITY,
KOLKATA



ANITA PANDA
MBBS
MURSHIDABAD MED. COLL.
AND HOSPITAL, MURSHIDABAD



UDITA MUKHOPADHYAY
MBBS
MED. COLLEGE,
KOLKATA



ARGHYA CHATTERJEE
CHEMICAL ENGG.
JADAVPUR UNIVERSITY,
KOLKATA



SANKARSHAN SAHU
CIVIL ENGG.
IIST, SHIBPUR, HOWRAH



RUPAYAN SARKAR
MECHANICAL ENGG.
IIT, KHARAGPUR



SOUGATA DANDAPATHAK
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MEDINIPURE COLLEGE (AUTO.),
MEDINIPUR



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COMP. SC. & ENGG.
JADAVPUR UNIVERSITY, KOLKATA



SAYAN BHAKTA
PHYSICS
RK MISSION VIDYAMANDIRA,
BELURMATH, HOWRAH



SOUVIK KUNDU
ELECT. & COMM. ENGG.
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KOLKATA



MADHUMITA DUTTA
PHYSICS
LADY BRABOURNE COLLEGE
KOLKATA



AYSHI MUKHERJEE
PHYSICS
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PRESIDENCY UNIVERSITY
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KOLKATA



DEBDYUTI BHADRA
ZOOLOGY
RK MISSION VIDYAMANDIRA
BELURMATH, HOWRAH



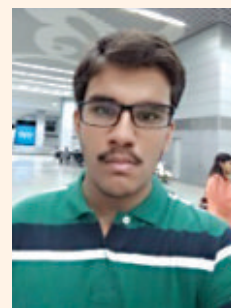
KAUSTAV BANERJEE
MBBS
R G KAR MED. COLLEGE AND
HOSPITAL, KOLKATA



SOUMYA KANTI DAS
ELECTRICAL ENGG.
JADAVPUR UNIVERSITY
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SOURAV PAUL
PHYSICS
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NADIA



KANISHK SINGH
COMP. SCIENCE & ENGG.
IIT, KHARAGPUR



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PHYSICS
PRESIDENCY UNIVERSITY
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SANDIPAN MANNA
PHYSICS
RK MISSION VIDYAMANDIRA
BELURMATH, HOWRAH



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PHYSICS
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IISER, KOLKATA



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PRESIDENCY UNIVERSITY
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CHEMISTRY
DINABANDHU ANDREWS
COLLEGE, KOLKATA



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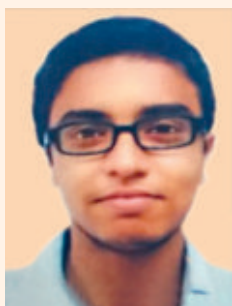
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STATISTICS
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KOLKATA



SUDEEP SHAW
MATHEMATICS
RK MISSION VIDYAMANDIRA
BELURMATH, HOWRAH



MAITREE PAL
MATHEMATICS
JADAVPUR UNIVERSITY
KOLKATA



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STATISTICS
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NARENDRAPUR, KOLKATA



ARIJIT GHOSHAL
CHEMISTRY
SURI VIDYASAGAR COLLEGE
BIRBHUM



SHATANIK BHATTACHARYA
PHYSICS
RK MISSION RES. COLLEGE
NARENDRAPUR, KOLKATA



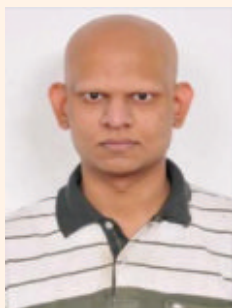
SAYAK CHATTERJEE
B. STAT
ISI, KOLKATA



RIFFAT AMIN
MBBS
CALCUTTA NATIONAL MED. COLLEGE
KOLKATA



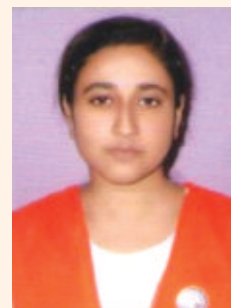
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MBBS
BURDWAN MED. COLLEGE
KOLKATA



GAMBHIRA SIRISH
ELECT. & ELEC. COMM. ENGG.
IIT, KHARAGPUR



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MIDNAPORE COLLEGE (AUTON)
MEDINIPUR



MANOSI DEBNATH
CHEMISTRY
LADY BRABOURNE COLLEGE
KOLKATA



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MBBS
NRS MEDICAL COLLEGE &
HOSPITAL, KOLKATA



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MBBS
CALCUTTA NATIONAL MED.
COLLEGE, KOLKATA



ARJAMA DAS
B. STAT
ISI, KOLKATA



SHUVAM CHOUDHURY
PHYSICS
CHAKDAHA COLLEGE
NADIA



ARGHYADIP DHARA
COMP. SC. & ENGG. HALDIA
INSTITUTE OF TECHNOLOGY
MIDNAPORE (E)



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MECHANICAL ENGG.
JADAVPUR UNIVERSITY
KOLKATA



SUPRAKASH PAUL
ELECTRICAL ENGG.
JADAVPUR UNIVERSITY
KOLKATA

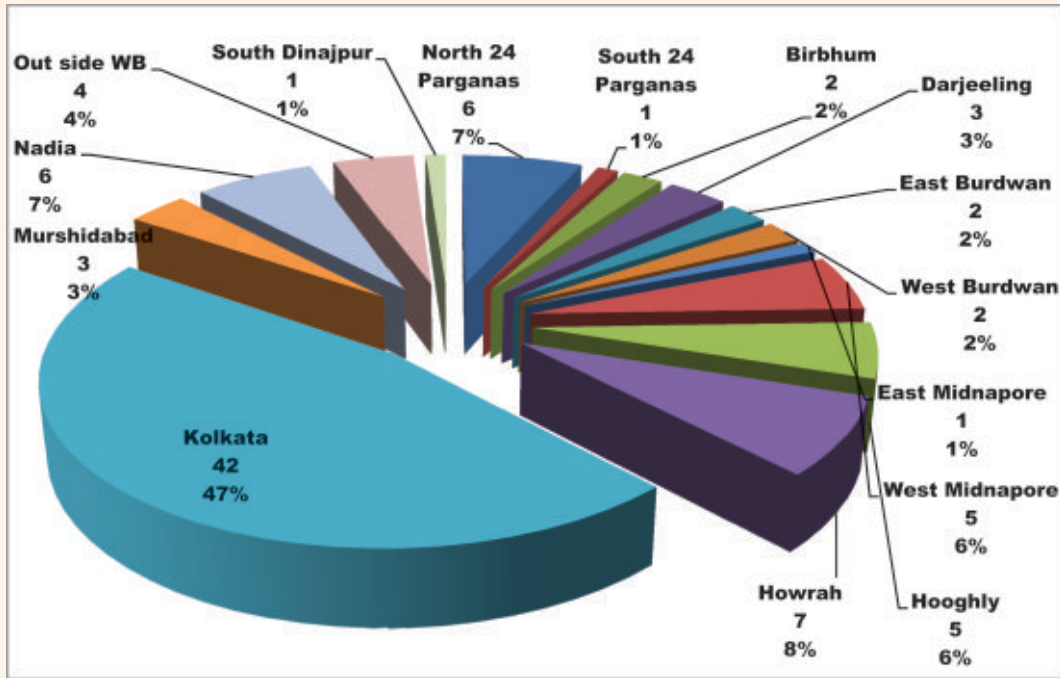


SUMIT KUMAR
ELECT. & TEL. COMM. ENGG.
JADAVPUR UNIVERSITY
KOLKATA



SUROJIT NASKAR
ELECT. & TEL. COMM. ENGG.
JADAVPUR UNIVERSITY
KOLKATA

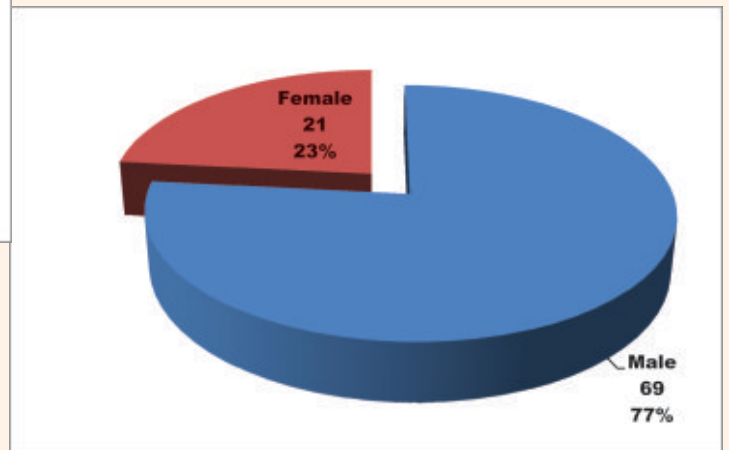
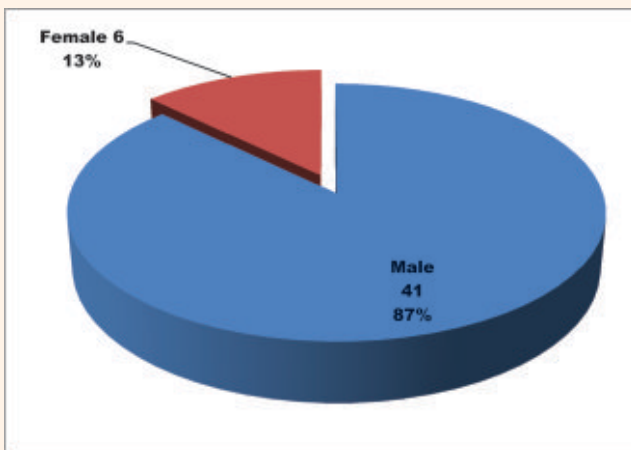
District wise distribution of JBNSTS Senior Scholars (90) based on their previous Institutions of study



Best School Award

This year the best school award goes for Ramakrishna Mission Vidyalaya, Narendrapur (S-24 Parganas) considering the maximum number of awardees passed their higher secondary examination from they institution. The award is given in the form of a Trophy and a Library Grant of Rs. (5000/-) Five Thousand.

Comparative Analysis of male female ratio in STST 2017&2016



SPECIAL AWARD FOR THE MOST PROMISING STUDENTS SELECTED IN STST-2017

In order to encourage the students to pursue higher studies, a laptop shall be awarded to the top 20 scholars (top 10 boys and top 10 girls ranked in the merit list). We believe this initiative (with financial support from Department of Higher Education Science & Technology and Biotechnology, Govt. of West Bengal) shall be highly supportive to the students for carrying out their advanced level of studies.

BIGYANI KANYA MEDHA BRITTI—A NEW ENDEAVOUR

Genesis of The Program :

Education is always considered as a human development index for any nation. The state of West Bengal has contributed a pioneer role in the development of the modern education system in our country. However it is observed that there is a significant deficiency of the woman scientists in Indian science & technology. The drop in female enrolment between primary and secondary education, and between secondary and tertiary education is steep due to many societal reasons.

JBNSTS has been working with the science talent search as well as development of human resources almost for the last six decades. From our past experience and considering the global scenario of the “women in science” and particularly where Indian women scientists are hugely under represented at the highest levels of academic recognition and honours; we decided to take some special initiative for the girls to encourage them to participate in science so that they can contribute towards the global development of science and technology. Thus, under the financial support of Department of Higher Education, Science and Technology and Biotechnology, Govt. of West Bengal, we have introduced this unique program for the promising girl students of science. Through this unique scheme “**Bigyani Kanyya Medha Britti**”, our focus is to encourage female students on tertiary education at the undergraduate and graduate levels.

Target Group/Eligibility : Girl Students passing (10+2) examination in 2017 from any board and studying/aspiring to study Medicine/ Engineering/ Basic Science (as per list of subjects considered by DST-INSPIRE) at their undergraduate levels in West Bengal. Selection shall be done through the JBNSTS Senior Talent Search Test 2017.

Scholarship & Facilities : A scholarship amount of **Rs. 2000/- per month** shall be awarded to them during their course of bachelors /masters (basic science) degree. A **annual book grant of Rs. 2000/-** shall also be given to the students for maximum up to 5 years, till

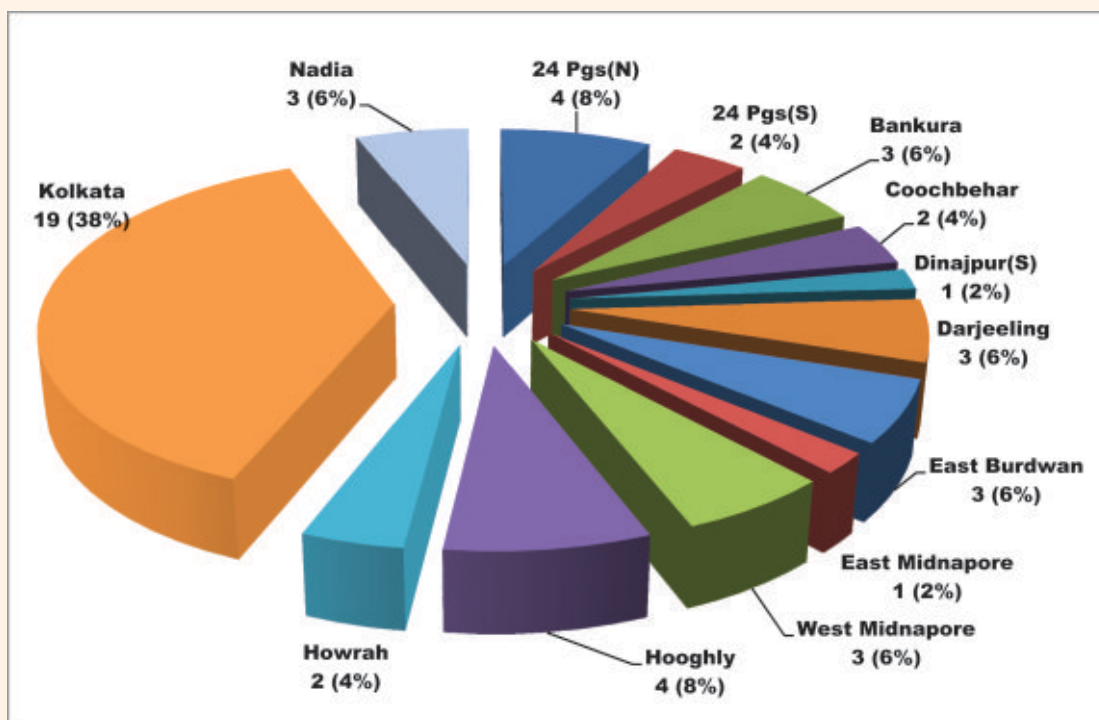
the completion of their master's degree (for basic sciences as per the subjects enlisted by the DST-INSPIRE, Govt. of India) and up to 4.5 years till the completion of bachelor's degree for the engineering/medical science students. Based on the annual availability of the fund, a modest funding can be made to enable these students to encourage and participate in science seminar, symposium, conference, workshop and to carry out small research project work. Students shall also be groomed through different nurturing camps, seminars and other enrichment programs. A student getting a scholarship from any other source would not be eligible for this Scholarship.

Important Dates & Information:

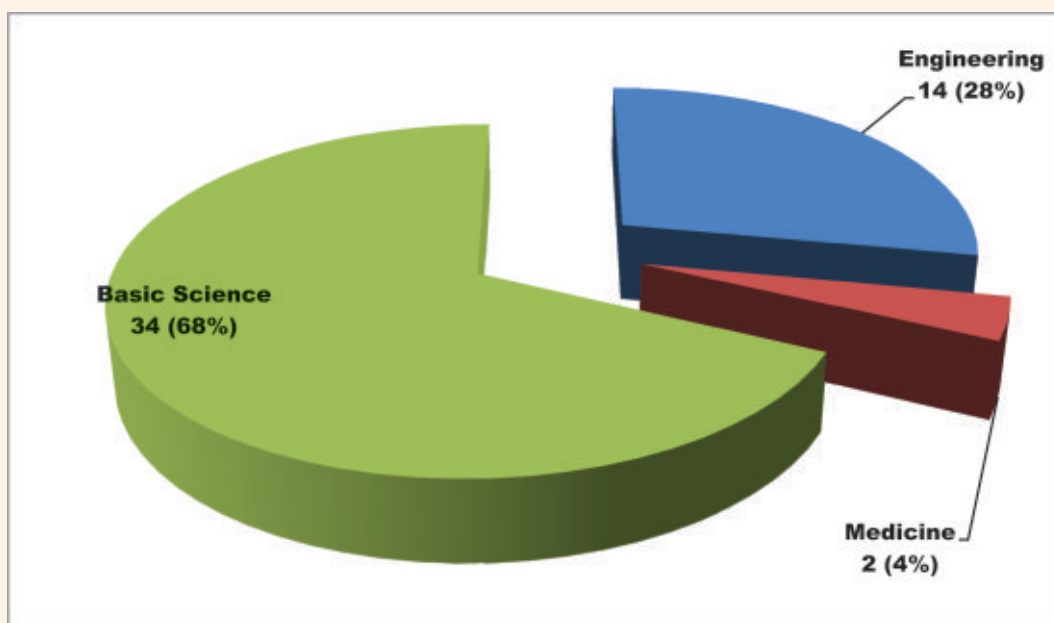
Examination & Selection: Selection examination (JBNSTS STST-2017) takes place at 31 different centres across West Bengal on 20th August 2017 (10:00AM-01:00PM). Where about **660 female candidates appeared** and through multi-phased selection process, 50 nos. of candidates were selected for Bigyani Kanya Medha Britti.

Syllabus: Written test was conducted based on the 12th standard syllabus on Physics, Chemistry, Mathematics, Biology. Students are exposed to short answer type subjective questions, solving problems and in-depth knowledge based questions.

**District wise distribution of students selected for the Bigyani Kanya Medha Britti -2017
Based on Previous Institution of study**



**Distribution of scholars selected for the Bigyani Kanya Medha Britti -2017
Based on their Present Stream of Study**



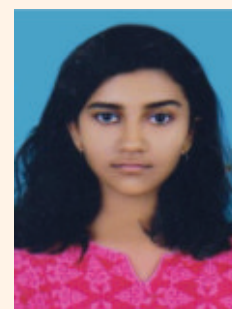
BIGYANI KANYA MEDHA BRITTI (BATCH 2017)



BIPASHA PANDIT
CHEMISTRY
VIDYASAGAR COLLEGE
KOLKATA



ANKITA RAKSHIT
POWER ENGG.
JADAVPUR UNIVERSITY
KOLKATA



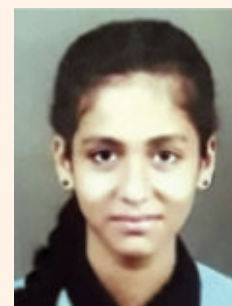
SANGHITA CHANDRA
BS-MS
IISER, KOLKATA



USHRI PATRA
BIOTECHNOLOGY
ST XAVIERS COLLEGE
KOLKATA



SAYANI CHANDA
CHEMISTRY
JADAVPUR UNIVERSITY
KOLKATA



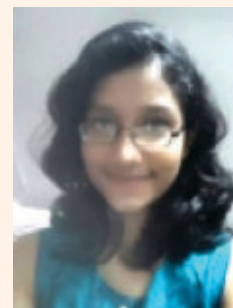
UPASANA GHOSH
COMPUTER SC. & ENGG.
RCC INST. OF INF. TECH.,
BELIAGHATA, KOLKATA



SHREYA MUKHERJEE
PHYSICS
SERAMPORE COLLEGE
HOOGHLY



ANWESHA PRADHAN
PHYSICS
LADY BRABOURNE COLLEGE
KOLKATA



TIASA SAHA
PHYSICS
LADY BRABOURNE COLLEGE
KOLKATA



KAUSHIKEE BANERJEE
MATHEMATICS
NARASINHA DUTTA COLLEGE
HOWRAH



BHASWATI GHOSH
MATHEMATICS
LADY BRABOURNE COLLEGE
KOLKATA



BHAGYASHREE BHATTACHARYYA
JUTE & FIBRE TECHNOLOGY
ACHARYA PRAFULLA CHANDRA
ROY SIKHSHA PRANGAN,
KOLKATA



REEJUTA KUNDU
MBBS
NORTHBENGAL MEDICAL
COLLEGE, DARJEELING



SUCHETANA SAMANTA
CHEMICAL ENGG.
JADAVPUR UNIVERSITY
KOLKATA



PRIYASHA SAMANTA
PHYSICS
GHATAL RABINDRASATABARSIKI
MAHAVIDYALAYA, MEDINIPUR



CHAITALI KARMAKAR
POLYMER SC. & TECH. ENGG.
UNIVERSITY OF CALCUTTA
KOLKATA



ADITI LAHIRI
MBBS
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KOLKATA



RIMI MONDAL
COMPUTER SCIENCE (HONS.)
BETHUNE COLLEGE
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LIFE SCIENCE
PRESIDENCY UNIVERSITY
KOLKATA



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COMPUTER SCIENCE & ENGG.
TECHNO INDIA
SALT LAKE



ZESMIN NAHAR KHATUN
CHEMISTRY
KRISHNAGAR GOVT. COLLEGE
NADIA



SRAMANA MAJUMDER
ARCHITECTURAL ENGG.
JADAVPUR UNIVERSITY
KOLKATA



ANUSHKA BISWAS
AGRICULTURE ENGG.
BIDHAN CHANDRA KRISHI
VISVAVIDYALAYA, NADIA



TRISHA TARAFDAR
MATHEMATICS
JADAVPUR UNIVERSITY
KOLKATA



SUSMITA NAG
CHEMISTRY
BERHAMPORE KRISHNATH COLLEGE
MURSHIDABAD



SHILPA DEOGHARIA
MATHEMATICS
PRESIDENCY UNIVERSITY
KOLKATA



SUTAPA CHONGDAR
MATHEMATICS
BURDWAN RAJ COLLEGE
BURDWAN



AVINANDITA MUKHOPADHYAY
BIOCHEMISTRY
ASUTOSH COLLEGE
KOLKATA



ANANYA ROY
COMP. SC.& ENGG. GOVT.
COLLEGE OF ENGG. & TEXTILE TECH.,
SERAMPORE, HOOGHLY



ANKITA DAS
MATHEMATICS
JADAVPUR UNIVERSITY
KOLKATA



PRIYANKA SAHA
PHYSICS
BETHUNE COLLEGE
KOLKATA



ANKITA NANDAN
MATHEMATICS
RAJA NARENDRA LAL KHAN
WOMENS COLLEGE, MIDNAPORE (W)



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CHEMISTRY
BETHUNE COLLEGE
KOLKATA



SAHANAJ SULTANA
MATHEMATICS
MUC WOMENS' COLLEGE
BURDWAN



MANAMI SANDEL
FOOD TECHNOLOGY
HALDIA INSTITUTE OF TECHNOLOGY
MIDNAPORE



SALMOLI CHANDRA
ELECT. & COMM. ENGG COLLEGE
OF ENGG. AND MANAGEMENT
KOLAGHAT, MEDINIPUR



DEBASMITA CHAKRABORTY
PHYSICS
BONGO BASI COLLEGE
KOLKATA



SASWATI BANERJEE
LEATHER TECHNOLOGY GOVT.
COLLEGE OF ENGG. & LEATHER TECH.
KOLKATA



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PHYSICS
APC ROY GOVT. COLLEGE
SILIGURI



GARGI BASU MALLICK
ZOOLOGY
KRISHNAGAR GOVERNMENT COLLEGE
NADIA



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CHEMISTRY
BETHUNE COLLEGE
KOLKATA



DEOTIMA CHAKRABORTY
JUTE & FIBRE TECH.
CALCUTTA UNIVERSITY
KOLKATA



SASWATA CHANDA
PHYSIOLOGY
VIDYASAGAR COLLEGE FOR WOMEN
KOLKATA



ARCHITA SAHU
PHYSICS
VISVA BHARATI UNIV.,
SHANTINIKETAN



PRATIMA PRADHAN
MATHEMATICS
CONTAI PK COLLEGE
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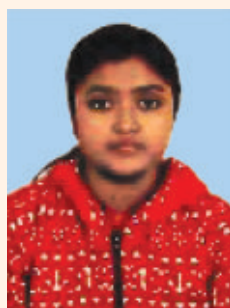
SHATOBHISA SEN
MATHEMATICS
BETHUNE COLLEGE
KOLKATA



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ELECTRICAL ENGG.
ADAMAS UNIVERSITY
KOLKATA



DEBANGKANA DUTTA
CHEMISTRY
GOKHALE MEMORIAL GIRLS COLLEGE
KOLKATA



ANKITA SAHA
PHYSICS
SILIGURI COLLEGE
SILIGURI



RIMICA DAS
CHEMISTRY
LADY BRABOURNE COLLEGE
KOLKATA







THE JBNSTS JUNIOR TALENT SEARCH TEST

**A new initiative
to explore
young talents
all over
West Bengal**

JUNIOR TALENT SEARCH TEST (JTST) - 2017

Inception of Junior Talent Search Test (JTST)

Jagadis Bose National Science Talent Search (JBNSTS) has been organizing Senior Talent Search Test or STST since 1960 in West Bengal. The objective of that was to identify, recognize and nurture the young and gifted minds who are at the threshold of proceeding into higher education in the state. The students studying in the disciplines of basic science, engineering and medicine are eligible for STST. JBNSTS by means of competence of more than fifty years of performance of STST conceived the idea of Junior Scholarship Test or JTST to explore talents among the students of 10th standard or Madhyamik (Secondary Examination) qualified students of the state.

In this context, it's worthwhile to mention about the wisdom and vision of our Hon'ble Chief Minister Ms Mamata Banerjee for materializing our proposal of JTST. The Department of Higher Education and Science and Technology took appreciation of our scheme and endorsed our project. Post successful commencement of JTST in 2015, 2016 saw a more pragmatic workflow in all respects for class XI science students panned across the state. The concept of JBNSTS touched the heart of students all over West Bengal, the success

of the project was expressed in the dimension of their participation in 2017.

Objectives and guiding principles of JTST

The aim of Junior Talent Search Test (JTST) is to identify, nurture and motivate the 10th standard qualified students studying science in 10+2 standard of West Bengal. The objectives are enumerated below.

- ❖ Encouraging and helping the proficient students to develop and grow the creative aptitude in education.
- ❖ Providing the students with financial support for pursuing science learning and education at higher level.
- ❖ Offering them vital exposure to the diverse world of science through workshops, symposiums, and lectures by esteemed scientists and professionals in the domain of science.
- ❖ To visit research laboratories, science institutions, Technology Centres etc. and to give the

students a firsthand experience of manifestation of perfection in their process of learning science.

- ❖ To teach them to correlate their education with the society to make our country self-reliant.

The identification process of these talented students is based on a meticulous two step/ phase selection procedure:

- ❖ **First Phase:** Written examination to evaluate the necessary knowledge and potential of students in science subjects.
- ❖ **Second Phase:** Interview of the written examination qualified students for assessment of the higher level of the subject and also gauging their creativity and rationale bent of mind.

Post identification, once the students are included in our fold, nurturing programs is regularly organized for the selected ones. They gain valuable insights by availing opportunities to interact with distinguished scientists and professionals from varied domains. They enjoy the ambience to work in the laboratory and the primary aim of this scheme is to enable the students associate themselves with hands-on activities, to explore multiple avenues of learning and development in keeping with science.

A few highlights regarding Junior Talent Search Test (JTST) 2017



Planning premise: The arrangement of Junior Talent Search Test (JTST) commenced once 2016

session was done away with. At the outset, the team started with the planning phase of the scheme initiating with a capacity building workshop of the employees of JBNSTS. This involved designing of posters and publicity materials for disseminating the information to respective quarters. Bilingual posters along with leaflets, fliers were formulated for awareness programs to schools and colleges.

Awareness Phase: JBNSTS went to an awareness drive post formulation of the plan for the entire test. The awareness campaign was launched in January and gained momentum for next six months. The schools, institutions and colleges were intimated through email, letters, telephone regarding JTST 2017 and our representatives travelled to a large number of institutions for making an impact for the said examination. Several awareness meetings were organized in different districts of West Bengal with the teachers of the schools. JBNSTS staff interacted personally with the teachers and students to circulate the relevant information amongst them for Junior Talent Search Test or JTST 2017.

Eligibility conditions: Students passing 10th standard with minimum 75 percent marks (overall) from any Board in 2017 and aspiring to study Science with the combination of any three of Physics/ Chemistry/ Mathematics/ Biology/ Statistics/ Computer Science.

Mode of application: Students were permitted to apply for JTST 2017 through both online and offline procedures.

Schedule of written examination: Written test was held on 20 August 2017 across all districts of West Bengal.

Scholarship number and amount: The amount of scholarship is Rs. 1000 per month and annual Book grant of Rs. 2500 for two years. Also, they are permitted to one-time book grant worth Rs. 2000 for all encouragement awardees. This year 200 Junior Scholars and 50 Encouragement Awardee have been selected by this rigorous procedure.



The entire program and scheme of things is funded by the department of Higher Education, Government of West Bengal.

Our support system: An excellent network of all education loving individuals of West Bengal is closely associated with JBNSTS. Starting from Vice Chancellors of Universities, Principals of Colleges, Headmasters and Headmistresses, numerous teachers, professors and scientists are the strong pillars of JBNSTS. They make our dream come true.



Venue details for JTST 2017

As many as thirty one (31) centers across the state provided their hosting for Junior Talent Search Test, 2017. A detailed list of examination centres along with number of students appeared are laid below.

Sl No.	Name of the Examination Centre	No. of Students present
1	A B N Seal College, Coochbehar	292
2	A P C Roy Govt. College, Siliguri	178
3	Balurghat College, Balurghat, Dakshin Dinajpur	87
4	Bankura Sammilani College, Bankura	392
5	Barasat Govt. College, Barasat, North 24 Parganas	212
6	Barrackpore Rashtraguru Surendranath College, North 24 Parganas	346
7	Bidhannagar Govt. College, Kolkata	80
8	Burdwan Raj College, Burdwan	379



Sl No.	Name of the Examination Centre	No. of Students present
9	Dhablat L.P. High School, South 24 Parganas	40
10	Dum Dum Motijheel College, North 24 Parganas	165
11	Eklavya Model Residential School, Jhargram, Paschim Midnapore	97
12	Fakir Chand College, Diamond Harbour, South 24 Parganas	204
13	Gupta College of Technological Sciences, Asansol, Burdwan (West)	76
14	Hooghly Mohsin College, Chinsurah, Hooghly	337
15	Indian Institute of Technology, Kharagpur	324
16	J. K. College, Purulia	169
17	Jadavpur University, Kolkata	363
18	Krishnagar Collegiate School, Nadia	223
19	Krishnath College, Berhampore, Murshidabad	291
20	Malda College, Malda	89
21	Midnapore College, Paschim Midnapore	572
22	Muragachha Govt. College, Nadia	69
23	Narasinha Dutt College, Howrah	270
24	NIT, Durgapur, Burdwan (East)	50
25	Prabhat Kumar College, Contai, Purba Medinipur	450
26	Presidency University, Kolkata	135
27	R. K. M. Residential College, Narendrapur, South 24 Parganas	167
28	R. K. M. Vidyamandira, Belurmath, Howrah	206
29	Raiganj Surendranath Mahavidyalaya	56
30	Vidyasagar College 39, Sankar Ghosh Lane, Kolkata	71
31	Visva Bharati, Shantiniketan	288
TOTAL		6678

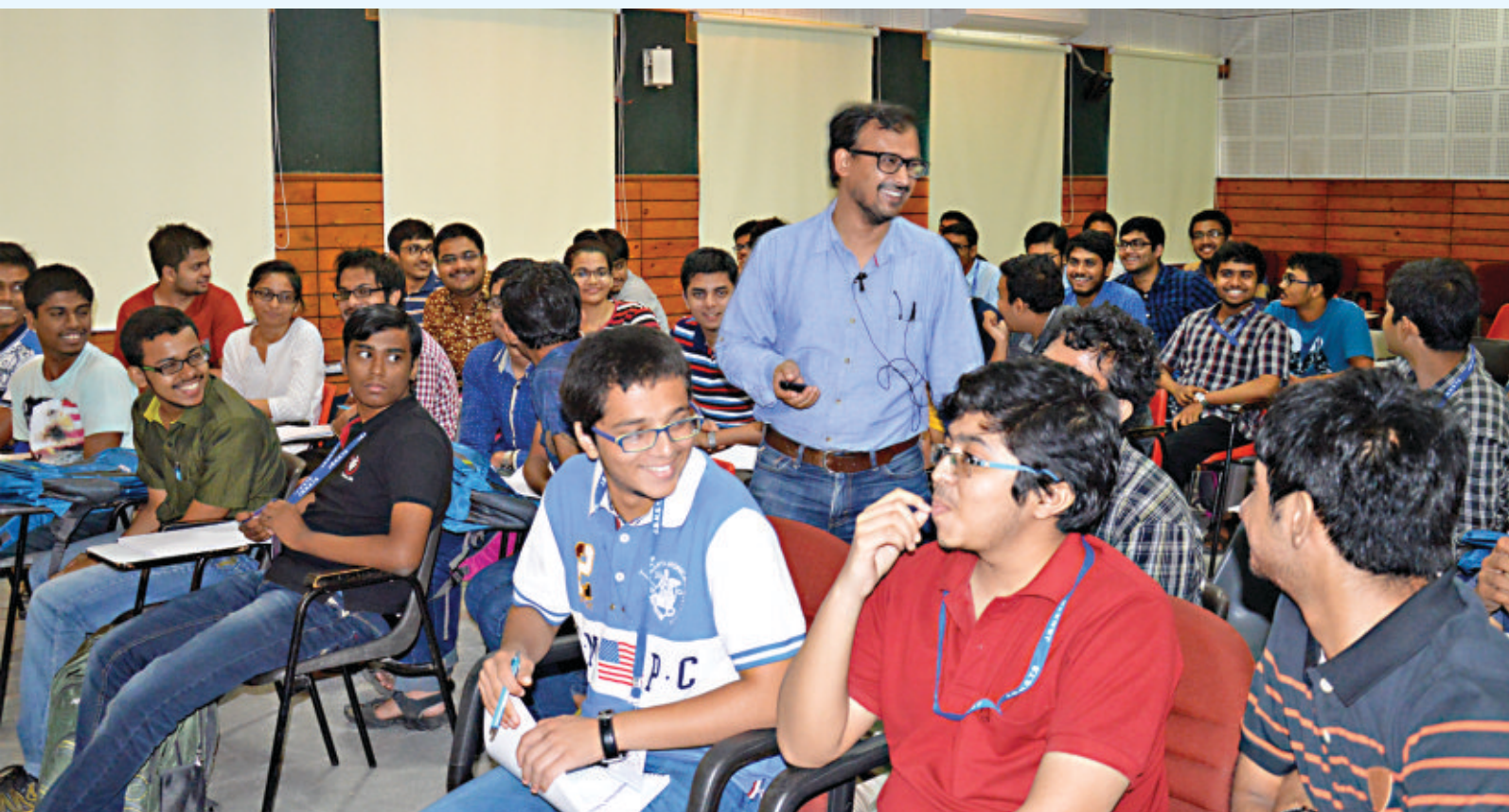


The above listing elucidates the examination centres under the fold of twenty (23) districts. Kolkata had highest number of centres in four (04), followed with South 24 Parganas which accounted for three (03) while Burdwan (West), Howrah, Midnapore (West), Nadia and North 24 Parganas recorded for two (02) centres each. The total number of students appeared for Junior Talent Search test was **6678**, out of which 430 students qualified for the 2nd phase examination, i.e., interview phase.



Nurturing workshop for JTST Scholars

Science workshops, symposiums have been the forte of JBNSTS which is governed by the scheme of “**Scholar Nurturing Initiative**”. They pave the foundation for enhancement of practical acumen of the subject. The students had the prospect of interacting with the stalwarts and engage in group activity for laboratory works. They were divided in groups comprising ten members each who conducted varied laboratory activities, under the supervision of expert resource persons (in-house and external both).



In keeping with this, JBNSTS organized residential workshops for 2015 and 2016 batch of JTST scholars spanning over four days for enrichment and fortification of their existing skills. The students had the opportunity to interact with reputed academicians and work in groups thereby augmenting group activity through learning. Both the workshops saw scholars thronging the corridors of JBNSTS and engaging into meaningful sessions of informative lectures and interesting hand-on activities.

Snapshot of workshops dated (3rd to 6th May, 2017) & (5th to 8th June, 2017):

Topics	Speaker(s)
High Energy Physics, Particle Physics	Prof. (Dr.) Amitava Raychaudhuri, Chairman, JBNSTS and Sir Tarak Nath Palit Professor of Physics, University of Calcutta.
Cosmology and different aspects of Physics	Dr. Arnab Kundu (Associate Prof, Saha Institute of Nuclear Physics, Kolkata)
Synthetic Biology and Genomic Research	Dr. Sangram Bag (Saha Institute of Nuclear Physics, Kolkata)
Spectroscopy and its application in Medical Diagnostics	Dr. Samir Kumar Pal (Professor, S. N. Bose National Centre for Basic Sciences, Kolkata)
Uncertainty, Randomness & Statistics; Truth, Philosophy & Myth	Dr. Kiranmoy Das (Assistant Prof. Indian Statistical Institute, Kolkata)
Electrical Engineering and Nanoscale application	Dr. Chiroosree Roy Chaudhuri (Assistant Professor, IEST, Shibpur)
Nanoscience	Dr. Abhijit Kar (Scientific Officer, JBNSTS)
Evolution of painting, sculpture and art	Mrs. Oita Biswas (Art College, Kolkata)
How the world was created?	Dr. Dhruvajyoti Chattopadhyay (Vice Chancellor, Amity University Kolkata)
Human nephrology system	Dr. Abhijit Taraphder (Nephrologist, Apollo Hospital Kolkata)
Evolution of Ape and their behavioral ecology	Dr. Anindya Sinha (Professor, School of natural Sciences; IISc Bangalore)
Human genome	Dr. Partha Majumder (Professor, National Institute of Biomedical Genomics, Kalyani)
Statistical Analysis and its application in Medical Diagnosis	Dr. Nilay Kanti Das (Medical College, Kolkata)
Nanoscience and its Applications	Dr. Abhijit Kar (Scientific Officer, JBNSTS)
Bio- inspired Oxidation Catalysts for a sustainable future	Dr. Sayam Sen Gupta (Associate Professor, IISER Kolkata)

Topics	Speaker(s)
Role of Statistics	Dr. Antar Bandopadhyay (Associate Professor, Indian Statistical Institute, New Delhi)
Bioorganic and Bioinorganic Chemistry	Dr. Gouriprasanna Roy (Assistant Professor, Chemistry; Shiv Nadar University)
Robotics and its application in our lives	Dr. Subhasis Bhaumik (Prof. Aerospace and Engineering; IEST Shibpur)
Structural Biology and Biophysics	Dr. Oishee Chakrabarti (Associate Professor, Saha Institute of Nuclear Physics, Kolkata)
Guest Stars in the sky	Dr. Pratik Majumder (Associate Professor, Saha Institute of Nuclear Physics, Kolkata)
World of Physics	Dr. Arghya Taraphder (Professor, Nanoscience IIT Kharagpur)
Statistics and its basic application	Dr. Kiranmoy Das (Assistant Professor, Indian Statistical Institute, Kolkata)
High Energy Physics and the Experiments at CERN	Dr. Suchandra Dutta (Saha Institute of Nuclear Physics, Kolkata)
Geology and treasures	Dr. Pulak Sengupta (Professor, Geological Sciences, Jadavpur University)
Motivational Lecture	Dr. Shibaji Raha (Senior Professor, Physics, Bose Institute)

There were also classes for interactions of the young scholars with painters, actors and professionals apart from the field of science. JBNSTS recognizes the role of creativity and talents in other spheres of life and attempts to expose our scholars to that.



JBNSTS JUNIOR SCHOLARS 2017

ABHRADEEP SARKAR



ANUBHAB ROY



PULAKESH BAG



RISHAV DEY



ANUBHAV GOSWAMI



INDRANIL RAY



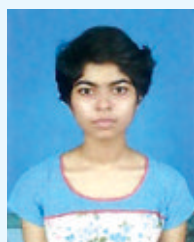
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ARITRA KONAR



KAZI FAIAZ AHMAD



SUBHABRATA GHOSH



SAYAK MAJUMDAR



SUJASH PAL



SAUMYOJYOTI SARKAR



ABHIRUP GHOSH



SHUBHAJIT MAJI



SOUMYAJIT MANNA



PRANAYAN METIYA



ATREYI CHANDA



SAGNIK CHAUDHURY



DEBJYOTI PAL



DEBOJJAL BAGCHI



RAJDEEP GHOSH



SRIJITA DUTTA



ANIKET BASAK



ANKAN SARKAR



SYED ROSHAN ALI



SAUTAM BHATTACHARYA



SAYAN SARKAR



AMRAPALY GHOSH



BAPPA NASKAR



TITHI KAR



ABHIJIT SAHOO



SWAGATA
MUKHOPADHYAY



SOHOM GUPTA



SAYAN OJHA



MOJAMMEL HAQUE



NITYANANDA MAHATO



SHUBHAM KAR



ARINDAM MAJEE



ANURAG MITRA



MD SIRAJUL BASIR



MOUNADEEP SAHA



SAYAK CHAKRABORTY



ADITYA BASU



ARKA DUTTA



SHANKHA PAL



SATYAJIT BACHHAR



ANURAT
BHATTACHARYA



ARIJIT SAHA



KOUSTAV SINHA RAY



SUKRIYO
CHAKRABORTY



SOUMYADEEP
BISWAS



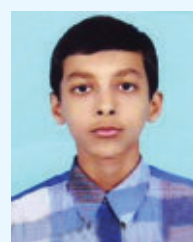
SUBHAYAN NATH



VINOBA PANDEY



ABHISHEK SARKAR



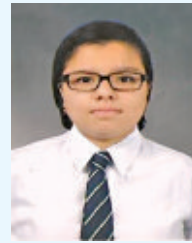
MD MASUM AKHTAR



APAN DINDA



SUBHRO PAUL



KRITEE ADHIKARY



SOURIN CHATTERJEE



DIPANWITA NAG



SUBHAJIT GHOSH



ANUBHAV DUTTA



SUNANDA MANDAL



SOUMYADIP DHARA



HRITWIK CHATTERJEE



AZMINA UROOJ



ANUBHAB GHOSH



PULAK KUMAR GHOSH



JAGANNATH ROY



SWATI CHAKRABORTY



SOUGATA SARKAR



KRITEKA CHOUDHURY



SOUNAK MAJUMDER



KUNTAL SAHA



SAYAN MAITY



OSCAR DEY



SHANTI SWARUP DAS



RUMELI GIRI



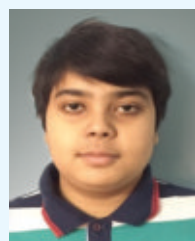
ROUDRANIL DAS



ARUSHI TANDON



AVIRUP DE



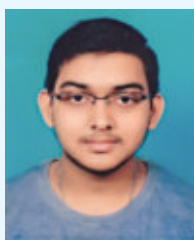
ARKA CHOUDHURI



AYUSH CHAKRABORTY



TANVEER ISLAM



BISWAJIT GHOSH



ANINDYA SIKDAR



DEBADRI SENGUPTA



ANIK MONDAL



HRISHIRAJ MALLICK



ANKAN MAITY



ARITRA NATH



WRICHIK BASU



SOUMADIPTA BISWAS



ATANU DATTA



RISHANT PAL



RITADIP BHARATI



DIPRANJAN DEY



ARPAN KUMAR CHAKI



RAJEET GHOSH



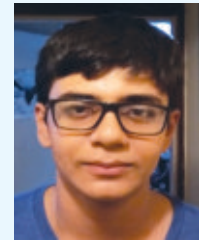
ARINDAM GHARA



RITAM DAS



ANATAP MITRA



ARJO DASGUPTA



ADRIRAJ TALUKDAR



AVANTEEKA GANGULY



ARNAB BHAKTA



RUDRA NATH MISTRY



PRAMIT KUMAR
CHANDRA



UMESH SOW



MOHIUDDIN MONDAL



BAIVABI
BHATTACHARYA



SUBHAJIT PATRA



PULAMA MONDAL



SAIKAT GHOSH



SAGNIK SARKAR



MANIRUL HOSSAIN



KUMARDIP BASAK



RIYA DAS



SOURADIP GUHA



PRITAM CHAKRABORTY



ASHIQ UR RAHMAN



MAINAK ROY



RAJDEEP TAH



PARICHAY GHOSH



PARTHA PRATIM DAS



NILARUN KOLEY



MD JAHID AKHTAR



ARKADEEP MITRA



ANKAN MALLICK



SANKALAN CHANDA



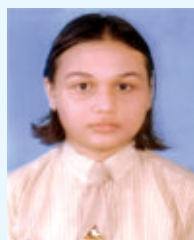
ARITRA MUKHERJEE



SABIR MONDAL



ASHIK IKBAL ANSARI



DEBADRITA ROY



SHARON UPLA



ABHISHEK MONDAL



ABU HASAN GAZI



ALAPAN DAS



ANIBRATA MAJEE



ANIKET MANDAL



ANISH MANDAL



ANUKABHA SARKAR



ANUPAM MAHATO



ANURAG MUNSHI



ARANYA DAS



ARIJIT DEY



ARITRA MAJUMDER



ARNAB GHOSH



ARPAN GHOSH



ARYA RAJA



AVRANIL MANDAL



AYANAVA MANDAL



AYONIL NANDI



AYUSH CHOUDHURY



BISHAL DUTTA



DEBBANI PATRA



DEBRATA SARKAR



DEBOJJAL DUTTA



DEEPANJAN
BHATTACHARYYA



DIPANKAR MONDAL



DWAIPAYAN GUHA



GURUDUTTA PAL



INDRASISH DEY



KANKANA KAPHA



MAYUKH RAYCHAUDHURI



NAYAN BANERJEE



PRITAM PATHAK



PROJJWAL GANGULY



PULASTYA BHATTACHARYYA



RIBHU BANERJEE



RITAM DEY



SAMIK MUKHOPADHYAY



SANANDITA DAS



SAPTASHWA MAITY



SARBARTHA GOSWAMI



SAUGATA BHATTACHARYA



SAURYA SIRCAR



SAYAN BANERJEE



SAYAN BISWAS



SAYAN BISWAS



SAYAN MISRA



SAYAN ROY



SHAYAK DUTTA



SHREYASHRI SARKAR



SOHAM BISWAS



SOMNATH BHATTACHARJEE



SRIJITA GHOSH



SUBHASISH MAJUMDAR



SUDIP GHOSHAL



SUNDHODEP ROY



SOUGATA MISTRI



SUPRIYO SEAL



SURJYANEE HALDER



SWASHWATA MUKHERJEE



TORSA PAIN

JBNSTS ENCOURAGEMENT AWARDEES 2017

Sl No.	Encouragement Awardees	Present Institution
1	Aindrila Maiti	DakshinMoyna High School (H.S)
2	Medha Mukhopadhyay	St. Stephens School Dumdum
3	Koushik Barai	ChakdahaRamlal Academy
4	Rajat Biswas	Krishnagar Collegiate School
5	Sandipon Sil	GobardangaKhanura High School
6	Anujit Maity	Kharagpur Atulmoni Polytechnic High (H.S) School, Kharagpur
7	Tunir Ghosh	St Stephens School
8	Utsav Thakur	R K Mission Vidyalaya, Narendrapur, Kolkata
9	Anjanashru Abhishek	BhavansGangabuxKanoriaVidyamandir
10	Dipayan Singha	Gorabazar I C Institution
11	Aniruddha Sarkar	Army Public School Barrackpore
12	Sayantika Hui	Midnapore Mission Girls High School, Midnapore (W)
13	Debolina Das	Bethune Collegiate School, Kolkata
14	Swarnaprobho Roy	AriadahaKalachand High School
15	Kaustav Mondal	JadavpurVidyapith
16	Dibyendu Mondal	Santipur Municipal High School
17	Santasree Banerjee	BhabansGangabuxKanoriaVidyamandir
18	Rishav Dutta	Delhi Public School Ruby Park
19	Sumouli Chakraborty	MakhlaDebiswariVidyaNiketan
20	Arnab Talukder	R K Mission Vidyalaya, Narendrapur, Kolkata
21	Shovan Mandal	BirbhumZilla School
22	Anish Sinha	KrishNath College School
23	Ananya Saha	ChakdahaBasantaKumariBalikaVidyapith
24	Samadrita Mondal	Satish Chandra Memorial School
25	Nirmalya Patra	UttarparaGovt High School
26	Puspendu Khan	Burdwan Municipal High School
27	Shruti Sahu	Mahadevi Birla World Academy

Sl No.	Encouragement Awardees	Present Institution
28	Jagrit Maiti	R K Mission Vidyalaya, Narendrapur, Kolkata
29	Deborup Sinha	St. Lawrence High School, Kolkata
30	Ahana Bhattacharyya	St. Luke's Day School, Naihati, North 24 Pgs
31	Kingkini Roychoudhury	G D Birla Centre For Education
32	Soumya Samanta	Nava Nalanda High School Hs Department
33	Snehansu Bisoi	SarengaMahatmajiSmritiVidyapith
34	Sougata Giri	Balighai F.D. High School, Medinipur (E)
35	Pritam Sur	Ramkrishna Mission Boys' Home High School, Rahara, Kolkata
36	Swagatalaxmi Datta	Rajgram Vivekananda Hindu Vidyalaya
37	Anik Mandal	Dav Model School
38	Sayak Atta	Howrah Vivekananda Institution
39	Mrinmoy Mondal	GobardangaKhantura High School
40	Arunavo Ganguly	Future Campus School
41	Arkoprava Ganguly	R K Mission Vidyalaya, Narendrapur, Kolkata
42	Prithwjit Dey	Rk Mission Vidyapith. Purulia
43	Sagar Chanda	Burdwan Municipal High School
44	Moulindu Mandal	Sudhir Memorial Institute
45	Debalina Das	Delhi Public School Ruby Park
46	Swarnajit Podder	BaranagarNarendranathVidyamandir
47	Subhrajit Sadhukhan	Baidyapur Ramkrishna Vidyapith
48	Jishnu Das	National Gems Higher Secondary School, Kolkata
49	BaibhabSaha	Aditya Academy Secondary
50	Manojit Khan	Kamalpur Netaji High School



“Take Risks in your life”

If You Win, You can Lead!
If you Loose, You can Guide!

– Swami Vivekananda



THE JBNSTS WEST BENGAL DISTRICT SCHEME PROGRAM

**An inspirational and capacity
building science program
for middle school
students and teachers from
district schools of West Bengal**

WEST BENGAL DISTRICT SCHEME PROGRAM

Despite India achieving all-round socio-economic progress through seven decades of its independence and modernization in education, science and technology, there is little improvement of nearly 60% of India's vast population who live in its villages and rural areas. Education plays an important role in the progress of an individual, the community, the country and finally the world. Education being one of the most important factors responsible to shape the personality of an individual has manifold functions. It is considered as a human development index for any nation and therefore it is in national interest that modern education should extend beyond cities to embrace students and teachers from rural areas.

There is no dearth of academic talent in India. However, due to the lack of awareness, inadequate educational facilities and low socio-economic status, these talented students from rural regions trail behind mainstream academics and professional careers. They neither get sufficient exposure to newer developments in science and technology, nor do they find opportunities to meet and interact with experts in the subject of science. Most children studying in district schools have very little exposure to science laboratories, contributing to a lifelong disadvantage that plagues them in higher studies. At an age when they are malleable, inquisitive, physically and intellectually energetic, the rigor of science learning baffles them. Their experience and knowledge of science gets trapped in limited school curriculum and passing of examinations.

West Bengal having played a pioneer role in the development of the modern education system in our country has been the leader of scientific and academic activities since long before independence in India. Scientists from West Bengal like *Jagadish Chandra Bose*, *Prafulla Chandra Ray*, *Radhanath Sikdar*, *Satyendra Nath Bose*, *P.C. Mahalanobis*, *Anil Kumar Gain*, *Meghnad Saha*,



Upendranath Brahmachari, Subhash Mukhopadhyay, Sisir Kumar Mitra, and many others attained great scientific achievements and played a significant role in the development of our country.

Quality is the most cherished goal of human endeavor and especially in the field of education. In order to meet the increased demand of quality education, governmental intervention and support is an urgent requirement. The growing population pressure and universalization of primary education, high dropout rates at the middle school level are important contributors also to a demand for quality education in middle school.

Unfortunately, in the rural areas the insufficiency of teachers and lack of infra-structure, extreme poverty are the reasons which make the education scenario really difficult and quite alarming in our country. Under these circumstances, issues such as innovative teaching, student's motivation and attending to their special needs are rarely addressed. This is therefore, an area where intervention is urgently needed.

The West Bengal District Scheme Program of the JBNSTS for middle school students, which has been in existence since 1998 with support from Government of West Bengal aims to create a better learning platform for middle school students through rigorous and innovative methods of science teaching. In this program, JBNSTS aims to motivate students in the age group of 12-14 years of the district schools of West Bengal towards learning of science using innovative and interactive methods. JBNSTS designs and implements science programs for moderate or high ability students from Grades VIII & IX. Approximately 6000 students from district level schools (rural or semi rural backgrounds) have already been nourished under the ambit of this program till now.

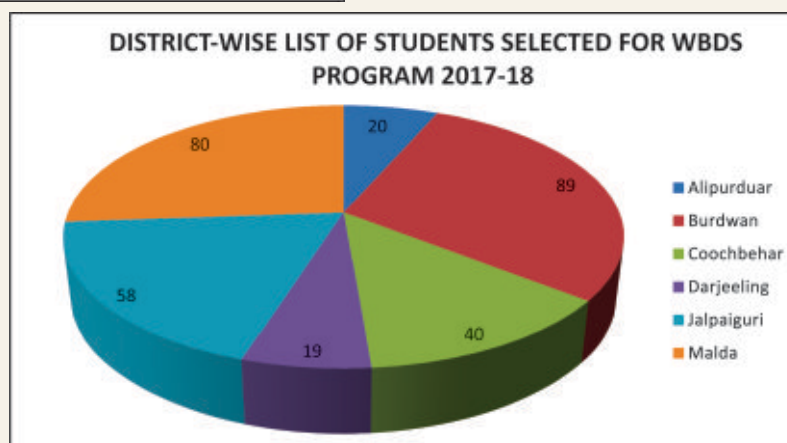
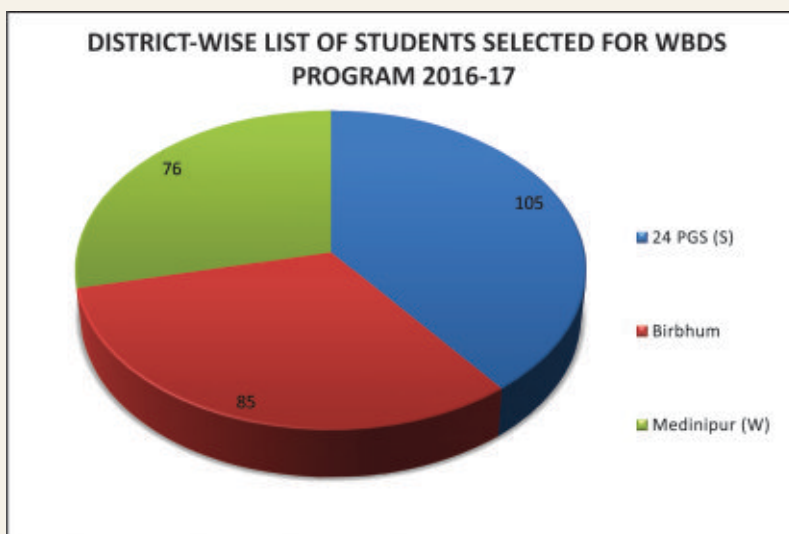


**List of Selected schools in 2016-17**

A. Birbhum Zilla School, Birbhum
B. Eklavya Model Residential School, Jhargram
C. Ghutiari Sharif B.M. Vidyapith, South 24 parganas
D. Janapriyanagar Janapriya Vidyalaya, South 24 parganas
E. Jhargram Kumud Kumari Institution, West Midnapore
F. Kakdwip Birendra Vidyaniketan, South 24 parganas
G. Khanshaheb Abad High School, South 24 parganas
H. Nalhati Hariprasad High School, Birbhum
I. Rani Benode Manjari Government Girls School, West Midnapore
J. Suri Public & Chandragati Mustafi Memorial High School, Birbhum

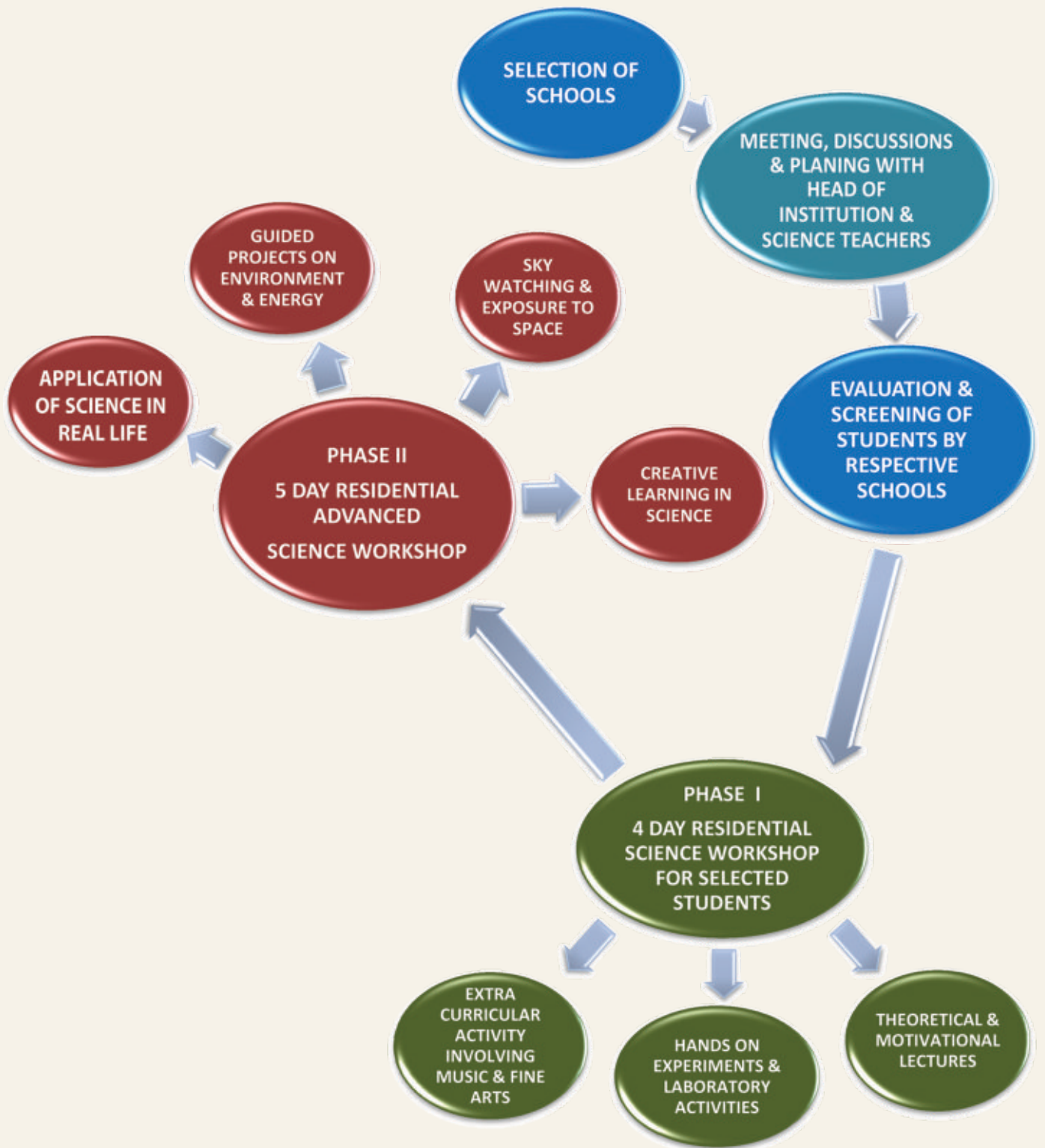
List of Selected schools in 2017-18

A. Krishnapur High School, Burdwan
B. Udaypalli Siksha Niketan, Burdwan
C. Malda Girls High School, Malda
D. Raina Jagatmata Balika Vidyalaya, Burdwan
E. Burdwan Municipal Girls High School, Burdwan
F. Lalit Mohan Shyam Mohini High School, Malda
G. Malda CC Girls High School, Malda
H. Malda Town High School, Malda
I. Raina Swami Bholananda Bidyatan, Burdwan
J. Jalpaiguri Government Girls High School, Jalpaiguri
K. Sunitibala Sadar Girls High School, Jalpaiguri
L. Tarai Tarapada Adarsha Vidyalaya, Siiguri
M. Dinhata High School, Coochbehar
N. Mathabhanga High School, Coochbehar
O. Railway Higher Secondary School, Alipurduar
P. Bairatguri High School, Dhubguri, Jalpaiguri



Events in the Calendar Year 2017

January & February 2017	WBDS Students Advanced Science Workshops (5 workshops of 5 days each (2016 batch; Phase II) involving 15 schools).
April 2017	Science Orientation workshops in Science for 133 Class X passed girl students from Bengali and English medium schools (2 workshops of 3 days each involving 33 schools).
May 2017	<ul style="list-style-type: none"> Meeting with Heads of Institutions of the selected schools in three districts. Selection of top 20 students of classes VIII & IX students from 16 schools (4 from Malda, 5 from Burdwan, 7 from Hill districts of North Bengal)
July 2017	Science Experiment Demonstrations and Interaction held with approximately 300 students from 11 Eklavya Model Schools of West Bengal at Eklavya Model Residential School, Jhargram.
June & July 2017	Science workshops for selected students (5 workshops for 5 days each), (2017 batch : Phase I) involving students from 16 schools.





Meeting with Heads of Institutions and science teachers of 16 district schools from North Bengal, Malda and Burdwan

List of Experts

- Sri Abhijit Kar, JBNSTS, Kolkata
- Sri. Abdul Halim Seikh, Sri Ramakrishana Ashram Institute, Harinavi, Kolkata
- Sri. Abhrajyoti Ghosh, Bose Institute, Kolkata
- Smt. Anindita Ukil, University of Calcutta, Kolkata
- Smt. Anupama Sengupta, Formerly of Jadavpur Balika Vidyapith, Kolkata
- Smt. Anuradha Lohia, Presidency University, Kolkata
- Smt. Arati Mukhopadhyay, Howrah Jogesh Chandra Girls' High School, Howrah
- Sri. Arnab Chakraborty, Indian Statistical Institute, Kolkata
- Sri. Arnab Pramanik, Ballygunge Science College, University of Calcutta
- Sri. Arup Sengupta, Garfa DNM High School, Kolkata
- Sri. Asit De, Saha Institute of Nuclear Physics, Kolkata
- Sri. Bimalendu Bhusan Bhattacharya, SN Bose National Centre for Basic Sciences, Kolkata
- Smt. Chaitali Mukherjee, Santospur Rishi Aurobinda Balika Vidyapith, Kolkata
- Sri. Dhruvajyoti Chattopadhyay, Amity University, Kolkata
- Sri. Gautam Basu, Bose Institute, Maniktala
- Smt. Ketaki Mukhopadhyay, RG Kar Medical College, Kolkata



- Sri. Koushik Dutta, Saha Institute of Nuclear Physics, Kolkata
- Smt. Maitree Bhattacharya, JBNSTS, Kolkata
- Sri. Mrinal Kanti Sarkar, DPS School, Kolkata
- Sri. Mrinal Mukherjee, Bankura University, Bankura
- Smt. Paromita Roy, JBNSTS, Kolkata
- Sri. Partha Pratim Roy, Southpoint High School, Kolkata
- Sri. Parthasarathi Mukhopadhyay, RKM Residential College, Narendrapur
- Sri. Pijush Basak, Ballygunge Science College, University of Calcutta
- Sri. Pintu Sinha, Katwa Kashiram Das Inst, Katwa
- Sri. Pratik Majumdar, Institute of Nuclear Physics, Kolkata
- Sri. Pratyay Raha, Musician, Kolkata
- Sri. Prodyut Ghosh, Indian Association for the Cultivation of Science, Kolkata
- Sri. Punarbasu Chaudhuri, University of Calcutta, Kolkata
- Smt. Samita Basu, SINP, Saltlake, Kolkata
- Smt. Sanchari Chattopadhyay, JBNSTS, Kolkata
- Smt. Sanghamitra Sengupta, University of Calcutta, Kolkata
- Sri. Saptarshi Mondal, Tangrakhali PJP High School, 24 Pgs(S)
- Sri. Sehkar Banerjee, Consultants, Solar Technology, Kolkata
- Smt. Sharmistha Bhattacharyya, Ananda Ashram Balika Vidyapeeth
- Sri. Shyamal Chakraborty, University of Calcutta, Kolkata
- Sri. Siddhartha Sankar Chattopadhyay, Bidhannagar Govt. High School, Saltlake
- Sri. Smarajit Manna, JBNSTS, Kolkata
- Smt. Somdatta Ghosh Dey, Indian Association for the Cultivation of Science, Kolkata
- Sri. Somenath Bhattachryya, Climate Action Network South Asia (CANSA)
- Smt. Srimonti Sarkar, Bose Institute, Kolkata
- Sri. Soumitra Sengupta, IACS, Jadavpur, Kolkata
- Sri. Subir Bhattacharya, Dumdum Kishore Bharati, Dumdum
- Sri Subha Das Mollick, Bichitra Pathsala, Kolkata
- Sri. Subhadip Bose, Reciter, Kolkata
- Sri Subhankar Chowdhury, S S K M Hospital, Kolkata
- Sri. Subhankar Ghosh, St. Xavier's College, Kolkata
- Sri. Uttam Ghosh, Calcutta University, Kolkata

SOME OF THE INTERESTING TOPICS COVERED

Theoretical Lectures	Hands-on Experiments	
	Life Science	Physical Science
<ul style="list-style-type: none"> ● Physics and space science ● Life of great scientists ● General relativity and Cosmology ● Understanding complex nuances of mathematics through graphs and sums ● Beneficial microbes in daily life ● Can a molecule be a machine ● Understanding the Periodic Table ● Human body immune response ● Journey to Antarctica ● Green House Gas and its effects ● Genetic diseases and counseling 	<ul style="list-style-type: none"> ● Blood group analysis & microscopic observation ● Microscopic observation of Lactobacillus and other bacteria ● Chemical test for carbohydrate & protein ● Photosynthesis experiments ● Observations of plant and animal cells under microscope ● Qualitative identification of adulterated food elements ● Morphometrical study of fish 	<ul style="list-style-type: none"> ● Power calculation of Solar Energy ● Using telescope to watch at evening sky ● Efficient use of solar cells ● Principles of Electroplating through experiments. ● How bimetallic strip works ● General Chemical reactions and their conditions ● Archimedes principle: Buoyancy ● Physical properties of water



A mathematics session in progress with Shri Subir Bhattacharyya.



Experiments and student presentations



Glimpses of experimental sessions and Student presentations at the workshops

The WBDS Program for girl students

The WBDS-JBNSTS program for girls this year aimed at firing young girl students' imagination into scientific theories and practices. The goal of this program was to orient high school students from both city and district schools towards pursuit of science in higher education and encouraging them to take up new challenges in scientific studies. They were exposed to several scientists through lectures and interaction.

Two workshops were held in April 2017 for 65 girls from 16 Bengali medium schools and 68 girls from 17 English medium schools. The following schools participated enthusiastically.

Bengali Medium Schools	English Medium Schools
1 Ananda Ashram Sarada Vidyapith	Apeeejay School, Park Street
2 Behala Sarada Vidyapith for Girls	Apeejay School, Saltlake
3 Bethune Collegiate School	Ashok Hall Girls' High School
4 Binodini Girls High School	BDM International
5 Garia Harimati Devi Uccha Balika Vidyalaya	Bidya Bharati Girls' High School
6 Howrah Jogesh Chandra Girls High School	Ballygunje Siksha Sadan
7 Jadavpur Sammilita Balika Vidyalaya	Delhi Public School, Ruby Park
8 Kamala Girls High School	Loreto House
9 Khanpur N B S Girls high School	Mahadevi Birla World Academy
10 Lake School for Girls	National Gems Higher Secondary School
11 Nischinda Balika Vidyapith	National High School for Girls
12 Nari Binode Manjari Girls High School	Nava Nalanda
13 Rahara Bhabanath Institution for Girls	Patha Bhavan
14 Rishi Aurobindo Balika Vidyapeeth	Pranavananda Vidya Mandir, Durgapur
15 Sakhavat Memorial Govt. Girls High School	St. John's Diocesan Girls' H S School
16 Shyamnagar Balika Vigyalaya	United Missionary Girls' High School
17 Sri Ram Narayan Singh Memorial High School	



Students participating in a class of human genetics

Students in deep discussion and data gathering during an experiment



Dr Paromita Roy, JBNSTS in a counseling session with students

Outdoor experiments with enthusiastic girls at the JBNSTS terrace.



Prof. Anuradha Lohia, VC, Presidency University delivering the Valedictory Lecture to an enthralled audience



Dr Abhijit Kar and Dr Smarajit Manna , JBNSTS exposing students to the joys of experimentation in science



WBDS program for Ekalavya schools

Under its commitment to reach out to disadvantaged students of West Bengal, a daylong program was organized by JBNSTS at Ekalavya Model Residential School, Jhargram on 8th July, 2017. Director, JBNSTS and her team engaged in a daylong interactive experimental session with approximately 300 tribal students from all Ekalavya Schools in West Bengal assembling at the Jhargram campus. The students took deep interest in varied experiments under the mentorship of JBNSTS experts. The cooperation received from of EMRS, Jhargram faculty and administration was deeply appreciated.



An excited batch of students from tribal schools at ERMS, Jhargram



THE JBNSTS DST INSPIRE SCIENCE CAMPS

A grayscale image of a large, multi-story building, likely a university or research institution, is centered in the lower half of the page. The building is framed by a large, colorful circular graphic composed of several overlapping, curved lines in orange, green, blue, and purple. The text 'Students enjoy their learning. 56th Science camp is under way.' is overlaid on the image.

**Students enjoy
their learning.
56th Science
camp is under way.**

JBNSTS-DST INSPIRE SCIENCE CAMP

Education is what remains after one has forgotten what one has learned in school.

Albert Einstein



Innovation in Science Pursuit for Inspired Research (INSPIRE) is one of the novel initiative by the Department of Science & Technology, Govt. of India to create nonconventional science learning culture for young talents and attract them towards science and research. The basic objectives of INSPIRE program are to build a strong communication with the talented youth of the nation, be aware of the excitements of creative pursuit of science and get passionate towards the assimilation of learning science at an early stage. JBNSTS also attempts to stimulate the brilliant youth towards science and inculcate scientific thought processes in all walks of their life by giving them a chance to interact with scientists and experts in various fields of science. This venture is aiming towards strengthening and expanding the Science & Technology system and R&D base of the nation by building the required human resources. It also aims to excite the interns by exposing them to the global leaders in science including Nobel Prize Winners to experience the joy of innovations.

JBNSTS conceptualized with the mission to motivate the talented youth of West Bengal towards the study of science and pursuing scientific research. As this program was launched by DST, GOI in 2008 with similar intend, JBNSTS started collaborating for this noble cause by organizing INSPIRE Science camps. The first one came to its execution in June 2009 and will step for the 56th INSPIRE Science Camp in December, 2017. To harmonize the aim of the program, we put our best effort and receive colossal appreciation from all segments of the society.



JBNSTS, with its proficient expertise and experience, is considered as the pioneer institute of the nation for organizing INSPIRE science camps.

INSPIRE Science Camp : A unique learning experience

This program is devised by comprehending the inherent need of these young brilliant students.

Detonations of the young minds

Global leaders of science from different disciplines interact with the interns, discuss about the inter-disciplinary connections and motivate the intellects of the interns about the scientific obscurity. These interactions clear all possible doubts of interns and open newer horizons and ideas to pursue in future.



Learning by Experiment

Interns are allowed to think, design and perform experiments independently/group for their projects. Basic principles of research methodologies are being taught and exposed to several instrumental facilities such as, Source Measuring Unit, Metallurgical Microscope, Biological Microscopes, Scanning Tunneling Microscope, Centrifuge, UV-VIS Spectrophotometer, Millican Oil-drop Experimental Setup, Microbiological Experimental setup etc.

Project Presentation

Interns prepare projects based on their experimental work at JBNSTS laboratory and present before the panel of experts. They are trained towards the conventional way of systematizing scientific investigation i.e. tabulating & analyzing experimental data, drawing inference, making presentations and so on. This is an exciting experience to these young scientists which brings confidence in them.





Brain Storming

Cultivation of new and innovative ideas on the issues of national importance and express these thoughts in the form of a short article by the interns. Best three write-ups are selected through evaluation, awarded & sent to DST, GOI. Some unique and innovative ideas, by these young minds, might play vital role in solving the respective issues.

Revelation to the cutting-edge research

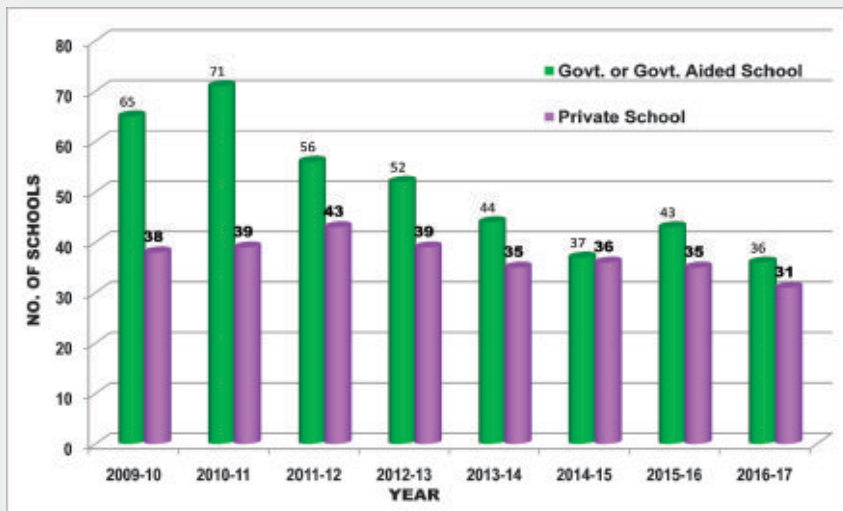
The flavour of modern day scientific research is provided to the interns through academic visit (one in each camp) to different R&D laboratories. The list includes:

- *Indian Association for the Cultivation of Science*
- *Indian Institute of Chemical Biology*
- *Central Glass and Ceramic Research Institute*
- *Saha Institute of Nuclear Physics*
- *Variable Energy Cyclotron Centre*
- *Centre for Research in Nanoscience and Nanotechnology*
- *National Institute of Biomedical Genomics*
- *ICAR Central Research Institute for Jute and Allied Fibres*
- *Birla Industrial and Technological Museum*
- *Science City*



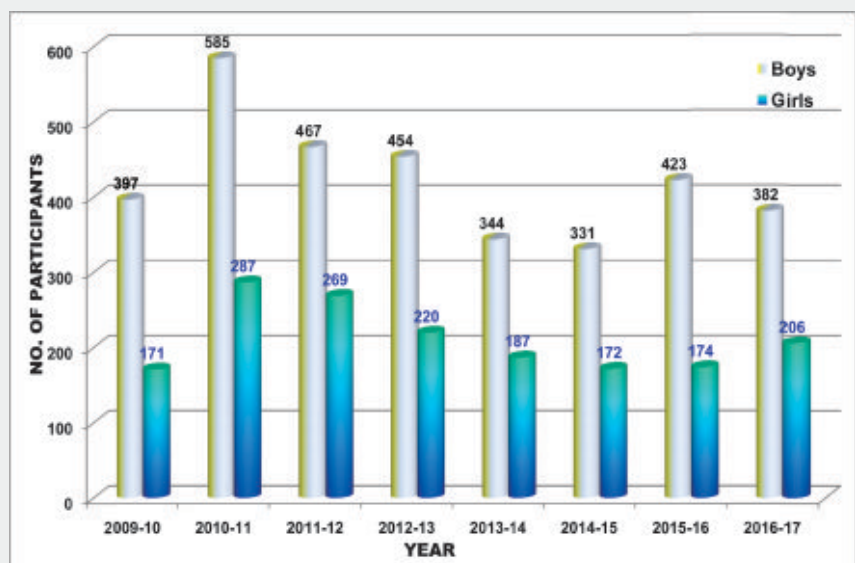
In A Nutshell....

Period	Camps	Interns	Schools	Mentors
2009 to 2017	55	5069 (Male:3383 Female:1686)	~ 700	~ 345



Participation from Govt. or Govt. Aided and Private schools at the INSPIRE Science Camp

Gender-wise participation at the INSPIRE Science Camp



**“Stay Hungry, stay foolish”
— Steve Jobs**

MOMENTS TO REMEMBER.....



Gracious presence of Ms. Mamata Banerjee, Hon'ble Chief Minister of West Bengal at JBNSTS is still considered as one of the memorable moments for JBNSTS. Talented young students of science from Govt. and Govt. aided Schools of rural Bengal, participants of INSPIRE Internship Science Camp, were deeply inspired by her soulful speech. Since then JBNSTS has initiated a lot of new programs to nurture young minds.



THE JBNSTS TALENT ENRICHMENT PROGRAMME

**Talent Enrichment
Program for
JBNSTS
Scholars**

Talent Enrichment Program for JBNSTS Scholars

JBNSTS has always aimed to expose the talented minds to the modern global scientific research rather than confining them only in classroom teaching. Thus, the purpose of Talent Enrichment Program (TEP) is to render the young scholars with a novel opportunity to visit esteemed scientific institutions of the country so that the scholars could perceive and be acquainted with the recent trends of scientific research, experiments and technological developments.

This year, forty (40) Senior Scholars participated in the TEP at Bangalore, during 15th to 23rd of June, 2017.

Snapshots of visit



Date	Venue
14-Jun-17	Arrival in Bangalore
15-Jun-17	Indian Space Research Organisation (ISRO) Satellite Centre National Aeronautics Laboratory (NAL)
16-Jun-17	Indian Institute of Astrophysics (IIA), Koramangala Campus Indian Institute of Astrophysics (IIA), CREST Campus, Hosekote
17-Jun-17	National Institute of Mental Health and Neuro Sciences (NIMHANS)
18-Jun-17	Bannerghatta Biological Park
19-Jun-17	Indian Institute of Science (IISC) Super Computer & Research Centre (SERC); IISC Department of Molecular Biophysics; IISC Department of Physics; IISC
20-Jun-17	Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR) National Centre for Biological Sciences (NCBS)
21-Jun-17	International Centre for Theoretical Sciences (ICTS) Genei Laboratory
22-Jun-17	Department of Earth Sciences, IISC Nanoscience & Engineering Department Indian Institute of Science; IISC
23-Jun-17	Ashoka Trust for Research in Ecology and the Environment (ATREE) Tipu Sultan Summer Palace Departure





The institutes arranged lectures and demonstrations for our scholars which provided an overwhelming experience for the scholars to accentuate their existing skills and scientific acumen for the days to come.

Interactions with renowned Scientists

JBNSTS being an esteemed scientific organization is well versed with the scientific developments and luminaries of science and technology. It's our privilege to welcome illustrious professionals who offer enlightening lectures and impart

invaluable discourses to our scholars.

During 2017, JBNSTS was obliged by the presence of Dr. Suvendra Nath Bhattacharyya (currently based with Indian Institute of Chemical Biology, Kolkata) recipient of Bhatnagar Award in Biological Sciences and National Bioscience, and Dr. Partha Sarathi Mukherjee (currently based with Indian Institute of Science, Bangalore) in Chemical Sciences for the year 2016, respectively.

NAL (CSIR) Senior Scholars at NAL (CSIR) Bengaluru during TEP in 2017



Scholars Speak/ Feedback

I am thankful to JBNSTS for giving me this wonderful opportunity to be a part of this awesome educational tour. It is a lifelong experience for me. It helped me a lot to decide my future goal. Thank you JBNSTS...

— **Arghadip Das**
(Electronics & Communications Engg.),
Jadavpur University

JBNSTS Senior Scholar (2016)



Finally we returned home with a treasure trove of memories and heavy heart that yearns to relive the bygone days. Thank you teachers, and thank you JBNSTS, for gifting us the best 10 days of our lives, till date!

— **Rumjum Mukherjee**
(Microbiology Hons.)
St. Xavier's College, Kolkata
JBNSTS Senior Scholar (2015)

I got the opportunity to observe such kind of laboratory experiments. I have been motivated enough. I will cherish this influence until when I can become a scientist doing the experiments in these great laboratories. And I have the belief, I will be able to deliver and return back something to the world of science!

— **Shraman Pramanick**
(Electronics & Communications Engg.),
Jadavpur University

JBNSTS Senior Scholar 2016



TEACHERS' TRAINING PROGRAM

JBNSTS – WAST-DST (WEST BENGAL) TEACHERS' TRAINING PROGRAM

Under the financial support from Department of Higher Education, Science & Technology and Bio-Technology, Government of West Bengal, JBNSTS has been conducting “Teachers' Training Program” to promote innovative and dynamic science teaching module among high and middle school level science teachers. This initiative will develop a functional scientific literacy to build up stronger future for young students through the teachers. The goal of this training program is to motivate the teachers so that they can teach science in more attractive ways and they can be competent in making full use of the benefits of this training program in their classroom.

OBJECTIVES OF THE TEACHERS' TRAINING PROGRAM

- To improve the present quality of teaching. A trained teacher would be able to present scientific events in a more interesting way so that the students shall have a reliable idea about the subject.
- To involve them into experiment based study so that they can implement these in their classrooms.
- To promote learner-centered method.
- To teach the students to apply their knowledge in solving real life problems.

The training was carried out based on several methods separately or in combinations:

1) Model Lectures on Teaching Methodologies:

Model lectures on Teaching Methodologies are delivered by eminent experts from different universities and institutes. These include principles of learning, understanding of scientific concepts; developing instructional objectives plan to present the lecture effectively.



2) **Demonstrative Lectures:**

In this session scientific experiments are designed and demonstrated with power point presentation, videos and hands on experiments.

3) **Orientation lectures for the teachers:**

The teachers are exposed to several illuminating lectures in different field of science, technology, engineering and mathematics so that their ideas and knowledge level can always be updated with recent developments in the world and need.

4) **Experience sharing by Participants:**

This session is used to exchange and share their experiences in regards to challenges and barriers in teaching and learning environment.

5) **Presentations by Participants:**

Involvement of the teachers in this session help them to improve the quality of teaching skills by demonstrating scientific concepts in different innovative and creative way as per the requirement of the students from varied socioeconomic background.

Uniqueness of the Program

- The program includes theoretical and practical subjects which are included in the school syllabus with emphasize in STEM curriculum.
- The program allows learning through a variety of methods that encourage active and reflective participants.
- Innovative and varied teaching methodologies are used.
- Advanced audio-visual means are used to create educational simulations and to analyze them in the learning groups.
- Hands on training and activity based learning get importance.



CALENDAR OF EVENTS

- ❖ **Workshop I:** January 18 - 20, 2017.
Participation: 40 teachers from 14 schools of Jhargram, West Medinipur.
Focusing area: Physical Science, Life Science, and Mathematics.
Venue: Eklavya Model Residential School, Jhargram, West Medinipur.

- ❖ **Workshop II:** May 11-13, 2017
Participation: 61 teachers from 45 schools of North 24 PGS, South 24 PGS, Kolkata, Howrah, Hooghly, Coochbehar.
Focusing area: Mathematics.
Venue: Jagadis Bose National Science Talent Search Campus.

- ❖ **Workshop III:** August 08-10, 2017
Participation: 65 teachers from 38 schools of North 24 PGS, South 24 PGS, Kolkata, Howrah, Hooghly, Birbhum.
Focusing area: Physical Science, Life Science.
Venue: Jagadis Bose National Science Talent Search Campus.

List of the participating schools

Districts	Sl. No	Name of the Participating Schools
Jhargram	1	Binpur High School
	2	Chandri Chandra Sekhar High School(H.S)
	3	Chichra High School
	4	Dahijuri Mahatma Vidyapith
	5	Dholkat Pukuria Pranabananda Vidyamandir (H.S)
	6	Eklavya Model Residential School, Jhargram
	7	Gidni Elokeshi High school(H.S)
	8	Jhargram Asoke Vidyapith (H.S)
	9	Jhargram Banitirtha High School
	10	Jhargram Kumud Kumari Institution
	11	Jhargram Nanibala Vidyalaya (Co.Ed)
	12	Ramakrishna Mission Vidyabhavan (H.S)
	13	Rani Binode Manjari Govt. Girls' School
	14	Sevayatan Vidyalaya

Districts	Sl. No	Name of the Participating Schools
North 24 PGS	1	Agarpara Mahajati Vidyapith
	2	Ariadaha Kalachand High School
	3	Banamalipur Priyanath Institution
	4	Barasat Girls' High School
	5	Barasat Kalikrishna Girls' High School
	6	Belghoria Mahakali Girls' High School
	7	Dakshineswar High School
	8	Dum Dum Kishore Bharati High School (H.S.)
	9	Nabapalli Jogendranath Balika Vidyamandir
	10	ShyamnagarKanti Chandra High School
	11	Kumar Asutosh Institution Main Boys
South 24 PGS	1	Akshya Nagar Kumar Narayan Madhyamik Sikshayatan
	2	Bhuban Nagar High School
	3	Debnagar Moshkhada Dinda High School
	4	Dhablat Lakshman Parabesh High School
	5	KakdipJnanadamoyee Vidyapith
	6	Namkhana Union High School
	7	Sundarban Janakalyan Sangha Vidyaniketan
	8	Basudevpur High School
	9	Ganipur High School
	10	Harinavi DVAS High School
	11	Jaynagar Institution
	12	Kashinagar High School, Kakdwip
	13	Khansaheb Abad High School, Sagar
	14	Sanghamitra Vidyalaya High
	15	Sarangabad Jajneswari Pathsala Girls High School
	16	Sundarban Adarsha Vidyaniketan
	17	Bhubannagar High School
Howrah	1	Bamangachi Sree Aurobinda High School
	2	Bankra Islamia High School
	3	Bantra Madhusudhan Pal Choudhury High School
	4	Belur High School (H.S)



Districts	Sl. No	Name of the Participating Schools
	5	Netaji Vidyayatan
	6	Deulpur High School
	7	Belur Panchanantala Mahendra Vidyapith
	8	Baragachiya Garbalia R.C. Manna Institution
	9	Dafarpur Prabartak Vidyamandir
Hooghly	1	Chatra Nandalal Institution
	2	Dwarbasini Girls' High School
	3	Guptipara High School
	4	Hooghly Branch Govt. High School
	5	Itachuna Srinarayan Institution
	6	Sekendarpur Rai K.P Pal Bahadur High School
	7	Serampore Girls' High School
	8	Serampore Union Institution
	9	Hooghly Collegiate School
Kolkata	1	Ananda Ashram Balika Vidyapeeth
	2	Ballygaunge Govt High School
	3	Behala Sharda Vidyapith For Girls
	4	Binodini Girls' High School
	5	Jadavpur Sammilita Balika Vidyalaya
	6	Kamala Girls' High School
	7	Jadavpur Vidyapith
	8	Santoshpur Rishi AurobindoBalika Vidyapith
	9	Naktala High School
	10	Bagbazar Multipurpose Girls' High School
	11	Bethune Collegiate School
	12	Behala Sharda Vidyapith For Girls
Birbhum	1	Rampurhat High School
Coochbehar	1	Vivekananda Vidyapeeth, Coochbehar

JBNSTS NCSTC-DST GOI, Teachers Training Workshop

OVERVIEW

JBNSTS has been conducting “Teachers' Training Program” to promote innovative and dynamic science teaching module among high and middle school level science teachers in the districts of West Bengal. Considering the decade long experience of JBNSTS and their ability in designing and conducting different S&T developmental programs DST-NCSTC, Govt. of India has conferred JBNSTS a great responsibility of conducting the programs for training school teachers through different innovative science teaching methods across West Bengal and develop different activity based teaching learning module. Dr. Abhijit Kar, Scientific Officer, JBNSTS is acting as the Principal Investigator of the project.

In an attempt to bridge the gap between science teaching and learning by students, JBNSTS under the financial support from NCSTC-DST, GOI, in collaboration with different colleges of West Bengal, organized three workshops at Nadia, New Jalpaiguri and Birbhum districts, to develop “research-based pedagogical tools” for science teachers, from October, 2016 throughout the year. About 236 Teachers from 113 schools have been trained for innovative science teaching methods. Teachers were invited from different schools of WB, the participants were either middle school or high school level teachers of science stream. This initiative will develop a functional scientific literacy to build up stronger future for young students.

OBJECTIVE

- To develop scientific attitude among the students through making connection between educational concepts and real world applications



- To improve the quality and standard of scientific teaching so that the students may have a transparent idea about the subject.
- To involve them into experiment based study so that they can implement these in their classrooms.
- To introduce teachers to experimental/research-based teaching.
- So that they could educate students about research methods used in their life/respective subjects/disciplines to produce new knowledge.
- Finally, it would help students at a young age to pursue the study of science and develop an inclination towards research work at higher level.
- This program will help in developing creative mind and innovative aptitude among student community.
- These resource materials developed, many other institutes across the nation may get benefited.



STRUCTURE OF THE PROGRAM

- Demonstrative Lectures by the experts.
- Hands-on Experiment demonstrated by the experts and performed by the participants.
- Sharing of ideas, teaching experiences and difficulties among the participants.
- Presentation by the teachers.
- Development of teaching learning module based on concepts of scientific facts within the syllabus of the middle & high school.

CALENDAR OF EVENTS

Workshop I	
Date:	January 04 -06, 2017
Venue:	Muragachha Government College, Nadia, WB
Participation:	66 teachers from 34 schools of Muragachha, Nadia, North 24 Paraganas district of West Bengal
Workshop II	
Date:	May16-18, 2017
Venue:	APC Roy Government College of Science, Siliguri, WB
Participation:	80 teachers from 42 schools of New Jalpaiguri, West Bengal
Workshop III	
Date:	July19-21, 2017
Venue:	Suri Vidyasagar College, Suri, WB
Participation:	90 teachers from 37 schools of Birbhum, West Bengal

Subjects : Physical Science, Life Science, and Mathematics

LIST OF PARTICIPATING SCHOOLS

Place	Sl.No	School name
NADIA, WEST BENGAL	1	Aleya High Madrasah
	2	Barnia High School (H.S)
	3	Belpukur High School (H.S)
	4	Bethuadahari Chakhatisala High School (H.S)
	5	Birpur High School (H.S)
	6	Chichuria High School
	7	Chhotanaldaha High School (H.S)
	8	Dharmada Sushilabala Hindu Girls' High School, Nadia
	9	Hat Chapra Girls' High School
	10	Hanspukuria Vidyapith
	11	Kamarhati CR High School (H.S)
	12	Muragachha High School(H.S)
	13	Mayapur Thakur Bhakti Vinode Institute (H.S)
	14	Nakashipara High School



Place	Sl.No	School name
	15	Netaji Vidyamandir High School
	16	P.J. Sahapara High School
	17	Ranirchara Sree Chaitanya High School, Nadia
	18	Saheb Nagar High School
	19	Sudhakarapur High School
	20	Shibpurjana Kalyan Sangha High School (H.S), Nadia
	21	Taibichara Akshoy High School
	22	Tentulberia High School
	23	Sondanga High School
	24	Singhati Junior High School
	25	Muragachha Subadani Girls' High School
	26	Panchkhela High School
	27	Barakulberia High School
	28	Mira High School
	29	Debagram SA Vidhyapith
	30	Matiyari RP Sen High School
	31	Lakhuria High School
	32	Panighata UDM High School
	33	Mira High School
	34	Dhubulia Deshbandhu High School
SILIGURI, WEST BENGAL	1	Adhikari Krishna Kanta High School Siliguri
	2	Alipurduar High School
	3	Attarobhai Balika Vidyapith
	4	Bagdogra Balika Vidyalaya, Siliguri
	5	Bairatiguri HS Jalpaiguri
	6	Balmiki Vidyapith
	7	Bani Mandir Railway HS
	8	Buraganj Kalkut Singh High School
	9	Bharati Hindi High School
	10	Chittaranjan High School
	11	Chashat High School
	12	Dr. Rajendra Prasad Girls' High School
	13	Deshbandhu High School
	14	Fanindra Dev Institution School Jalpaiguri



Place	Sl.No	School name
	15	HakimparaBalikaVidyalaya, Siliguri
	16	Hatighisa High School Siliguri
	17	IlpalCoudhuryHigh School
	18	Jagadish Chandra Vidyapith
	19	Jalpaiguri Government Girls School
	20	Jalpaiguri Zilla School
	21	Jyotsnamoyee Girls High School Siliguri
	22	Krishnamaya Memorial High School
	23	MahanandaHigh School
	24	Madati High School
	25	Margaret st. Nivedita (H.S)
	26	Muraliganj High school
	27	N.J.P. Railway Colony (H.S)
	28	Nilnalini Vidyamandir
	29	Netaji Girls' High School, Siliguri
	30	Narasingha Vidyapith
	31	Paltaghata High School
	32	Phanidewa High School
	33	Ramkrishna Saradamoni Vidyapith
	34	Shaktigarh High School
	35	Shri Narasingha Vidyamandir
	36	Siliguri Baradakanta Vidyapith
	37	Siliguri Boys' High School
	38	Siliguri Girls' High School
	39	Siliguri Netaji High School
	40	Sonali Girls' High School Siliguri
	41	Tarai Tarapada Adarsha Vidyalaya
	42	Surya Nagar Master Pretnath Memorial MadhyamikVidyalaya
SURI, WEST BENGAL	1	Adda Satyaprasanna Public High School, Suri
	2	Ahamadpur Jaydurga High School, Birbhum
	3	Ajoypur High School
	4	Balijuri High School, Dubrajur
	5	Bani Mandir High School





Place	Sl.No	School name
	6	Birbhum Zilla School
	7	Derpur High School, Sainthia
	8	Bishnupur High School, KulkurSuri
	9	Hetampur Raj High School,Dubrajpur
	10	Chinpaai High School
	11	Kaijuli Hemchandra High School
	12	Dr. Sudhakrishna High School, Birbhum
	13	Karidhyajadu Roy Memorial and Public High School
	14	Joplai High School, Dubrajpur
	15	Kapasdanga KH High School, Suri
	16	Kabi Nazrul Sikshaniketan, Gobindapur
	17	Langulia High School,Suri-I
	18	Kaligati Smriti Nari Sikshaniketan, Suri - II
	19	Madhaipur PalliMangal Vidyalaya
	20	Karidhya Vidyaniketan High School, Karidhya
	21	Mayureswar High School
	22	Kota Sur High School, Suri
	23	Nalhati Hariprasad High School
	24	Loke Para High School, Suri
	25	Purandarpur High School
	26	Maladanga Seherakuri Bangshidhar High School, MD. Bazar
	27	Ramprosad Roy Smrity High School
	28	Nagari Sudhanshu Badoni Siksha Niketan
	29	Suri Benimadhab Institution, Suri Municipality
	30	Nalhati High School for Girls'
	31	Suri Sri Sri Ramkrishna Vidyapith
	32	Bk.T.P.P Prabir Sengupta Vidyalaya Suri
	33	SainthiaSB Dutta Girls' High School
	34	Suri Public & Chandragati Mustafi Memorial High School
	35	Deriapur Anchal High School, Sainthia
	36	Suren Banerjee Siksha High School, Husnabad, Suri
	37	SuriNetaji Vidyabhawan
	38	Sainthia Jogeswari Dutta Girls' High School



Teachers performing hands on experiments with the expert Dr. Smarajit Manna (Student Advisor, JBNTS Kolkata)



Siliguri



Jhargram



Kolkata



REPORT ON ACTIVITIES 2016

December 2016

17/12/2016: Annual Award Ceremony: held at M L Sircar Hall, Indian Association for the Cultivation of Science, Kolkata.

Scientific Session:

Lecture delivered by

- (1) Prof. Suranjan Das, Vice Chancellor, Jadavpur University, Kolkata.
- (2) Prof. Ajay K Sood, Indian Institute of Science, Bangalore.

Prize Distribution Session:

Welcome Address by Prof. Maitree Bhattacharyya, Director, JBNSTS, Kolkata.

Lecture delivered by Prof. Santanu Bhattacharya, Director, Indian Association for the Cultivation of Science, Kolkata.

Lecture delivered by the Guest of 'Honor' Shri Vivek Kumar, Principal Secretary, Department of Higher Education, Science & Technology and Biotechnology, Government of West Bengal, Kolkata.

Keynote speech delivered by Prof. Ajay K. Sood, Indian Institute of Science, Bangalore.

Lecture delivered by Prof. Amitava Raychaudhuri, Chairman, JBNSTS and Sir Tarak Nath Palit Professor of Physics, University of Calcutta, Kolkata.

Distribution of certificates among the Junior and Senior JBNSTS Scholars of batch 2016 by the above distinguished guests.

Prof. Amitava Raychaudhuri, handed over the 'Junior Best School Trophy' for the year 2016 to the students and teachers of Ramakrishna Mission Vidyalaya, Narendrapur, Kolkata.

Prof. Ajay K Sood and Prof. Dhruvjayoti Chattopadhyay handed over the 'Senior Best School Trophy' for the year 2016 to the students and teachers of South Point High School, Kolkata and Vivekananda Mission School, Joka, Kolkata respectively.

The program was ended with vote of thanks delivered by Dr. Paromita Roy, Deputy Director, JBNSTS which was followed by the National Anthem.

20/12/ - 24/12/2016: DST – Inspire Internship Science Camp in association with JBNSTS entitled '**Learning Science**' for class XI science students (106) of West Bengal, held at JB-Centre of Excellence, Kolkata.

Welcome Address was delivered by Prof. Maitree Bhattacharyya, Director, JBNSTS, Kolkata.

Speakers & Lectures :

- (1) **“Evolution of Science since the days of Aristotle”** by Dr. Bichitra Kumar Guha, Indian Institute of Engineering Science and Technology, Shibpur, Howrah.
- (2) **“A fatty affair”** by Dr. Partha Chakrabarti, Indian Institute of Chemical Biology, Kolkata.
- (3) **“Let's improve your research aptitude – do some active research”** by Dr. Smarajit Manna and Dr. Abhijit Kar, JBNSTS Kolkata, Dr. Arnab Pramanik and Dr. Pijush Basak, Calcutta University, Kolkata.

- (4) ***“Einstein Gravitation: The Voice of the Black Whole and the Universe”***: by Dr. Soumitra Sengupta, Indian Association for the Cultivation of Science, Kolkata.
- (5) Technical Write-up Session by Dr. Gopal Chakrabarti, Dr. B C Guha Centre for Genetic Engineering and Biotechnology and Dr. Anindita Ukil, Calcutta University, Kolkata.
- (6) ***“Photochemistry at Interface”*** by Dr. Samita Basu, Saha Institute of Nuclear Physics, Kolkata.
- (7) ***“Guest Stars of our Universe”*** by Dr. Pratik Majumdar, Saha Institute of Nuclear Physics, Kolkata.
- (8) ***“Contested tracks, traffic jam, unpredictable motors, and frequent poking – a glimpse of life inside a cell”*** by Dr. Krishanu Ray, TIFR, Mumbai.
- (9) ***“Molecular Machines : The Nobel Prize in Chemistry, 2016”*** by Dr. Pradyut Ghosh, Indian Association for the Cultivation of Science, Kolkata.
- (10) ***“Anker Dhandha ityadi”*** by Dr. Arnab Chakraborty, Indian Statistical Institute, Kolkata
- (11) ***“Statistics in real Life: A different view”*** by Dr. Sanjoy Chaudhuri, National University of Singapore, Singapore.

Project presentation session for participating students: Judges were - Dr. Sanatan Chattopadhyay, Calcutta University, Kolkata, Dr. Debajyoti Ghoshal, Jadavpur University, Kolkata and Dr. Arindam Bhattacharyya, Calcutta University, Kolkata.

Participants of the science camp visited at Variable Energy Cyclotron Centre, Salt Lake, Kolkata.

28/12/2016: One day Seminar “Employee Capacity Building” organized by Jagadis Bose National Science Talent Search, held at Digha Saikatabad, Digha.

A meeting was organized regarding the plan of various activities including JTST and STST of JBNSTS for the year 2017.

Interactive lecture by Dr. Somnath Bhattacharyya, Environmental Scientist, Kolkata.

January 2017

04/01/ - 06/01/2017: A 3 days Science Teachers' Program: held at Muragachha Government College, Nadia with the financial assistance from the Department of Higher Education, Science & Technology and Biotechnology, Government of West Bengal, Kolkata.

Inaugural lecture by Dr. Abhijit Kar, Scientific Officer, JBNSTS, Kolkata.

Speakers :

- (1) Dr. Sanjay Ghosh, Bose Institute, Kolkata.
- (2) Dr. Partha Karmakar, Muragachha Government College, Nadia.
- (3) Dr. Abhijit Kar, JBNSTS, Kolkata.
- (4) Dr. Bhupati Chakrabarti, Formerly of City College, Kolkata.
- (5) Dr. Smarajit Manna, JBNSTS, Kolkata.
- (6) Dr. Uttam Ghosh, Calcutta University, Kolkata.
- (7) Dr. Samsul Alam, Silut Basantapur High School, Guskara, Burdwan.
- (8) Dr. Riddhi Majumder, St. Xavier's College, Kolkata.

(9) Dr. Partha Deb Ghosh, Kalyani University, Nadia.

(10) Mr. Bikash Bhadra, Hare School, Kolkata.

06/01/2017: Visit to JBNSTS by participants (39 college and university teachers) of the Refresher Course on **“Recent Trends in Life Science”** held at Department of Life Science and Biotechnology, Jadavpur University, Kolkata.

Welcome Address by Prof. Maitree Bhattacharyya, Director, JBNSTS, Kolkata.

Speakers :

(1) Lecture by Dr. Paromita Roy, Deputy Director, JBNSTS on Gifted Education.

(2) Lecture by Dr. Smarajit Manna, Student Advisor, JBNSTS on various activities of JBNSTS including awareness of JTST and STST, 2017.

The participants visited different establishments of JBNSTS including laboratories.

09/01/ - 13/01/2017: “WBDS Students Advanced Science Workshop” supported by Department of Higher Education, Government of West Bengal for middle school students (49) from 2 selected schools (Suri Public & Chandragati Mustafi Memorial High School, Birabhum and Birbhum Zilla School, Birbhum) held at JB-Centre of Excellence, Kolkata.

Welcome Address was delivered by Prof. Maitree Bhattacharyya, Director, JBNSTS, Kolkata.

Speakers:

(1) Shri Sehkar Banerjee, Consultants, Solar Technology, Kolkata.

(2) Dr. Partha Sarathi Majumdar, Guest Lecturer, R K M Belur Math, Howrah.

(3) Dr. Abhrajyoti Ghosh, Bose Institute, Kolkata.

(4) Mr. Mrinal Kanti Sarkar, DPS School, Kolkata.

(5) Mr. Pratyay Raha, Musician, Kolkata.

(6) Dr. Somnath Bhattacharyya, Environmental Scientist, Kolkata.

(7) “Let's improve your research aptitude – do some active research” by Dr. Smarajit Manna, Dr. Abhijit Kar. Shri Puskar Naskar and Shri Sudip Das, JBNSTS, Kolkata.

Quiz session for participating students by Panancea Society, Kolkata.

Participants of the WBDS Program visited at Birla Industrial and Technological Museum.

13/01/2017: Awareness Program for JTST & STST by Ms. Sweta Chakraborty and Ms. Paromita Majumdar at the following institutions in Kolkata.

(1) Jadavpur Sammilita Balika Vidyalaya (2) Jadavpur Adarsha Balika Sikshyatan (3) Garfa D N Memorial High School(HS) (4) Garfa D N M Girls High School (5) Jadavpur Vidyapith (6) Andrew's High School (7) A K Ghosh Memorial School (8) Jadavpur N K Pal Adarsha Sikshyatan.

16/01/2017: Awareness Program for JTST & STST by Ms. Paromita Majumdar and Mr. Tanmoy Pal, JBNSTS at the following institutions in Kolkata.

(1) Jodhpur Park Boys' School (2) Binodini Girls' High School (3) Dhakuria Ramchandra High School (4) Jadavpur Bagha Jatin High School (5) Baghatin Balika Vidyalaya.

16/01/ - 20/01/2017: “WBDS Students Advanced Science Workshop” supported by Department of Higher Education, Government of West Bengal for middle school students (46) from 2 selected



schools, Rani Binode Manjari Government Girls' School, Jhargram, West Midnapur and Nalhati Hariprasad High School, Birbhum held at JB-Centre of Excellence, Kolkata.

Speakers:

- (1) Shri Shekhar Banerjee, Consultants, Solar Technology, Kolkata.
- (2) Dr. Partha Sarathi Majumdar, Guest Lecturer, R K M Belur Math, Howrah.
- (3) Shri Subhadip Bose, Reciter, Kolkata.
- (4) Dr. Goutam Basu, Bose Institute, Kolkata.
- (5) **“Sky Watching”:** at JBNSTS roof top, Kolkata – conducted by Indian Sky Watchers Association, Kolkata.
- (6) “Let's improve your research aptitude – do some active research” by Dr. Pijush Basak, JBNSTS and Dr. Arnab Pramanik, Calcutta University, Kolkata.

Project presentation session for participating students : Judges were : (1) Shri Saptarshi Mondal, Tangrakhali High School, South 24Parganas, (2) Dr. Sharmistha Bhattacharya, Ananda Ashram Balika Vidyalaya, Kolkata.

Quiz session for participating students by Panacea Society, Kolkata.

Participants of the WBDS Program visited at Birla Industrial and Technological Museum for hand on activity.

17/01/2017: Awareness Program for JTST & STST, 2017 by Mr. Basudeb Dutta and Ms. Paromita Majumdar at the following institutions in Kolkata.

(1) Tirthapati Institution (2) National High School for Girls' (3) National High School for Boys' (4) Nava Nalanda High School.

17/01/2017: Awareness Meeting for JTST & STST, 2017 at Cooch Behar by Shri Dipankar Sarkar, JBNSTS, Kolkata.

The meeting was held at MJN Stadium meeting room, Coochbehar. 27 Science Teachers from 15 different High Schools of Coochbehar (Sadar and sub-division) participated in this meeting.

17/01/ - 18/01/2017: Awareness Program for JTST & STST at Balurghat and Maldah by Shri Ranjit Kumar Mallick and Shri Tanmoy Pal, JBNSTS, Kolkata.

17/01/ - 18/01/2017: Awareness Program for JTST & STST 2017 for High School students at Jalpaiguri and Siliguri by Shri Prasenjit Chakraborty, JBNSTS, Kolkata.

18/01/2017: Awareness meeting for JTST & STST, 2017 at Alipurduar by Shri Dipankar Sarkar, JBNSTS, Kolkata.

The meeting was held at McWilliam High School, Alipurduar. 20 Science Teachers from 15 different High Schools of Alipurduar & nearby localities participated in this meeting.

17/01/ - 20/01/2017: Awareness Program for JTST & STST for High School students at Purulia and Bankura by Shri Joydip Das, Assistant Director (Admn) and Shri Sougata Ray, Project Officer, JBNSTS.

18/01/ - 20/01/2017: A 3 days Science Teachers' Program held at Ramakrishna Mission Vidyamandir, Jhargram, Midnapur with the financial assistance from the Department of Higher Education, Science & Technology and Biotechnology, Government of West Bengal.

Keynote address : Swami Vedatitananda.

Lecture delivered by Shri Jagadis Prasad Mina, IAS, District Magistrate, West Midnapur.

Speakers:

- (1) Dr. Abhijit Kar, JBNSTS, Kolkata.
- (2) Dr. Bhupati Chakrabarti, Formerly of City College, Kolkata.
- (3) Dr. Riddhi Majumdar, St. Xavier's College, Kolkata.
- (4) Prof. Siddhartha Sen, School of Physics, Trinity College, Dublin, Ireland.
- (5) Dr. Pradipta Ghosh, Jhargram Raj College, Midnapore.
- (6) Dr. Partha Karmakar, Muragachha Government College, Nadia.
- (7) Dr. Smarajit Manna, JBNSTS, Kolkata.
- (8) Dr. Subhash Samanta , Midnapore College.

18/01/2017: Awareness Program for JTST & STST by Ms. Paromita Majmdar at the following institutions in Kolkata.

- (1) Aurobindo Balika Vidyalaya, Santoshpur (2) Jadavpur High School for Boys (3) Jadavpur High School for Girls.

19/01/2017: Awareness Program for JTST & STST by Ms. Paromita Majmdar and Mr. Anirban Banerjee at the following institutions in Kolkata.

- (1) Khanpur Nirmala Bala Sarkar Girls' High School (2) Khanpur Hirendralal Sarkar High School (3) Naktala High School (4) Garia Harimati Devi Uchcha Balika Vidyalaya (5) Harinavi DAV High School (6) Harinavi Subhasini Balika Sikshalaya.

20/01/2017: Awareness Program for JTST & STST by Ms. Paromita Majmdar and Mr. Anirban Banerjee at the following institutions in Kolkata.

- (1) South Suburban School (Main) (2) Beltala Girls' High School (3) United Missionary Girls' High School.

27/01/ & 30/01/2017: Awareness Program for JTST & STST by Ms. Paromita Majmdar and Mr. Tanmoy Pal at the following institutions in Kolkata.

- (1) St. Lawrence High School (2) Kamala Girls' High School (3) Jagadadbandhu Institution (4) Kamala Chatterjee School for Girls' (5) Mitra Institution (Bhwanipur) (6) Muralidhar Girls' School (7) St. Johns' Diocwsan Girls' H S School (8) LaMartiniere for Boys (9) La Maartiniere for Girls (10) Modern High School for Girls.

February 2017

06/02/ - 10/02/2017: "WBDS Students Advanced Science Workshop" supported by Department of Higher Education, Government of West Bengal for middle school students (58) from 2 selected schools (Kakdwip Birendra Vidyaniketan (H.S.) Kakdwip, South 24 Parganas and Khansaheb Abad High School, Sagar, South 24 Parganas) held at JB-Centre of Excellence, Kolkata.

Speakers:

- (1) Shri Sekhar Banerjee, Expert in Solar Sciences, Kolkata.
- (2) Dr. Parthasarathi Majumder, RKM Vivekananda University, Belur Math.

- (3) Dr. Anindita Ukil, University of Calcutta, Kolkata.
- (4) Dr. Subhankar Ghosh, St. Xavier's College, Kolkata.
- (5) **“Sky Watching”: at JBNSTS roof top**, Kolkata – conducted by Indian Sky Watchers Association, Kolkata.
- (6) **“Let's improve your research aptitude – do some active research”** by Dr. Smarajit Manna, Dr. Abhijit Kar, JBNSTS, Kolkata.
- (7) Shri Pratyay Raha, Musician, Kolkata.

The participants visited at BITM for having hands on activities on Physical Science, Life Science and Mathematics.

Quiz session for participating students by Panancea Society, Kolkata

Project presentation session for participating students : Judges were - Shri. Arup Sengupta, DNM High School, Kolkata and Shri. Pintu Kr. Sinha, Katwa Kasiram Das Institution, Burdwan.

10/02/2017: Awareness Meeting for JTST & STST, 2017 at South 24 Parganas by Shri Dipankar Sarkar and Puskar Naskar, JBNSTS, Kolkata.

The meeting was held at Dhablat L. P. High School (HS), Sagar, South 24 Parganas. 12 Science teachers from 09 different High Schools of South 24 Parganas participated in this meeting.

11/02/2017: Awareness Meeting for JTST & STST, 2017 at South 24 Parganas by Shri Dipankar Sarkar and PuskarNaskar, JBNSTS, Kolkata.

The meeting was held at Kakdwip Birendra Vidyaniketan (HS), Kakdwip, South 24 Parganas. 12 Science teachers from 12 different High Schools of South 24 Parganas participated in this meeting.

13/02/2017: Awareness Meeting for JTST & STST, 2017 at Howrah by Ms. Swapna Dey and Mr. Debnarayan Mukherjee, Kolkata.

The meeting was held at Howrah Jogesh Chandra Girls' School, Howrah. 27 Science teachers from 5 different High Schools of Howrah and nearby localities participated in this meeting.

13/02/ - 17/02/2017: “WBDS Students Advanced Science Workshop” supported by Department of Higher Education, Government of West Bengal for middle school students (53) from 2 selected schools (Ekalavya Model Residential School, Jhargram, West Midnapur and Janapriyanagar Janapriya Vidyalaya (HS), Basanti, South 24 Parganas) held at JB-Centre of Excellence, Kolkata.

Speakers:

- (1) **“Let's improve your research aptitude – do some active research”** by Dr. Smarajit Manna, Dr. Abhijit Kar, Ms. Monalisa Char, Shri Sudip Das and Shri Puskar, Naskar, JBNSTS Kolkata.
- (2) Dr. Ketaki Mukhopadhyay, RG Kar Medical College, Kolkata.
- (3) Dr. Abhrajyoti Ghosh, Bose Institute, Kolkata.
- (4) Dr. Parthasarathi Majumder, RKM Vivekananda University, Belur Math.
- (5) Mr. Sekhar Banerjee, Expert in Solar Sciences, Kolkata.
- (6) Smt. Subha Das Mollick, Bichitra Pathsala, Kolkata.

- (7) “Sky Watching”: at JBNSTS roof top, Kolkata – conducted by Indian Sky Watchers Association, Kolkata.

The participants visited at BITM for having hands on activities on Physical Science, Life Science and Mathematics.

Music session for participating students by Panancea Society, Kolkata.

Project presentation session for participating students : Judges were - Smt. Anupama Sengupta, Formerly of Jadavpur Sammilita Balika Vidyalaya, Kolkata and Dr. Arati Mukhopadhyay, Howrah Jogesh Chandra Girls' School, Howrah.

15/02/2017: Awareness Meeting for JTST & STST, 2017 at Mednipur (E) by Shri Dipankar Sarkar and Puskar Naskar, JBNSTS, Kolkata.

The meeting was held at Contai Model Institution, Mednipur (E). 14 Science Teachers from 14 different High Schools of Mednipur participated in this meeting.

17/02/2017: Awareness Meeting for JTST & STST, 2017 at South 24 Parganas by Shri Dipankar Sarkar and Sudip Das, JBNSTS, Kolkata.

The meeting was held at Sundarban Adarsha Vidyaniketan, Basanti, South 24 Parganas. 08 Science Teachers from 08 different High Schools of South 24 Parganas participated in this meeting.

20/02/ - 24/02/2017: “WBDS Students Advanced Science Workshop” supported by Department of Higher Education, Government of West Bengal for middle school students (57) from 2 selected schools Jhargram Kumud Kumari Institution, Jhargram, West Midnapur and Ghutiasharif B. M. Vidiyapith, Ghutiasharif, South 24 Parganas) held at JB-Centre of Excellence, Kolkata.

Speakers:

- (1) Dr. Parthasarathi Majumder, RKM Vivekananda University, Belur Math.
- (2) Mr. Sekhar Banerjee, Expert in Solar Sciences, Kolkata.
- (3) Dr. Samita Basu, Saha Institute of Nuclear Physics, Kolkata.
- (4) Dr. Arnab Chakraborty, Indian Statistical Institute, Kolkata.
- (5) **“Let's improve your research aptitude – do some active research”** by Dr. Smarajit Manna, Dr. Abhijit Kar, Ms. Monalisa Char, Shri Sudip Das and Shri Puskar, Naskar, JBNSTS Kolkata
- (6) **“Sky Watching”:** at JBNSTS roof top, Kolkata – conducted by Indian Sky Watchers Association, Kolkata.
- (7) Shri Subhadeep Bose, Recitation, Ekalavya Model Residential School, Jhargram, Mednipur.

The participants visited at BITM for having hands on activities on Physical Science, Life Science and Mathematics.

Music session for participating students by Panancea Society, Kolkata.

Project presentation session for participating students : Judges were : Shri. Saptarshi Mandal, Tangrakhali High School, South 24 Parganas and Dr. Punarbasu Choudhury, Calcutta University, Kolkata.

March 2017

27/03/ - 31/03/2017: DST – Inspire Internship Science Camp in association with JBNSTS entitled 'Learning Science' for class XI science students (114) of West Bengal, held at JB-Centre of Excellence, Kolkata.

Welcome Address was delivered by Prof. Maitree Bhattacharyya, Director, JBNSTS, Kolkata.

Speakers & Lectures :

- (1) **"Origin of Life"** by Dr. Dhruvajyoti Chgattopadhyay, Amity University, Kolkata.
- (2) **"Photochemistry at Interface"** by Dr. Samita Basu, Saha Institute of Nuclear Physics, Kolkata.
- (3) **"Let's improve your research aptitude – do some active research"** by Dr. Smarajit Manna, Dr. Abhijit Kar, JBNSTS Kolkata.
- (4) **"Excitements with Materials in Nanoscale"** by Dr. Samit Kumar Ray, SN Bose National Centre for Basic Sciences, Kolkata.
- (5) Write-up session : on some issues of National Importance by Dr. Anindita Ukil and Dr. Ishani Deb, University of Calcutta, Kolkata.
- (6) **"Nanoscience & Nanotechnology : Fundamental and Applications"** by Dr. Dulal Senapati, Saha Institute of Nuclear Physics, Kolkata.
- (7) **"The Three-body Problem"** by Dr. Ananda Dasgupta, IISER, Kolkata.
- (8) **"Development of Indigenous Devices and Nanomedicines for Community Linkage"** by Dr. Samir Kumar Pal, SN Bose National Centre for Basic Sciences, Kolkata.
- (9) **"The fundamental constituents of matter and their interactions"** by Dr. Abhijit Bhattacharyya, University of Calcutta, Kolkata.
- (10) **"Constructability – an Old Enigma"** by Dr. Parthasarathi Mukhopadhyay, R K Mission Residential College, Narendrapur, Kolkata.
- (11) **"Understanding DNA, molecular backbone of life"** by Dr. Sanghamitra Sengupta, University of Calcutta, Kolkata.
- (12) **"Puzzles and Magic with Mathematics"** by Dr. Arnab Chakraborty, Indian Statistical Institute, Kolkata.

Project presentation session for participating students : Judges were : Dr. Soumen Basak, Saha Institute of Nuclear Physics, Kolkata and Dr. Debajyoti Ghoshal, Jadpur University, Kolkata.

Participants visited to Centre for Research in Nanoscience & Nanotechnology (CRNN), University of Calcutta, Salt Lake Campus, Kolkata.

April 2017

11/04/ - 13/04/2017: "Science Orientation workshop for Girls' from Bengali Medium School" held at JB-Centre of Excellence, Kolkata.

Welcome Address by Prof. Maitree Bhattacharyya, Director, JBNSTS, Kolkata.

Speakers :

- (1) Prof. Dhruvajyoti Chattopadhyay, Amity University, Kolkata.

- (2) Laboratory session by Dr. Smarajit Manna, Dr. Abhijit Kar, JBNSTS, Dr. Pijush Basak and Dr. Arnab Pramanik, University of Calcutta, Kolkata.
- (3) Dr. Abhrajyoti Ghosh, Bose Institute, Kolkata.
- (4) Dr. Pratik Majumdar, Institute of Nuclear Physics, Kolkata.
- (5) Dr. Prodyut Ghosh, Indian Association for the Cultivation of Science, Kolkata.
- (6) Dr. Shyamal Chakraborty, Calcutta University, Kolkata.
- (7) Prof. Samita Basu, Saha Institute of Nuclear Physics, Kolkata.
- (8) Dr. Uttam Ghosh, Calcutta University, Kolkata.
- (9) Dr. Sanghamitra Sengupta, University of Calcutta, Kolkata.
- (10) Dr. Paromita Roy, JBNSTS, Kolkata.

18/04/ - 20/04/2017: "Science Orientation workshop for Girls' from English Medium School" held at JB-Centre of Excellence, Kolkata.

Welcome Address by Prof. Maitree Bhattacharyya, Director, JBNSTS, Kolkata.

Speakers

- (1) Dr. Somdatta Ghosh Dey, Indian Association for the Cultivation of Science, Kolkata.
- (2) Dr. Subhankar Chowdhury, S S K M Hospital, Kolkata.
- (3) Laboratory session by Dr. Smarajit Manna, Dr. Abhijit Kar, JBNSTS, Dr. Pijush Basak and Dr. Arnab Pramanik, University of Calcutta, Kolkata.
- (4) Dr. Uttam Ghosh, Calcutta University, Kolkata.
- (5) Dr. Koushik Dutta, Saha Institute of Nuclear Physics, Kolkata.
- (6) Prof. Soumitra Sengupta, Indian Association for the Cultivation of Science, Kolkata.
- (7) Dr. Sanghamitra Sengupta, Calcutta University, Kolkata.
- (8) Dr. Srimonti Sarkar, Bose Institute, Kolkata.
- (9) Dr. Paromita Roy, JBNSTS, Kolkata.
- (10) Prof. Anuradha Lohia, Presidency University, Kolkata.

29/04/- 30/04/2017: Two days Seminar entitled "Those who make us proud" for JBNSTS Senior Scholars (39), held at JB-Centre of Excellence, Kolkata.

Welcome address by Prof. Maitree Bhattacharyya, Director, JBNSTS.

Lecture Sessions:

1. Dr. Samir Kumar Pal, SN Bose National Centre for Basic Sciences, Kolkata.
2. Dr. Sujoy Ghosh, Institute of Post Graduate Medical Education and Research, Kolkata.
3. Dr. Parthasarathi Mukherjee, Indian Institute of Science Bangalore.
4. Dr. Ananda Dasgupta, Indian Institute of Science Education and Research, Kolkata.
5. Dr. Sangram Bag, Saha Institute of Nuclear Physics, Kolkata.

Interaction with JB-Scholars by the following eminent personalities:

1. Shri Bhagirath Mishra, Writer and former Jt. Secretary, Government of West Bengal.
2. Shri Kamal Aich, Painter, Kolkata.

May 2017

03/05/ - 06/05/2017: Science workshop for JBNSTS Junior Scholars (98) of batch 2016 held at JB-Centre of Excellence, Kolkata.

Welcome address by Prof. Maitree Bhattacharyya, Director, JBNSTS.

Speakers :

- (1) Prof. Amitava Raychaudhuri, Chairman, JBNSTS and Sir Tarak Nath Palit Professor of Physics, University of Calcutta, Kolkata.
- (2) Activity session at JBNSTS Laboratory by Dr. Smarajit Manna and Dr. Abhijit Kar, JBNSTS Kolkata.
- (3) Dr. Arnab Kundu, Saha Institute of Nuclear Physics, Kolkata.
- (4) Dr. Sangram Bag, Saha Institute of Nuclear Physics, Kolkata.
- (5) Dr. Samir Kumar Pal, SN Bose National Centre for Basic Sciences, Kolkata.
- (6) Ms. Kheya Chattopadhyay, Artist and Film Personality, Kolkata.
- (7) Mr. Aditya Sengupta, Artist and Film Personality, Kolkata.
- (8) Dr. Kironmoy Das, Indian Statistical Institute, Kolkata.
- (9) Dr. Chirosree Roy Chaudhuri, Indian Institute of Engineering Science and Technology, West Bengal.
- (10) Dr. Abhijit Kar, JBNSTS, Kolkata.
- (11) Dr. Ayeeta Biswas, The Indian College of Arts and Draftsmanship, Kolkata.
- (12) Dr. Dhruvajyoti Chattopadhyay, Amity University, Kolkata.
- (13) Dr. Subhrangsu Aditya, Jadavpur University, Kolkata.
- (14) Dr. Anindya Sinha, National Institute of Advanced Studies (Indian Institute of Science Campus), Bangalore.

11/05/ - 13/05/2017: JBNSTS Teachers' Training Program with Mathematics School Teachers' (60) in association with Azim Premji University and Ramanujan Mathematical Society held at JB-Centre of excellence, Kolkata.

Welcome Address by Prof. Maitree Bhattacharyya, Director, JBNSTS, Kolkata.

Speakers:

- (1) Dr. Parthasarathi Mukhopadhyay, Ramakrishna Mission Residential College, Narendrapur, Kolkata.
- (2) Dr. Arnab Chakraborty, Indian Statistical Institute, Kolkata.
- (3) Dr. Partha Karmakar, Muragacha Government College, Nadia.
- (4) Smt. Swati Sircar, Azim Premji University, Part – II, Kolkata.

- (5) Dr. Rana Barua, Indian Statistical Institute, Kolkata.
- (6) Dr. Sourav Sen Gupta, Indian Statistical Institute, Kolkata.
- (7) Dr. Soumitra Sengupta, Indian Association for the Cultivation of Science, Kolkata.

16/05/ - 18/05/2017: "JBNSTS-NCSTC- DST Science Teachers'(80) Training Program" held at Acharya Prafulla Chandra Roy Government College, Siliguri.

Welcome Address by Dr. Mayukh Sarkar, Principal in-Charge, Acharya Prafulla Chandra Roy Government College, Siliguri.

Address by Chief Guest of the Program: Prof. Ananda Mukhopadhyay, Formerly of NBU, Siliguri.

Address by Guest of Honour: Prof. Dyutish Chakrabarti, A.E.O. Mahakuma Parisad, Siliguri.

Address by Guest of Honour: Prof. Pranab Kumar Bhattacharya, BPSC, Siliguri.

Speakers:

- (1) Dr. Abhijit Kar, JBNSTS, Kolkata.
- (2) Dr. Smarajit Manna, JBNSTS, Kolkata.
- (3) Dr. Sougata Ghosh, Acharya Prafulla Chandra Roy Government College, Siliguri.
- (4) Dr. Partha Karmakar, Muragachha Government College, Nadia.
- (5) Dr. Bhupati Chakrabarti, Formerly of City College, Kolkata.
- (6) Ms. Laboni Chatterjee, Alipurduar School, Alipurduar.
- (7) Dr. Sutapa Sanyal, Krishnagar Government College, Nadia.
- (8) Dr. Debajyoti Ghoshal, Jadavpur University, Kolkata.

June 2017

05/06/ - 08/06/2017: Science workshop – II for JBNSTS Junior Scholars (60) of batch 2015 held at JB-Centre of Excellence, Kolkata.

Welcome address by Prof. Maitree Bhattacharyya, Director, JBNSTS.

Speakers :

- (1) Dr. Partha Pratim Majumder, National Institute of Biomedical Genomics, Nadia.
- (2) Dr. Nilay Kanti Das, Medical College, Kolkata.
- (3) Dr. Abhijit Kar, JBNSTS.
- (4) Dr. Sayam Sen Gupta, Indian Institute of Science Education and Research, Kolkata.
- (5) Dr. Antar Bandyopadhyay, Indian Statistical Institute, New Delhi.
- (6) Dr. Gouriprasanna Roy, Shiv Nadar University, Uttar Pradesh.
- (7) Dr. Subhasis Bhaumik, IEST, Shibpur, Howrah.
- (8) Dr. Oishee Chakraborti, Saha Institute of Nuclear Physics, Kolkata.
- (9) Dr. Pratik Majumdar, Saha Institute of Nuclear Physics, Kolkata.
- (10) Dr. Arghya Taraphder, IIT, Kharagpur.
- (11) Dr. Kiranmoy Das, Indian Statistical Institute, Kolkata.

- (12) Dr. Suchandra Dutta, Saha Institute of Nuclear Physics, Kolkata.
- (13) Dr. Pulak Sengupta, Jadavpur University, Kolkata.
- (14) Dr. Sibaji Raha, Bose Institute, Kolkata.

15/06 – 22/06/17: Talent Enrichment Program at Bangalore, funded by Department of Higher Education, Science & Technology and Biotechnology, Government of West Bengal : 35 Senior JB - Scholars' visited the following Science & Technology Centers at Bangalore :

(1) Indian Space Research Organization (ISRO) (2) CSIR National Aerospace Laboratories (3) Indian Institute of Astrophysics, (Koramangala Campus and CREST Campus), (4) National Institute of Mental Health & Neurosciences (NIMHANS), (5) MBU, MSERC, CES, Physics, Centre for Nanoscience and Engineering, IISc Bangalore (6) Jawaharlal Nehru Centre for Advanced Scientific Research (7) National Centre for Biological Science (NCBS), (8) Genei Laboratories Pvt.Ltd. ((9) ICTS, (10) Ashok Trust for Research in Ecology and the Environment (ATREE).

19/06/ - 23/06/2017: “WBDS District students' science Workshop” supported by Department of Higher Education, Government of West Bengal for middle school students (54) from 3 selected schools (Krishanpur High School, Burdwan, Udaypalli Siksha Niketan, Burdwan and Malda Girls' High School, Malda) held at JB-Centre of Excellence, Kolkata.

Speakers:

- (1) Shri Parthapratim Roy, South Point High School, Kolkata.
- (2) Dr. Mrinal Mukherjee, Batanagar High School, Kolkata.
- (3) Dr. Chaitali Mukherjee, Santoshpur Rishi Aurobindo Balika Vidyapith, Kolkata.
- (4) Dr. Arati Mukhopadhyay, Howrah Jogesh Chandra Girls' High School, Howrah.
- (5) Shri Saptarshi Mondal, Tangrakhali High School, South 24 Parganas.
- (6) Shri Subir Bhattacharya, Dum Dum Kishore Bharati School, Kolkata.
- (7) Dr. Arnab Pramanik, Calcutta University, Kolkata.
- (8) Dr. Pijush Basak, Calcutta University, Kolkata.
- (9) Dr. Shyamal Chakraborty, Calcutta University, Kolkata.
- (10) Dr. Paromita Roy, JBNSTS, Kolkata.
- (11) Dr. Bimalendu Bhusan Bhattacharya, SN Bose National Centre for Basic Sciences, Kolkata.

Participants of the workshop visited at BITM, Kolkata.

26/06/ - 30/06/2017: “WBDS District students' science Workshop” supported by Department of Higher Education, Government of West Bengal for middle school students (58) from 3 selected schools (Burdwan Municipal Girls' High School, Burdwan, Raina Jagatmata Balika Vidyalaya, Burdwan and Lalit Mohan Mohini High School, Malda) held at JB-Centre of Excellence, Kolkata.

Speakers:

- (1) Shri Parthapratim Roy, South Point High School, Kolkata.
- (2) Dr. Arati Mukhopadhyay, Howrah Jogesh Chandra Girls' High School, Howrah.
- (3) Shri Pintu Kr. Sinha, Katwa Kasiram Das Institution, Burdwan.
- (4) Dr. Arnab Pramanik, Calcutta University, Kolkata.

- (5) Dr. Pijush Basak, Calcutta University, Kolkata.
- (6) Dr. S Sengupta, Calcutta University, Kolkata.
- (7) Shri Arup Sengupta, Garfa, DNM High School, Kolkata.
- (8) Smt. Sharmistha Bhattacharya, Ananda Ashram Balika Vidyalaya, Kolkata.
- (9) Dr. Arnab Chakraborty, Indian Statistical Institute, Kolkata.
- (10) Mr. Pratyay Raha, Musician, Kolkata.
- (11) Dr. Punarbasu Chaudhuri, Calcutta University, Kolkata.
- (12) Dr. Paromita Roy, JBNSTS, Kolkata.
- (13) Prof. Samita Basu, Saha Institute of Nuclear Physics, Kolkata.

Participants of the workshop visited at BITM, Kolkata.

July 2017

08/07/2017: JBNSTS Science Workshop and lecture at Ekalavya School, Jhargram, Midnapur under JBNSTS WBDS program, 300 tribal students from all the Ekalavya schools of West Bengal participated in the program.

10/07/ - 14/07/2017: *“WBDS District students' science Workshop”* supported by Department of Higher Education, Government of West Bengal for middle school students (57) from 3 selected schools (Raina Swami Bholananda Bidyatan, Burdwan, Malda CC Girls' High School, Malda and Malda Town High School Malda) held at JB-Centre of Excellence, Kolkata.

Speakers:

- (1) Shri Siddhartha S Chattopadhyay, Bidhannagar Govt. High School, Kolkata.
- (2) Shri Saptarshi Mondal, Tangrakhali High School, South 24Parganas.
- (3) Shri Pintu Kr. Sinha, Katwa Kasiram Das Institution, Burdwan.
- (4) Dr. Chaitali Mukherjee, Santoshpur Rishi Aurobindo Balika Vidyapith, Kolkata.
- (5) Dr. Mrinal Mukherjee, Batanagar High School, Kolkata.
- (6) Dr. Koushik Dutta, Saha Institute of Nuclear Physics, Kolkata.
- (7) Dr. Somnath Bhattacharyya, Environmental Scientist, Kolkata.
- (8) Dr. Goutam Basu, Bose Institute, Kolkata.
- (9) Dr. Arnab Chakraborty, Indian Statistical Institute, Kolkata.
- (10) Dr. Paromita Roy, JBNSTS, Kolkata.

Participants of the Workshop visited at BITM, Kolkata.

19/07 – 21/07/2017: *“JBNSTS-NCSTC- DST Science Teachers' Training Program”* held at Suri Vidyasagar College, Birbhum.

Welcome Address by Dr. Tapan Kumar Parichha, Officer in Charge, Suri Vidyasagar College, Birbhum.

Address by Guest of Honour : Shri Bikash Roy Choudhury, Sabhadhipati, Birbhum Zilla Parishad & President G.B. of Suri Vidyasagar College, Birbhum.

Address by Guest of Honour: Shri P Mohangandhi, District Magistrate, Birbhum.

Address by Guest of Honour: Shri Rejaul Haque, D.I.S., (S.E.) Birbhum.

Speakers:

- (1) Dr. Sudhendu Mandal, Seacom Skills University, Birbhum.
- (2) Dr. Abhijit Kar, JBNSTS, Kolkata.
- (3) Dr. Debajyoti Ghoshal, Jadavpur University, Kolkata.
- (4) Dr. Laxmi Narayan Mandal, Suri Vidyasagar College, Birbhum.
- (5) Dr. Partha Karmakar, Muragachha Government College, Nadia.
- (6) Dr. Bhupati Chakraborty, formerly of City College, Kolkata.
- (7) Dr. Sutapa Sanyal, Krishnanagar Government College, Nadia.
- (8) Dr. Riddhi Majumder, St. Xavier's College, Kolkata.
- (9) Dr. Uttam Ghosh, Calcutta University, Kolkata.
- (10) Dr. Partha Mahata, Suri Vidyasagar College, Birbhum.

24/07/ - 28/07/2017: "WBDS District students' science Workshop" supported by Department of Higher Education, Government of West Bengal for middle school students (77) from 4 selected schools (Sunitibala Sadar Girls' High School, Jalpaiguri, Jalpaiguri Government Girls' High School, Jalpaiguri, Tarai Tarapada Adarsha Vidyalaya, Siliguri and Dinhata High School, Coochbehar) held at JB-Centre of Excellence, Kolkata.

Speakers:

- (1) Smt. Sanchari Chattopadhyay, JBNSTS, Kolkata.
- (2) Smt. Anupama Sengupta, Science Communicators Forum, Kolkata.
- (3) Shri Subir Bhattacharya, Dum Dum Kishore Bharati High School, Kolkata.
- (4) Dr. Pijush Basak, Calcutta University, Kolkata.
- (5) Dr. Arnab Pramanick, Calcutta University, Kolkata.
- (6) Dr. Sohan Sengupta, Calcutta University, Kolkata.
- (7) Shri Subhadeep Bose, Ekalavya Model Residential School, Jhargram.
- (8) Dr. Chaitali Mukherjee, Santoshpur Rishi Aurobindo Balika Vidyapith, Kolkata.
- (9) Dr. Mrinal Mukherjee, Batanagar High School, Kolkata.
- (10) Shri Arup Sengupta, Garfa, DNM High School, Kolkata.
- (11) Smt. Sharmistha Bhattacharya, Ananda Ashram Balika Vidyalaya, Kolkata.
- (12) Dr. Asit De, Saha Institute of Nuclear Physics, Kolkata.
- (13) Shri Pintu Kr. Sinha, Katwa Kasiram Das Institution, Burdwan.
- (14) Shri Saptarshi Mondal, Tangrakhali High School, South 24Parganas.
- (15) Dr. Sanghamitra Sengupta, Calcutta University, Kolkata.
- (16) Dr. Paromita Roy, JBNSTS, Kolkata.

Participants of the Workshop visited at BITM, Kolkata.

31/07/ - 04/08/2017: “WBDS District students' science Workshop” supported by Department of Higher Education, Government of West Bengal for middle school students (60) from 3 selected schools (Railway Higher Secondary School, Alipurduar, Bairatguri High School, Dhubguri, Jalpaiguri, and Mathabhanga High School, Coochbehar) held at JB-Centre of Excellence, Kolkata.

Speakers:

- (1) Smt. Sanchari Chattopadhyay, JBNSTS, Kolkata.
- (2) Dr. Abdul Halim Sheikh, Ramakrishna Ashram Institute, Baruipur, South 24Parganas.
- (3) Dr. Smarajit Manna, JBNSTS, Kolkata.
- (4) Dr. Sanghamitra Sengupta, University of Calcutta, Kolkata.
- (5) Dr. Arnab Pramanik, University of Calcutta, Kolkata.
- (6) Dr. Pijush Basak, University of Calcutta, Kolkata.
- (7) Mr. Sohan Sengupta, University of Calcutta, Kolkata.
- (8) Shri Saptarshi Mondal, Tangrakhali High School, South 24Parganas.
- (9) Dr. Arati Mukhopadhyay, Howrah Jogesh Chandra Girls' High School, Howrah.
- (10) Mr. Pratayay Raha, Musician, Kolkata.
- (11) Dr. Chaitali Mukherjee, Santoshpur Rishi Aurobindo Balika Vidyapith, Kolkata.
- (12) Dr. Mrinal Mukherjee, Batanagar High School, Kolkata.
- (13) Dr. Shyamal Chakrabarti, Calcutta University, Kolkata.
- (14) Dr. Paromita Roy, JBNSTS, Kolkata.

Participants of the Workshop visited at BITM, Kolkata.

August 2017

08/08/ - 10/08/2017: A 3 days Science Teachers' & Training Program held at JBNSTS with the financial assistance from Department of Higher Education, Science & Technology and Biotechnology, Govt. of West Bengal. Middle and High School science teachers from the school of Howrah, Hooghly, North 24 Parganas, South 24 Parganas and Kolkata.

Welcome address by Prof. Maitree Bhattacharyya, Director, JBNSTS.

Speakers:

- (1) Mr. Samar Bagchi, formerly of Birla Industrial and Technological Museums, Kolkata.
- (2) Dr. Subir Nag, Satyapriya Roy College of Education, Kolkata.
- (3) Dr. Bhupati Chakrabarti, formerly of City College, Kolkata.
- (4) Shri Partha Pratim Roy, South Point High School, Kolkata.
- (5) Dr. Arindam Rana, City College, Kolkata.
- (6) Dr. Riddhi Majumder, St. Xavier's College, Kolkata.
- (7) Dr. Subir Chandra Dasgupta, Maulana Azad College, Kolkata.



(8) Dr. Debajyoti Ghoshal, Jadavpur University, Kolkata.

(9) Prof. Siddhartha Roy, Bose Institute, Kolkata.

19/07 – 21/07/2017: “JBNSTS-NCSTC- DST Science Teachers' Training Program” held at Suri Vidyasagar College, Birbhum (100).

08/08/ - 10/08/2017: “JBNSTS-WB- DST Teachers' Training Program” held at Jagadis Bose National Science Talent Search, Kolkata (65).

20/08/2017: 58th Senior Talent Search Test : 2008 undergraduate science students applied for STST examination and 1471 students appeared for the test from West Bengal at 31 examination centres.

20/08/2017 : 3rd Junior Talent Search Test : 7501 Science Students (Class XI) applied for JTST examination and 6678 Students appeared for the test from West Bengal at 31 centres.

September 2017

09/09 – 10/09/2017: Senior Talent Search Test final Interview (2nd Phase): For short listed (307) students of West Bengal held at JB - Centre of Excellence, Kolkata.

October 2017

13/10 – 15/10/2017: Scientific Creativity Test (3rd and final Phase): For short listed (126) undergraduate science students of West Bengal for the award of Senior JBNSTS Scholarship, held at JB - Centre of Excellence, Kolkata.

November 2017

17/11 – 19/11/2017: Junior Talent Search Test final Interview (2nd Phase): For short listed (430) students of West Bengal to be held at JB - Centre of Excellence, Kolkata.

SCHOLARS' ACHIEVEMENT

Senior Scholars

- **Smt. Adrika Raybarman**, JBNSTS scholar of batch 2012, is currently working as Ph. D student at Department of Biochemistry, University of Illinois, Urbana-Champaign, USA.
- **Shri Rajorshi Paul**, JBNSTS scholar of batch 2012, is currently pursuing Masters Degree University in Alberta, Canada.
- **Shri Soham Dan**, JBNSTS scholar of batch 2012, is currently pursuing PhD at University of Illinois Urbana Champaign at USA.
- **Shri Tathagata Basu**, JBNSTS scholar of batch 2012, is currently a PhD student at Department of Mathematical Sciences, Durham University, UK.
- **Shri Indrajit Pal**, JBNSTS scholar of batch 2013 published two research papers in 2016 (Current Computer-Aided Drug Design, Volume 12, Number 3, 2016 and, IEEE(EDS) Kolkata Chapter Sponsored 5th International Conference on Computing, Communication and Sensor Network (CCSN, 2016) which will be extended in Communication on Applied Electronics.
- **Shri. Bhubanjyoti Bhattacharya**, JBNSTS Scholar of batch 2001, appointed as a faculty of Physics at Lawrence Technological University in Michigan, USA.

Junior Scholars

- **Shri Rajatava Mukhopadhyay**, JBNSTS junior scholar of batch 2016, was selected to present a paper at the Mathematical Association of America's (MAA) MathFest, held in Chicago, IL, USA during July 26-29, 2017 (Under 18 years group).

CURRENT DONORS AND DONATIONS (2016-17)

A. SCHOLARS RESERVE FUND		
i) Donations (General)		
1 Armenian Holy Church of Nazareth	532,000.00	
2 MP Birla Smarak Kosh (South Point)	94,500.00	
3 Daulat Ram Mehndiratta Charitable Trust	27,000.00	653,500.00
B. LABORATORY FUND		
i) Donation - Corpus		
1 Dr.Somenath Bhattacharyya	3,500.00	
2 Shri Subhabrata Das (Scholar- 2009 batch)	423.00	
3 Shri Sarnab Bhattacharyya (Scholar - 2012 batch)	2,678.00	6,601.00
ii) DONATION (General)		
1 Dr.Bhabatosh Biswas	2,000.00	2,000.00

Research Activities In JBNSTS

Dr Paromita Roy, Deputy Director, JBNSTS, has been a researcher in the area of gifted minds since 2014. She has been contributing to book chapters international volume on gifted Education, is involved with three cross nation studies with Europe and USA on perception of students and teachers on giftedness and has been invited to several national and international forums to present her work, conduct workshops and teach students. In the year 2017 she was invited as a keynote speaker at the National Seminar on Inclusive Pedagogy at Delhi University (Feb 23, 2017), invited to visit the Center for Talented Youth, Ireland based in Dublin in (March 1-6, 2017) and invited as a judge and mentor of the Asia Pacific Forum of Science Talented involving 19 countries and held in National Taiwan Norman University, Taipei, Taiwan (July 11-15, 2017). She spoke on “Role of Teachers in the Education for the Gifted and Talented”, at the Teacher Refresher Course on Recent trends in Life Science by the UGC Human Resource Development Centre (January 6, 2017).

Recent Publications :

Roy, P. (2017). Gifted education in India. *Cogent Education*, 4(1), 1332815.
doi:10.1080/2331186X.2017.1332815

Roy, P. (2016). Creativity and science education for the gifted: Insights from psychology. In K.S. Taber & M. Sumida (Eds.), *Perspectives on Science Education for the Gifted: Key issues and challenges*. Cambridge: Routledge ISBN 978-0-415-73740-1

Roy, P., Mondal, M., Bakuli, K. and Mishra.A. (2016). *Education and Identification of Gifted Students of India*. Maulana Abul Kalam Institute of Asian Studies, Kolkata

Research Publication of Dr. S. Manna

Dr. Smarajit Manna, Student Advisor, JBNSTS, has research interests to contribute in the field of Bioinformatics, Material Science and Cognitive Science.

Publication in the year 2017:

Improvisation of electrical properties of PVDF-HFP: use of novel metallic nanoparticles:
Journal of Materials Science Materials in Electronics, October 2017, Volume 28, Issue 19, pp 14798–14808.



Research activities by Dr. Abhijit Kar

Dr. Abhijit Kar currently working as Scientific Officer of Jagadis Bose National Science Talent Search is looking after different academic and research activities. His current research interest comprises of Application of Nanotechnology for Micro- Electronics, Nanostructured composites and energy devices, Photo voltaic, thin film and Nanomultilayer structure for advanced materials joining. Nano Bio-Materials. He has expertise on different materials characterization techniques. He is one of the first and pioneer research scientist working on lead free solder for electronics/microelectronics applications from India. Published about 40 research papers in SCI Journals and Conference proceedings; contributed in book chapter on **Electron Microscopy** (ISBN 978-953-51-0450-6) and edited book on Nanomaterials and devices and editor of the book **Nanoelectronics and Materials Development** (ISBN 978-953-51-4734-3).

Project Undergoing

1. Training of motivated teachers in innovative methods of science teaching to build scientific aptitude among school students of districts of West Bengal DST-NCSTC-Govt. of India as Principal Investigator
2. Understanding the mechanism of action of Homeopathic medicine at the molecular level in Nano Domains in-vivo and in-vitro systems; CCRH, Govt. Of India as Collaborative Partner with CIRE, Kolkata

Publication

1. Nanoelectronics and Materials Development, Book Edited by Dr. Abhijit Kar; Published by InTech Publisher, ISBN 978-953-51-4734-3; August 2016.
 2. Monalisa Char, A.K. Chakraborty, S. Aditya, S. Manna, A.Kar; Effect of transient Liquid Phase Soldering technique on lead free solder joint interface; 3rd One Day Symposium on Nanotechnology from materials to medicine and their social impact; BITM-Kolkata, March 2017.
 3. Monalisa Char, A.K. Chakraborty, S. Aditya, S. Manna, S. Chaudhuri, A.Kar; Effect of thin film multilayer on the morphological and functional properties of lead free solder joint interface (*under review*)
 4. Monalisa Char, A.K. Chakraborty, S. Aditya, A.Kar; Reliability Prediction of lead free solder to copper joint interface developed by transient liquid phase soldering for microelectronics; 2nd International Conference on Emerging Materials Characterization and Application (EMCA-2017); NIT-Durgapur, March-2017.
 5. Abhijit Kar; Awareness of Tea to the Grass-roots Level in India" –An Invited Lecture at Half a day Brain Storming Meeting on Tea Research In India, SCBNCBS, Kolkata, August 2017
- ## Supervising 1 PhD student working (Registered at NIT-Durgapur) on the nanostructured lead free materials development for microelectronics applications.

Prof Maitree Bhattacharyya, Director is a senior researcher in diverse field of modern biology. She is guiding five research scholars registered in Calcutta University. Already several students have been awarded PhD degree under her supervision. She has published the following papers in this year .

Medical Biochemistry

1. Kakali Ghoshal, Subhadip Chakraborty, Chirantan Das, Sanatan Chattopadhyay, Subhankar Chowdhury, Maitree Bhattacharyya, Dielectric properties of plasma membrane: A signature for dyslipidemia in diabetes mellitus, *Archives of Biochemistry and Biophysics*, 2017; 635, 27-36, DOI: 10.1016/j.abb.2017.10.002.
2. Sima Paul, Kakali Ghoshal, Maitree Bhattacharyya, Dilip Kumar Maiti, Detection of HSO_3^- : A Rapid Colorimetric and Fluorimetric Selective Sensor for Detecting Biological SO_2 in Food and Living Cells., *ACS Omega*, 2017; 2, 8633 – 8639, DOI: 10.1021/acsomega.7b01218.
3. Sultan Tousif¹, Dhiraj Kumar Singh, Sitabja Mukherjee, Shaheer Ahmad, Rakesh Arya, Ranjan Nanda, Anand Ranganathan, Maitree Bhattacharyya, Luc Van Kaer, Santosh K. Kar, Gobardhan Das, Nanoparticle-Formulated Curcumin Prevents Post-therapeutic Disease Reactivation and Reinfection with Mycobacterium tuberculosis following Isoniazid Therapy, *Front. Immunol.*, 30 June 2017 | <https://doi.org/10.3389/fimmu.2017.00739>

Structural Biology

1. Ahana Das, Pijush Basak, Rudradip Pattanayak, Turban Kar, Rajib Majumder, Debadrita Pal, Anindita Bhattacharya, Maitree Bhattacharyya, Samudra Prosad Banik, Trehalose induced structural modulation of Bovine Serum Albumin at ambient temperature, *International Journal of Biological Macromolecules*, 2017, doi.org/10.1016/j.ijbiomac.2017.07.074
2. Turban Kar, Pijush Basak, Rittik Kumar Ghosh, Maitree Bhattacharyya, Protective effects of curcumin against gamma ray induced conformational change of Human Serum Albumin, *International Journal of Biological Macromolecules*, 99 (2017) 600–607. <http://dx.doi.org/10.1016/j.ijbiomac.2017.02.105>
3. Turban Kar, Pijush Basak, Rittik Kumar Ghosh, Maitree Bhattacharyya, Analysis of Curcumin interaction with Human Serum Albumin using spectroscopic studies with molecular Simulation, *Front. Biol.* 2017, 12(3): 199–209). DOI 10.1007/s11515-017-1449-z
4. Sudeshna Chowdhury, Samudra Prosad Banika, Rajib Majumder, Shakuntala Ghorai, Swagata Pal, Pijush Basak, Suman Khowala, Prevention of protein aggregation by extracellular fungal sucrase of *Termitomyces clypeatus*. *Turk J Biochem* 2017. DOI 10.1515/tjb-2016-0297
5. Rudrdip Pattanayak, Pijush Basak, Srikanta Sen and Maitree Bhattacharyya, An insight to the binding of Ellagic acid with Human serum albumin using spectroscopic and

isothermal calorimetry studies, *Biochemistry and Biophysics Reports* 2017, 10 88–93 <http://dx.doi.org/10.1016/j.bbrep.2017.03.001>

Microbial Ecology

1. Sudip Nag, Arnab Pramanik, Dhruvajyoti Chattopadhyay, Maitree Bhattacharyya, Green-fabrication of gold nanomaterials using *Staphylococcus warneri* from Sundarbans estuary: An effective recyclable nano-catalyst for degrading nitro-aromatic pollutants, *Environmental Science and Pollution Research*, DOI: 10.1007/s11356-017-0617-7
2. Arghya Mukherjee, Bobby Chettri, James Langpoklakpam, Pijush Basak, Aravind Prasad, Ashis Mukherjee, Maitree Bhattacharyya, Arvind Singh, Dhruvajyoti Chattopadhyay, Bioinformatic Approaches Including Predictive Metagenomic Profiling Reveal Characteristics of Bacterial Response to Petroleum Hydrocarbon Contamination in Diverse Environments, *Scientific Reports*, | 7: 1108 | DOI:10.1038/s41598-017-01126-3.



THE JBNSTS FUNDS AND ACCOUNTS



FINANCIAL REPORT

JBNSTS is happy to report a period of exponential growth from the aspects of both finance and developments which exceeded all previous records. The largest receipts were from the Department of Higher Education, Science & Technology and Biotechnology Department, Government of West Bengal. The funds of the institution came from multiple sources which reflect its image of high physical accountability of the expenditure.

Apart from regular sanction of grant for salary and maintenance, Department of Higher Education, Science & Technology and Biotechnology Department, Government of West Bengal, in the year 2016-17, funded significant amounts for Developing a Creative Corner, setting up State of Art Biotechnology Laboratory in West Bengal and renovation of existing Building.

Department of Higher Education, Science & Technology and Biotechnology Department, Government of West Bengal also sanctioned funds for Junior Talent Search Test. 125 Scholarships for Junior Scholars have been fixed at Rs.1,000/- per month with a book grant of Rs.2,000/- per year.

Department of Science and Technology, Government of India and DST-SEAT, Government of India also sanctioned their recurring grants for Science camp and Teacher Training Programme.

At a glance the amounts received from both government and non government sources are as follows:

A. Department of Higher education, Science & Technology and Biotechnology, Government of West Bengal	
● Renovation of existing building	Rs. 55,30,000/-
● Junior Scholarship	Rs. 96,66,250/-
● Salary and Maintenance	Rs. 1,53,35,170/-
● West Bengal District Scheme	Rs. 26,00,000/-
● Creative Corner	Rs. 55,00,000/-
● Biotechnology Laboratory	Rs. 1,03,30,000/-

B. Department of Science & Technology, Government of India		
● Teachers Training Programme	Rs.	30,00,000/-
● Science Camp	Rs.	38,15,269/-
● Vigyan Prasar	Rs.	22,000/-

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



FUNDS AND ACCOUNTS

Pan and Associates

Chartered Accountants

4RA-3/2, Purbachal Housing Estate,
Phase-II, Salt Lake, Kolkata-700 097
Telephone : 2248-7310 (Office)
E-mail : spmd@vsnl.net

INDEPENDENT AUDITOR'S REPORT

To

**The Members of the Governing Body,
Jagadis Bose National Science Talent Search**

1. Report on the Financial Statements

1.1. We have audited the accompanying Financial Statements of **JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH**, 1300, Raj Danga Main Road, Kasba, Kolkata - 700 107, which comprise of the Balance Sheet as at 31st March, 2017 and the Income & Expenditure Account of the Society for the year then ended and a summary of Significant Accounting Policies and other explanatory information.

2. Management Responsibility for the Financial Statements

2.1. The Management is responsible for the maintenance of adequate accounting records in accordance with the accounting principles generally accepted in India including the applicable Accounting Standards for safeguarding the assets of the Society and for preventing and detecting frauds and other irregularities; selection and consistent application of appropriate accounting policies and making judgments and estimates that are reasonable and prudent; and design, implementation and maintenance of adequate internal financial controls, that operate effectively for ensuring the accuracy and completeness of the accounting records, relevant to the preparation and presentation of the Financial Statements that give a true and fair view and are free from material misstatement, whether due to fraud or error.

3. Auditor's Responsibility

3.1. Our responsibility is to express an opinion on these Financial Statements based on our audit. We have conducted our audit in accordance with the Standards on auditing issued by the Institute of Chartered Accountants of India. Those Standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the Financial Statements are prepared free of material misstatement.

3.2. An audit involves performing procedures to obtain audit evidence about the amounts and the disclosures in the Financial Statements. The procedures selected depend on the Auditor's judgment, including the assessment of the risks of material misstatement of the Financial Statements, whether due to fraud or error. In making those risk assessments, the Auditor considers internal financial control relevant to the Society's preparation of the Financial

Statements that give a true and fair view in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on whether the Society has in place an adequate internal financial controls system over financial reporting and the operating effectiveness of such controls. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of the accounting estimates made by Society's Management, as well as evaluating the overall presentation of the Financial Statements.

- 3.3. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion on the Standalone Financial Statements.

In continuation to our comments in the foregoing Clauses above, we further report that :

- 4.1. The disposal process of several items of non-functioning Fixed Assets, initiated towards the end of the year, has culminated into invitation of an open tender, which has been finalized on the date of the Balance Sheet [vide Note No. 14 of Schedule – 'O']. Albeit, the resultant disposal of these assets has finally taken place on 10.04.2017, yet no accounting treatment towards the consequential effect of writing off those impaired assets from the books of accounts of the Society has been found effected during the year, by considering this event occurring after the Balance Sheet date. Thus, non-consideration of the available valuation of these scrapped assets as well as the corresponding provision towards impairment of the same, the book value of the Society's Fixed Assets has resulted in an understatement to that extent ;
- 4.2. The reason behind non-provisioning of liabilities towards Gratuity payable to employees, albeit has been elaborated in Note No. 10.2.2. of Schedule – 'O', yet the same is not in line with the relevant stipulations as specified under applicable Accounting Standard 15 by the Institute of Chartered Accountants of India.
- 4.3. Non-charging of depreciation on Fixed Assets acquired under Special Reserve Fund, albeit a practice being followed by the Society over the years in pursuance of its declared policy [vide Note No. 5.2 of Schedule – 'O'], yet is not in conformity with the accounting principles generally accepted in India and the requisite accounting effects have not been given to bring the book values of the relevant assets to their true written down values. Had the depreciation been charged at the applicable rates being followed by the Society, the balance of said Fund would have been reduced by an identical margin.

Opinion -

We report that :

- 5.1. Subject to our remarks appearing under different sub-clauses in Clause 4 above, we have obtained all the information and explanations which, to the best of our knowledge and belief, were necessary for the purposes of our audit and have found them to be satisfactory ;
- 5.2. The transactions of the Society, which have come to our notice, have been within the powers of the Society.
- 5.3. In our opinion proper books of account as required by law have been kept by the Society so far as it appears from our examination of those books ;



- 5.4. In our opinion and subject to our comments under different sub-clauses in Clause 4 above, the Balance Sheet and the Income & Expenditure Account comply with the applicable Accounting Standards ;
- 5.5. The Balance Sheet and the Income & Expenditure A/c. referred to in this report are in agreement with the books of account ;
- 5.6. In our opinion and to the best of our information and according to the explanations given to us, the said accounts, read in conjunction with the Significant Accounting Policies and Notes to the Financial Statements and attached thereto, give the information required in the manner so required and also give, subject to our comments under different sub-clauses in Clause 4 above, a true and fair view in conformity with the accounting principles generally accepted in India :
- i) In the case of the Balance Sheet, of the state of the Society's affairs as at 31st March, 2017; and
 - ii) In the case of the Income & Expenditure Account, of the **Surplus** of the Society for the year ended on that date.

Dated : Kolkata
The 12th September, 2017

For Pan & Associates
Chartered Accountants
Firm Regn. No. : 322655E

Sd/-
Shekhar Kumar Pan
(Proprietor)
Membership No. 053883

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

BALANCE SHEET AS ON 31ST MARCH, 2017

PREVIOUS YEAR ₹	SCHEDULES	CURRENT YEAR	
		₹	₹
SOURCES OF FUNDS			
72,117,789.77	Funds A	94,500,833.29	
13,279,726.07	Liabilities for Unutilised Grant B	17,118,190.01	
85,397,515.84	TOTAL	111,619,023.30	
APPLICATION OF FUNDS			
20,845,483.80	Fixed Assets C	23,224,747.02	
60,828,841.75	Investments D	69,874,935.74	
Net Current Assets -			
18,524,612.79	Current Assets E	28,415,585.15	
14,801,422.50	Less : Current Liabilities F	<u>9,896,244.61</u>	
<u>3,723,190.29</u>		<u>18,519,340.54</u>	
85,397,515.84	TOTAL	111,619,023.30	

Signed in terms of our report of even date.

On behalf of the Governing Body

For Pan & Associates
Chartered Accountants
Firm Regn. No. : 322655E

Sd/-

Prof. (Dr.) Maitree Bhattacharyya
Director

Sd/-

Shekhar Kumar Pan
Proprietor
Membership No. 053883KOLKATA
The 12th September, 2017



JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH

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

INCOME AND EXPENDITURE ACCOUNT (GRANT) FOR THE YEAR ENDED 31ST MARCH, 2017

Previous Year	Particulars	Government of West Bengal						Government of India				Current Year Total	
		Sch. (DHE) - Grants	Higher Edn., (WBDS) From DHE	Junior Talent Search Tests (DHE - JTST)	Junior Talent Search Tests (DST - JTST)	Teachers' Training Programme (DST - TTP)	Ministry of North-East Region (MDoNER)	Deptt. of Science & Technology (DST)	Schm. for Early Science & Attract of Talent for Science (DST - SEATS)	Talent Enrichment Programme (CSIR)	Vigyan Prasar		
₹	₹	₹	₹	₹	₹	₹	₹	₹	₹	₹	₹	₹	₹
	INCOME												
	General:												
32,611,337.00	Grant-in-aid	15,335,170.00	2,600,000.00	-	9,666,250.00	-	-	-	3,000,000.00	3,815,269.00	-	22,000.00	34,438,689.00
2,766,121.82	Last year's Surplus / (Deficit) / Unutilized Grant	4,247,979.64	324,269.49	3,507,000.00	1,289,009.00	2,730,770.00	108,311.75	52,901.05	-	-	180,573.11	-	12,420,814.04
-	Liabilities no longer required written back	-	-	-	-	-	-	-	-	-	-	-	-
-	Interest earned from Saving Bank Deposits	-	-	-	-	-	-	-	-	-	-	-	-
35,377,458.82	TOTAL INCOME	19,583,149.64	2,924,269.49	3,507,000.00	10,935,259.00	2,730,770.00	108,311.75	52,901.05	3,000,000.00	3,815,269.00	180,573.11	22,000.00	46,859,503.04
	EXPENDITURES												
	General:												
6,663,536.00	Establishment	7,483,244.00	-	-	-	-	-	-	-	-	-	-	7,483,244.00
10,325,908.00	Programme Expenses	1,577,186.00	2,448,500.00	-	8,189,219.50	745,966.00	-	4,682.00	417,830.00	3,815,269.00	190,424.00	27,322.00	17,416,398.50
5,967,200.78	Office & Administrative Expenses	5,024,594.17	-	-	-	-	-	-	-	-	-	-	5,024,594.17
22,956,644.78	TOTAL EXPENDITURES	14,085,024.17	2,448,500.00	-	8,189,219.50	745,966.00	-	4,682.00	417,830.00	3,815,269.00	190,424.00	27,322.00	29,924,236.67
12,420,814.04	BALANCE	5,498,125.47	475,769.49	3,507,000.00	2,746,039.50	1,984,804.00	108,311.75	48,219.05	2,582,170.00	-	(9,850.89)	(5,322.00)	16,935,266.37
12,420,814.04	Unutilised / (Deficit) Grants - Carried forward	5,498,125.47	475,769.49	3,507,000.00	2,746,039.50	1,984,804.00	108,311.75	48,219.05	2,582,170.00	-	(9,850.89)	(5,322.00)	16,935,266.37

Signed in terms of our report of even date.

For Pan & Associates
Chartered Accountants
Firm Regn. No. : 322655E

On behalf of the Governing Body

Sd/-
Shekhar Kumar Pan
Proprietor
Membership No. 053883

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

KOLKATA
The 12th September, 2017

JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH

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

INCOME AND EXPENDITURE ACCOUNT (FUND) FOR THE YEAR ENDED 31ST MARCH, 2017

Previous Year	Particulars	Sch.	Scholars' Reserve Fund	Development Fund	Laboratory Fund	JBNSTS-Own Gen. Fund	Staff Welfare & Medical Fund	Infrastructure Development Fund	Total
₹			₹	₹	₹	₹	₹	₹	₹
	INCOME								
	General -								
	Scholars' Reserve Fund :								
360,000.00	Grants		503,000.00						503,000.00
349,000.00	Donations		653,500.00						653,500.00
1,396,099.78	Interests on Investments		1,477,503.30						1,477,503.30
620,735.00	Registration Fees (For Senior / Junior Talent Search Tests)		636,125.00						636,125.00
-	Miscellaneous Other Receipts		1,084.00						1,084.00
	Development Fund :								
-	Grants			-					-
-	Donations			-					-
603,593.64	Interests on Investments			279,676.96					279,676.96
1,041,868.75	Interests earned on Savings / Short-term Deposits			3,191,064.99					3,191,064.99
	Laboratory Fund :								
34,000.00	Donations				2,000.00				2,000.00
163,754.25	Interests on Investments				176,998.45				176,998.45
-	Overhead				25,000.00				25,000.00
20,000.00	Fees for usage of Laboratory Facilities				-				-
	JBNSTS - Own Generation Fund :								
94,469.00	Rent Earned					104,884.89			104,884.89
653,750.00	Accommodation					628,335.19			628,335.19
122,000.00	Overhead					255,000.00			255,000.00
325,353.33	Interests on Investments					444,270.12			444,270.12
	Staff Welfare & Medical Fund :								
62,245.41	Interests on Investments						80,364.48		80,364.48
	Infrastructure Development Fund :								
66,753.34	Interests on Investments							85,209.94	85,209.94
5,913,622.50	TOTAL INCOME		3,271,212.30	3,470,741.95	203,998.45	1,432,490.20	80,364.48	85,209.94	8,544,017.32
	Carried Over								

Contd...2

JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH

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

INCOME AND EXPENDITURE ACCOUNT (FUND) FOR THE YEAR ENDED 31ST MARCH, 2017 (contd...)

Previous Year	Particulars	Sch.	Scholars' Reserve Fund	Development Fund	Laboratory Fund	JBNSTS-Own Gen. Fund	Staff Welfare & Medical Fund	Infrastructure Development Fund	Total
₹			₹	₹	₹	₹	₹	₹	₹
5,913,622.50	TOTAL INCOME Brought Forward		3,271,212.30	3,470,741.95	203,998.45	1,432,490.20	80,364.48	85,209.94	8,544,017.32
	LESS: EXPENDITURES								
	General -								
1,313,776.00	Scholars' Reserve Fund	J	1,732,296.87						1,732,296.87
875,664.65	Development Fund	K		1,377,458.69					1,377,458.69
115,038.24	Laboratory Fund	L			104,369.56				104,369.56
156,381.68	JBNSTS - Own Generation Fund	M				136,249.08			136,249.08
	- Staff Welfare & Medical Fund	N					NIL		-
	- Infrastructure Development Fund	N						NIL	-
2,460,860.57	TOTAL EXPENDITURES		1,732,296.87	1,377,458.69	104,369.56	136,249.08	-	-	3,350,374.19
3,452,761.93	BALANCE		1,538,915.43	2,093,283.26	99,628.89	1,296,241.12	80,364.48	85,209.94	5,193,643.13
	Excess of Income over Expenditures, i.e.,								
3,452,761.93	SURPLUS, transferred to Specific Funds		1,538,915.43	2,093,283.26	99,628.89	1,296,241.12	80,364.48	85,209.94	5,193,643.13

Signed in terms of our report of even date.

For Pan & Associates
Chartered Accountants
Firm Regn. No. : 322655E

On behalf of the Governing Body

Sd/-
Shekhar Kumar Pan
Proprietor
Membership No. 053883

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

KOLKATA
The 12th September, 2017

JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH

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

INCOME AND EXPENDITURE ACCOUNT (INDIVIDUAL PROJECT GRANTS) FOR THE YEAR ENDED 31ST MARCH, 2017

Previous Year	Particulars	Government of India			Total
		Science & Engineering Research Bureau (SERB) u / DST Dr. Abhijit Kar	Science & Engineering Research Bureau (SERB) u / DST Dr. Pijush Basak	Maulana Abul Kalam Azad Instit. of Asian Studies (MAKAJAS) Dr. Paromita Roy	
₹	Sch.	₹	₹	₹	₹
	INCOME				
	General :				
1,413,941.00	Grant-in-aid	-	400,000.00	-	400,000.00
-	Interests earned on Savings Deposits	3,094.00	17,763.00	50.00	20,907.00
	Last year's Surplus / (Deficit) /	-			
	Unutilized Grant after adjustment /				
325,230.00	refund during the year	138,703.28	675,056.00	12,321.00	826,080.28
1,739,171.00	TOTAL INCOME	141,797.28	1,092,819.00	12,371.00	1,246,987.28
	EXPENDITURES				
	General :				
913,090.72	Programme Expenses	H 323,701.00	959,521.00	10,750.00	1,293,972.00
913,090.72	TOTAL EXPENDITURES	323,701.00	959,521.00	10,750.00	1,293,972.00
826,080.28	BALANCE	(181,903.72)	133,298.00	1,621.00	(46,984.72)
826,080.28	UNUTILISED GRANTS Carried forward	(181,903.72)	133,298.00	1,621.00	(46,984.72)

Signed in terms of our report of even date.

For Pan & Associates
Chartered Accountants
Firm Regn. No. : 322655E

On behalf of the Governing Body

Sd/-
Shekhar Kumar Pan
Proprietor
Membership No. 053883

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

KOLKATA
The 12th September, 2017



JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH

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

SCHEDULE - A

FUNDS

PREVIOUS YEAR		CURRENT YEAR	
₹		₹	₹
SCHOLARS' RESERVE FUND :			
11,126,078.29	Balance as per last account	12,538,137.07	
1,412,058.78	Add : Surplus for the year as per Income & Expenditure Account	1,538,915.43	
12,538,137.07			14,077,052.50
DEVELOPMENT FUND :			
16,291,032.25	Balance as per last account	50,065,227.99	
1,000.00	Add : Donation (Corpus)	-	
33,003,398.00	Add : Capital Grants received during the year	17,363,427.00	
769,797.74	Add : Surplus for the year as per Income & Expenditure Account	2,093,283.26	
50,065,227.99			69,521,938.25
LABORATORY FUND :			
2,036,269.13	Balance as per last account	2,138,985.14	
-	Add : Donation (Corpus)	8,601.00	
102,716.01	Add : Surplus for the year as per Income & Expenditure Account	99,628.89	
2,138,985.14			2,247,215.03
SPECIAL RESERVE FUND :			
28,365.09	Balance as per last account	28,365.09	
-	Less : Assets Written Off	-	
28,365.09			28,365.09
1,205,373.37	PROJECT CAPITAL ASSETS FUND (Sub-schedule - A 1)		1,022,328.77
CONTINGENCY FUND :			
1,000,000.00	Balance as per last account		1,000,000.00
JBNSTS - OWN GENERATION FUND :			
3,263,771.15	Balance as per last account	4,102,961.80	
1,039,190.65	Add : Surplus for the year as per Income & Expenditure Account	1,296,241.12	
4,302,961.80			5,399,202.92
	Less : Transfer to Other Funds -		
(100,000.00)	a) To Staff Welfare & Medical Fund	(100,000.00)	
(100,000.00)	b) To Infrastructure Development Fund	(100,000.00)	
4,102,961.80			5,199,202.92
STAFF WELFARE & MEDICAL FUND :			
334,884.58	Balance as per last account	497,129.99	
100,000.00	Add : Transfer from JBNSTS - Own Generation Fund	100,000.00	
62,245.41	Add : Surplus for the year as per Income & Expenditure Account	80,364.48	
497,129.99			677,494.47
INFRASTRUCTURE DEVELOPMENT FUND :			
366,379.76	Balance as per last account	533,133.10	
100,000.00	Add : Transfer from JBNSTS - Own Generation Fund	100,000.00	
66,753.34	Add : Surplus for the year as per Income & Expenditure Account	85,209.94	
533,133.10			718,343.04
RETIREMENT BENEFIT FUND - (Provident Fund) :			
8,161.22	Balance as per last account	8,476.22	
315.00	Add : Interests earned during the year	417.00	
-	Less : Current Year's Expenses	-	
8,476.22			8,893.22
INTERNATIONAL CONFERENCE FOR GIFTED MINDS (ICGM) FUND :			
57,907.00	Balance as per last account	-	
-	Add : Donations received during the year	-	
57,907.00	Less : Current Year's Expenses (Sub-schedule - A 2)	-	
72,117,789.77	TOTAL		: 94,500,833.29

JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH

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

SCHEDULE - A1

PROJECT CAPITAL ASSETS FUND [*Sub-Schedule to Schedule - "A"*]

PREVIOUS YEAR ₹		CURRENT YEAR		₹
		₹	₹	
		Monitored by Principal Investigators		Total
		Dr. Abhijit Kar	Dr. Pijush Basak	
1,129,204.06	Balance as per last account	951,286.95	254,086.42	1,205,373.37
270,000.00	Add : Capital Grant received during the year	-	-	-
1,399,204.06		951,286.95	254,086.42	1,205,373.37
193,830.69	Less : Depreciation for the year	146,107.64	36,936.96	183,044.60
1,205,373.37	TOTAL	805,179.31	217,149.46	1,022,328.77

SCHEDULE - A 2

EXPENDITURES UNDER ICGM & RESEARCH ACTIVITIES [*Sub-Schedule to Schedule - "A"*]

Rs.		Rs.	Rs.
	a) Expenditures for Research Activities (Nuremberg) -		
22,523.00	Computer & Peripherarls	-	
29,350.00	Honorarium to Data Collector	-	
5,734.00	City Conveyance (For Co-ordinator and Data Collector)	-	
300.00	Miscellaneous Expenses	-	
57,907.00	TOTAL		-

SCHEDULE - "B"

LIABILITIES FOR UNUTILISED GRANTS

A. In respect of Grants Received from different Authorities of Govt. of West Bengal -

4,247,979.64	a) Deptt. of Higher Education (DHE)	5,498,125.47	
324,269.49	b) DHE - West Bengal District Scheme (WBDS)	475,769.49	
	c) DHE - Junior Talent Search Tests (JTST)	3,507,000.00	
1,269,009.00	d) Deptt. of Science & Technology (DST) - Junior Talent Search Tests	2,746,039.50	
2,730,770.00	e) DST - Teachers' Training Programme (TTP)	1,984,804.00	
30,000.00	f) West Bengal Academy of Science & Technology (WAST) [<i>As per last account</i>]	30,000.00	
2,831.75	g) DST - (WAST) [<i>As per last account</i>]	2,831.75	
12,111,859.88	Sub Total		14,244,570.21

B. In respect of Grants Received from different Authorities of Govt. of India -

108,311.75	a) Ministry of Development of North Eastern Region (DoNER)	108,311.75	
52,901.05	b) Deptt. of Science and Technology (DST)	48,219.05	
-	c) DST - Teachers' Training Programme (TTP)	2,582,170.00	
180,573.11	d) Council of Scientific & Industrial Research, Talent Enrichment Programme	-	
341,789.91	Sub Total		2,738,700.80

C. In respect of Project Grants received from different Authorities of Govt. of India -

	a) Science & Engineering Research Bureau (SERB) under DST -		
138,703.28	i) Principal Investigator - Dr. Abhijit Kar	-	
675,056.00	ii) Principal Investigator - Dr. Pijush Basak	133,298.00	
	Sub Total		133,298.00
	b) Maulana Abul Kalam Azad Instt. of Asian Studies (MAKAIAS), Principal Investigator - Dr. Paromita Roy	1,621.00	
12,321.00			
826,080.28			134,919.00
13,279,726.07	TOTAL		17,118,190.01



JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH

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

SCHEDULE - "C"

FIXED ASSETS

Description of Assets	Written Down	Adjustments /	Addition	Value	Rate of	Depreciation	Written Down
	Value as on 01.04.2016	Written off during the year	during the year	as on 31.03.2017	Depreciation	for the year	Value as on 31.03.2017
	₹	₹	₹	₹	%	₹	₹
A. Assets pertaining to Development Fund -							
1) Leasehold Land	2,075,669.00	-	-	2,075,669.00	-	-	2,075,669.00
2) Building	7,128,743.32	-	8,656,667.00	15,785,410.32	5%	789,270.52	14,996,139.80
3) Rain Water Harvesting System	56,458.34	-	-	56,458.34	5%	2,822.92	53,635.42
4) Mural	35,575.92	-	-	35,575.92	5%	1,778.80	33,797.12
5) Electrical Equipment	405,850.67	-	-	405,850.67	15%	60,877.60	344,973.07
6) Electrical Fittings	172,627.02	-	-	172,627.02	10%	17,262.70	155,364.32
7) Electrical Fittings funded by GoWB	-	-	173,525.00	173,525.00	10%	17,352.50	156,172.50
8) Furniture	343,256.06	-	7,500.00	350,756.06	10%	34,700.61	316,055.45
9) Office Equipment	222,422.80	-	10,171.00	232,593.80	15%	34,692.20	197,901.60
10) Science Indoor Exhibits	98,565.06	-	-	98,565.06	15%	14,784.76	83,780.30
11) Computers	21,827.80	-	-	21,827.80	60%	13,096.68	8,731.12
12) Laboratory Equipment	12,611.45	-	-	12,611.45	15%	1,891.72	10,719.73
13) Computers & Accessories funded by GoWB	25,848.90	-	101,795.00	127,643.90	60%	46,047.84	81,596.06
14) Printer / Scanner / Photocopier funded by GoWB	200,337.90	-	15,000.00	215,337.90	60%	129,202.74	86,135.16
15) Air Conditioners (Dormitory)	-	-	603,251.00	603,251.00	10%	60,325.10	542,925.90
A1. Capital Work-in-Progress pertaining to Development Fund -							
16) Building (Innovation Centre)	112,986.00	-	16,161.00	129,147.00	NA	-	129,147.00
17) Interior Decoration & Renovation	7,100,138.00	8,656,667.00	1,556,529.00	-	NA	-	-
18) Structure for Rooftop Canteen	-	-	1,350,000.00	1,350,000.00	NA	-	1,350,000.00
Sub-total (Development Fund)	18,012,918.24	8,656,667.00	12,490,599.00	21,846,850.24		1,224,106.69	20,622,743.55
B. Assets pertaining to Laboratory Fund -							
1) Furniture	160,394.06	-	-	160,394.06	10%	16,039.41	144,354.65
2) Laboratory Equipment	566,894.36	-	-	566,894.36	15%	85,034.15	481,860.21
Sub-total (Laboratory Fund)	727,288.42	-	-	727,288.42		101,073.56	626,214.86
C. Assets pertaining to DHE, Govt. of West Bengal -							
1) Office Equipment	3.01	-	-	3.01	15%	0.45	2.56
2) Furniture	1,713.96	-	-	1,713.96	10%	171.40	1,542.56
3) Computers & Accessories pertaining to WBDS, GoWB	-	-	77,650.00	77,650.00	60%	23,295.00	54,355.00
Sub-total (Dept. of Higher Edn., Govt. of WB)	1,716.97	-	77,650.00	79,366.97		23,466.85	55,900.12
D. Assets pertaining to JBNSTS - Own Generation Fund -							
1) Laboratory Equipment	523,388.65	-	-	523,388.65	15%	78,508.30	444,880.35
2) Computers	8,710.96	-	-	8,710.96	60%	5,226.58	3,484.38
3) Office Equipment	110,589.90	-	-	110,589.90	15%	16,588.49	94,001.41
4) Electrical Equipment	131,663.68	-	-	131,663.68	15%	19,749.55	111,914.13
5) Furniture & Fixtures	81,605.00	-	85,643.00	167,248.00	10%	13,747.80	153,500.20
6) Electrical Fittings	16,189.10	-	-	16,189.10	15%	2,428.37	13,760.73
Sub-total (JBNSTS - Own Generation Fund)	872,147.29	-	85,643.00	957,790.29		136,249.08	821,541.20
E. Assets pertaining to Capital Fund -							
1) Laboratory Equipment	943,698.95	-	-	943,698.95	15%	141,554.84	802,144.11
2) Computers	7,588.00	-	-	7,588.00	60%	4,552.80	3,035.20
Sub-total (Capital Fund) PI : Dr. A. Kar	951,286.95	-	-	951,286.95		146,107.64	805,179.31
F. Laboratory Equipment (SERB) PI : Dr. P.Basak)	196,267.42	-	49,979.00	246,246.42	15%	36,936.96	209,309.46
G. Assets pertaining to Special Reserve Fund -							
1) Furniture & Fittings	31,130.37	-	-	31,130.37	-	-	31,130.37
2) Computers	4,992.46	-	-	4,992.46	-	-	4,992.46
3) Electrical Equipment	37,604.58	-	-	37,604.58	-	-	37,604.58
4) Electrical Fittings	6,731.10	-	-	6,731.10	-	-	6,731.10
5) Office Equipment	3,400.00	-	-	3,400.00	-	-	3,400.00
Sub-total (Special Reserve Fund)	83,858.51	-	-	83,858.51	-	-	83,858.51
TOTAL	20,845,483.80	8,656,667.00	12,703,871.00	24,892,687.80		1,667,940.78	23,224,747.02
Previous Year	13,129,916.04	-	8,871,709.00	22,001,625.04		1,156,141.24	20,845,483.80

JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH

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

SCHEDULE - "D"

INVESTMENTS

PREVIOUS YEAR		CURRENT YEAR	
₹		₹	₹
	CURRENT INVESTMENTS :		
	A. Investments in Short-Term Fixed Deposits -		
2,550,000.00	a) With State Bank of India, Kasba Branch	2,567,017.00	
34,500,000.00	b) With United Bank of India, Bosepukur Rajdanga Branch	40,090,953.65	
37,050,000.00	Sub Total	42,657,970.65	
	B. Interests Accrued on above Fixed Deposits -		
57,845.00	a) With State Bank of India, Kasba Branch	56,366.00	
196,283.75	b) With United Bank of India, Bosepukur Rajdanga Branch	579,403.09	
254,128.75	Sub Total	635,769.09	
37,304,128.75	TOTAL		43,293,739.74
	LONG - TERM INVESTMENTS -		
	A. Investments in Long-Term Fixed Deposits -		
19,300,000.00	a) With State Bank of India, Kasba Branch	22,300,000.00	
1,100,000.00	b) With State Bank of India, Jeevan Deep Branch	1,100,000.00	
30,000.00	c) With UCO Bank, Brabourne Road Branch	30,000.00	
2,044,000.00	d) With Housing Development Finance Corporation Ltd.	2,044,000.00	
800,000.00	e) With State Bank of India (FC), Salt Lake, Sector - 1 Branch	800,000.00	
23,274,000.00	Sub Total	26,274,000.00	
	B. Interests Accrued on above Fixed Deposits -		
221,447.00	a) With State Bank of India, Kasba Branch	296,970.00	
18,957.00	b) With Housing Development Finance Corporation Ltd.	-	
10,309.00	c) With State Bank of India (FC), Salt Lake, Sector - 1 Branch	10,226.00	
250,713.00	Sub Total	307,196.00	
	TOTAL		26,581,196.00
60,828,841.75	GRAND TOTAL		69,874,935.74



JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH

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

SCHEDULE - "E"

CURRENT ASSETS, LOANS & ADVANCES

PREVIOUS YEAR		CURRENT YEAR		
₹		₹	₹	₹
9,416.00	A. CURRENT ASSETS -			53,782.00
	a) Cash in hand (As physically verified)			
	b) Cash at Bank (Held in Savings Bank Accounts with)			
474,192.88	i) SBI, Kasba Branch - Development Fund (A/c. No. 10415825360)	963,151.88		
208,944.52	ii) SBI, Salt Lake, Sector - 1 Branch - FC (A/c. No. 10836429242)	281,496.52		
1,715,696.06	iii) SBI, Kasba Branch - Project (A/c. No. 10415825359)	3,278,671.38		
376,250.80	iv) SBI, Kasba Branch - Scholars' Res. Fund (A/c. No.10415825348)	100,999.93		
10,339,137.53	v) United Bank of India (UNI), Bosepukur Rajdanga (A/c. No. 5486)	22,445,820.83		
8,225.67	vi) UNI, Bosepukur Rajdanga - Provident Fund (A/c. No. 5657)	8,642.67		
9,533.00	vii) Union Bank of India, Ballygunge Branch (A/c. No. 301202010009819)	11,381.00		
730,325.00	viii) SBI, Kasba (Govt. Aided Project 01 - Dr. Pijush Basak)	144,684.00		
3,665.00	ix) SBI, Kasba (Govt. Aided Project 02 - Dr. Paromita Roy)	957.00		
150,630.28	x) SBI, Kasba (Govt. Aided Project 03 - Dr. Abhijit Kar)	56,930.28		
14,016,600.74	Sub Total			27,292,735.49
	c) Cash at Bank (Held in Current Accounts with)			
16,791.00	i) SBI, Kasba Branch (A/c. No. CA - 35061192770)	10,305.00		
10,000.00	ii) SBI, Kasba Branch (A/c. No. CA - 33224282758)	10,000.00		
26,791.00	Sub Total			20,305.00
	d) Interests Accrued on Savings Bank Deposits			
-	i) SBI, Kasba Branch - Development Fund (A/c. No. 10415825360)	590.00		
-	ii) SBI, Salt Lake, Sector - 1 Branch - FC (A/c. No. 10836429242)	185.00		
-	ii) SBI, Kasba Branch - Scholars' Res. Fund (A/c. No.10415825348)	80.00		
-	iii) SBI, Kasba Branch - Project (A/c. No. 10415825359)	2,282.00		
10,566.00	viii) SBI, Kasba (Govt. Aided Project 01 - Dr. Pijush Basak)	212.00		
287.00	ix) SBI, Kasba (Govt. Aided Project 02 - Dr. Paromita Roy)	1.00		
1,761.00	x) SBI, Kasba (Govt. Aided Project 03 - Dr. Abhijit Kar)	37.00		
12,614.00	Sub Total			3,387.00
14,056,005.74	TOTAL			27,316,427.49
14,065,421.74	TOTAL (A)			27,370,209.49
	B. LOANS & ADVANCES -			
	(Advances recoverable in cash or in kind or for value to be received,- unsecured, considered good)			
	a) Security Deposits -			
13,000.00	i) For Telephone	11,000.00		
92,827.10	ii) For Electricity	92,827.10		
105,827.10	Sub Total			103,827.10
	b) Grant-in-Aids Receivable -			
3,615,442.00	i) From Deptt of Higher Education, Govt. of West Bengal	605,808.00		
500,000.00	ii) From Council of Scientific & Industrial Research, Govt. of India	9,850.89		
58,127.00	iii) From Deptt. of Science & Technology, Govt. of India (SEATS)	83,120.00		
-	iv) From Govt. of India, Vigyan Prasar	5,322.00		
-	v) From Govt. of India, Science & Engineering Research Bureau (SERB) under DST	181,903.72		
4,173,569.00	Sub Total			886,004.61
3,500.00	c) Advance against Salary	2,730.00		
49,168.00	d) Advances to Staff against Tours / Programmes	4,670.00		
82.95	e) Advance for Office Expenses (Postage)	3,140.95		
-	f) Advances to Suppliers	24,545.00		
14,239.00	g) Prepaid Expenses	20,335.00		
112,805.00	h) Tax Deducted at Sources (Refundable)	-		
-	i) Tax Deducted at Sources	123.00		
4,459,191.05	TOTAL (B)			1,045,375.66
18,524,612.79	GRAND TOTAL (A + B)			28,415,585.15

JAGADISH BOSE NATIONAL SCIENCE TALENT SEARCH

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

SCHEDULE - "F"

CURRENT LIABILITIES AND PROVISIONS

PREVIOUS YEAR		CURRENT YEAR	
₹		₹	₹
	A. Liabilities for Expenses :		
1,860,561.00	Scholarships	2,218,561.00	
331,070.50	Book Grants	388,388.50	
53,940.00	Senior Talent Search Test Expenses	-	
53,940.00	Junior Talent Search Test Expenses (DST, GoWB)	64,050.00	
15,000.00	Best School Award	15,000.00	
	Expenses under Other Programmes of DST, GOI -		
-	a) Teachers' Training Programme	70,350.00	
73,210.00	b) Scheme for Early Attraction of Talent for Science (SEATS)	273,606.11	
12,474.00	c) Science & Engg. Research Bureau (SERB)	23,173.00	
-	d) Science Workshop for Contact Programmes	<u>565.00</u>	367,694.11
77,975.00	Teachers' Training Programme (TTP) Expenses (DST, GoWB)	-	
101,443.00	West Bengal District Scheme (WBDS) Programme Expenses (DHE, GoWB)	-	
11,385.00	Development Fund Expenses	-	
	Repair & Maintenance Expenses -		
-	a) For General purposes	36,402.00	
-	b) For Building	<u>483,263.00</u>	519,665.00
-	Contingency		29,517.00
-	Staff Welfare Expenses		133,560.00
1,758.00	Postage & Telephone		-
42,290.00	City Conveyance		-
31,680.00	Laboratory Equipment (Laboratory Fund)		-
18,849.00	Office Equipment (Development Fund)		-
7,003,571.00	Interior Decoration & Renovation (Development Fund)	517,430.00	
-	Rooftop Canteen (Development Fund)	1,263,750.00	
34,230.00	Computer & Accessories		-
9,048.00	Cleaning Expenses		-
25,490.00	Electricity	29,470.00	
19,800.00	Security Service Charges		-
8,337.00	Books & Journals		-
-	Professional Fees		35,400.00
34,500.00	Audit Fees		35,400.00
3,319,768.00	Property Taxes		-
2,390.00	Profession Tax (Employees)		900.00
13,254.00	Income Tax Deducted at Sources (Contractors)		21,354.00
-	Income Tax Deducted at Sources (Consultancy)		8,000.00
10,204.00	Work Contract Tax Deducted at Sources		26,287.00
13,166,167.50	Sub Total		5,674,426.61
132,228.00	B. Security Deposits from Contractors (Civil)		93,291.00
-	C. Deposits from Scholars (Talent Enrichment Programme [TEP])		70,000.00
	D. Liabilities towards Grants from DST, GoWB -		
	Grants received in Advance		
-	a) For Junior Talent Search Test	2,462,500.00	
-	b) For Talent Enrichment Programme	<u>1,075,000.00</u>	
	Sub Total		3,537,500.00
	E. Liabilities towards Grants from DST (SEATS), GOI -		
800,000.00	a) Grants received in Advance (For Forthcoming Camps)		-
703,027.00	b) Grants Refundable (For Finished Camps)	<u>521,027.00</u>	
	Sub Total		521,027.00
14,801,422.50	TOTAL		9,896,244.61



JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH

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

SCHEDULE - "G"

ESTABLISHMENT

PREVIOUS YEAR		CURRENT YEAR	
₹		₹	
6,601,880.00	Salaries & Allowances	7,421,588.00	
61,656.00	Contribution to Provident Fund (Office)	61,656.00	
6,663,536.00	TOTAL		7,483,244.00

SCHEDULE - "H"

PROGRAMME EXPENSES

PREVIOUS YEAR		CURRENT YEAR	
₹		₹	
	I. Expenses funded by Deptt. of Higher Education, Govt. of West Bengal -		
869,317.00	Talent Search Test	1,027,360.00	
134,197.00	Awareness Programmes	158,501.00	
5,000.00	Best School Award	10,000.00	
51,375.00	Books & Journals	94,304.00	
212,079.00	Annual Award Ceremony	287,021.00	
1,271,968.00	Sub Total :		1,577,186.00
	II. Expenses funded by Deptt. of Higher Education, Govt. of West Bengal (WBDS) -		
18,884.00	Academic Meeting	20,769.00	
44,750.00	Base Line Tests	35,431.00	
637,231.00	Follow-up Workshop	-	
590,805.00	Science / Advance Science Workshop	1,976,616.00	
114,116.00	Teachers' Training Programmes	101,265.00	
462,123.00	Project Competitions	223,127.00	
-	Special Programme for Underprivileged Students	91,292.00	
1,867,909.00	Sub Total :		2,448,500.00
	III. Expenses under Govt. of West Bengal [DST - Junior Talent Search Test (JTST)]		
-	Aids to Schools for Establishment of Laboratories	3,400,000.00	
285,238.00	Annual Award Ceremony	212,951.00	
5,000.00	Best School Award	5,000.00	
47,000.00	Encouragement Awards	101,000.00	
102,000.00	Book Grants	312,500.00	
594,000.00	Scholarship	1,974,000.00	
6,481.00	Science Workshop	215,512.00	
955,196.00	Talent Search Tests	1,090,877.00	
59,311.00	Awareness Programmes	232,019.00	
94,140.00	Teaching Aid	115,050.00	
285,484.00	Remuneration	515,290.00	
3,029.00	Contingency	9,971.50	
99,536.00	Publicity Materials	-	
28,615.00	Office Overhead	2,500.00	
22,961.00	Postage & Telephone	2,549.00	
2,587,991.00	Sub Total :		8,189,219.50
	IV. Expenses under Govt. of West Bengal [DST - Teachers' Training Programmes]		
227,435.00	Activity-based Workshop	428,970.00	
61,730.00	Manpower Costs	283,098.00	
30,000.00	Meeting Expenses for Workshop Planning	33,898.00	
319,165.00	Sub Total :		745,966.00
6,047,033.00	Carried Over		12,960,871.50

SCHEDULE - "H"

PROGRAMME EXPENSES contd...H

PREVIOUS YEAR		CURRENT YEAR	
₹		₹	₹
6,047,033.00	<i>Brought Fwd.</i>		Cont'd... 2 12,960,871.50
	V. Expenses under Govt. of India [DST - Teachers' Training Programmes]		
-	Honorarium	49,371.00	
-	Consumables (Laboratory Materials)	117,592.00	
-	Fooding, Lodging & Refreshment Expenses	68,014.00	
-	Overhead Expenses	26,091.00	
-	Travels for Mentors & Participants	156,762.00	
-	Sub Total :		417,830.00
3,885.00	VI. Expenses under Govt. of India [DST]		4,682.00
	Science Workshop for Contact Programmes		
3,778,375.00	Expenses under Govt. of India [DST - SEATS]		3,815,269.00
	Science Camps (INSPIRE)		
	VII. Expenses funded by Talent Enrichment Programme (CSIR), Govt. of India		
8,821.00	City Conveyance	3,607.00	
820.00	Postage & Telephone	40.00	
138,400.00	Remuneration	87,133.00	
1,000.00	Seminar	93,542.00	
107,180.00	Travels	6,102.00	
240,394.00	Visits to Science Institutions	-	
496,615.00	Sub Total :		190,424.00
	VIII. Expenses under Govt. of India [DST - Vigyan Prasar]		
-	Science Workshop Expenses		27,322.00
	IX. Expenses under Science & Engg. Research Bureau, Govt. of India [DST - SERB]		
	a) Research Activities (Principal Investigator - Dr. Abhijit Kar)		
100,000.00	Fellowship (Manpower Costs)	70,333.00	
55,697.72	Consumables	105,926.00	
23,717.00	Travel	9,114.00	
7,112.00	Contingencies	38,328.00	
-	Overhead Expenses	100,000.00	
186,526.72	Sub Total :	323,701.00	
	b) Research Activities (Principal Investigator - Dr. Pijush Basak)		
220,000.00	Fellowship (Manpower Costs)	660,000.00	
-	Consumables	116,143.00	
-	Travel	18,102.00	
84,944.00	Contingencies	65,276.00	
100,000.00	Overhead Expenses	100,000.00	
404,944.00	Sub Total :	959,521.00	
591,470.72			1,283,222.00
321,620.00	X. Expenses funded by Maulana Abul Kalam Azad Instt. of Asian Studies (MAKAIAS)		
	Research Activities (Principal Investigator - Dr. Paromita Roy)		10,750.00
11,238,998.72	TOTAL		18,710,370.50



JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH

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

SCHEDULE - "I"

OFFICE & ADMINISTRATIVE EXPENSES

PREVIOUS YEAR		CURRENT YEAR		
₹		₹	₹	₹
47,665.00	Postage & Telephone		88,392.00	
191,066.80	Contingency		305,475.12	
292,190.00	Electricity		379,452.00	
82,292.00	Printing & Stationery		109,793.00	
424,589.00	City Conveyance		524,385.00	
-	Staff Welfare Expenses		325,897.20	
3,343,768.00	Property Tax		385,488.00	
	Repair & Maintenance Expenses -			
88,368.00	a) For Computers & Other Equipment	166,724.00		
-	b) For Laboratory Equipment	85,000.00		
990,431.00	c) For Building	899,477.00		
-	d) For Dormitory	304,323.00		
144,674.00	e) For General purposes	<u>317,388.00</u>		
			1,772,912.00	
238,209.00	Security Service Charges		559,324.00	
65,260.00	Cleaning & Sanitation Expenses		247,837.00	
-	Remuneration to Contractual Employees		181,372.00	
-	Professional Fees		58,400.00	
24,000.00	Legal Fees & Expenses		27,000.00	
34,500.00	Audit Fees		35,400.00	
187.98	Depreciation on Assets pertaining to DHE, GoWB		23,466.85	
5,967,200.78	TOTAL			5,024,594.17

SCHEDULE - "J"

EXPENSES UNDER SCHOLARS' RESERVE FUND

₹		₹	₹
1,062,000.00	Scholarship	1,532,000.00	
128,000.00	Book Grants	171,000.00	
11,000.00	Encouragement Award	-	
112,776.00	Workshop on Science & Scientists	29,296.87	
1,313,776.00	TOTAL :		1,732,296.87

SCHEDULE - "K"

EXPENSES UNDER DEVELOPMENT FUND

₹		₹	₹
161,000.00	Repairs & Maintenance Expenses	153,352.00	
23,962.00	Fabrication & Furnishing Expenses	-	
690,702.65	Depreciation	1,224,106.69	
875,664.65	TOTAL :		1,377,458.69

JAGADISH BOSE NATIONAL SCIENCE TALENT SEARCH

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

SCHEDULE - "L"

EXPENSES UNDER LABORATORY FUND

PREVIOUS YEAR		CURRENT YEAR	
₹		₹	₹
-	Laboratory Fund Expenses	3,296.00	
115,038.24	Depreciation	101,073.56	
115,038.24	TOTAL :		104,369.56

SCHEDULE - "M"

EXPENSES UNDER JBNSTS - OWN GENERATION FUND

₹		₹	₹
-	Honorarium to Honorary Director	-	
156,381.68	Depreciation	136,249.08	
156,381.68	TOTAL :		136,249.08

SCHEDULE - "N"

EXPENSES UNDER STAFF WELFARE & MEDICAL FUND

₹		₹	₹
-	Staff Medical Expenses		
	TOTAL :		NIL

JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH

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

SCHEDULE - "O"

SIGNIFICANT ACCOUNTING POLICIES AND NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31ST MARCH, 2017

A. Significant Accounting Policies

1. Basis of Preparation of Financial Statements :

1.1. The Financial Statements have been prepared in accordance with Historical Cost convention and as a going concern. The accounting policies adopted in preparation of the Financial Statements are consistent with those followed in the previous year.

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.

2.2.1. 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.

2.2.2. In the absence of any specific investment under any particular fund, 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 original costs of the concerned Fixed Assets from the relevant Funds, except the following cases :

- a) In respect of the Special Reserve Fund, Project Capital Assets Fund, Retirement Benefit Fund and International Conference for Gifted Minds (ICGM) Fund, for not having any investible surplus under them.
- b) As regards the Contingency Fund, due to the attainment of the stipulated limit specified thereunder.
- c) Interests of Rs. 94,500/= and Rs. 417/= being specific earnings of Scholars' Reserve Fund and Retirement Benefit Fund, respectively, have directly been allocated to these Funds.
- d) Interests on Long Term Investments and Savings Bank Deposits totaling Rs. 84,654/= generated from investments made out of Foreign Contributions being specific earnings of the Scholars' Reserve Fund and Development Fund, have been apportioned on the same basis to these funds.
- e) Similarly, Interests on Short Term Investments and Savings Bank Deposits totaling Rs. 31,91,064.99 generated from investments made out of Grant received from the Dept. of Higher Education, Govt. of West Bengal towards construction of G + II

Building for Innovation Centre, have been specifically considered under Development Fund.

3. Grants-in-Aid –

- 3.1. Grants of the nature of contributions towards capital expenditures are being credited to the respective Funds.
- 3.2. Grants for meeting revenue expenditures are treated as income of the year for which they are realized, except that they will be treated as accrued income where sanctions have been issued either before the last day of the year or for the year and there is reasonable certainty of collection and realization.
- 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 irrespective of completion of rendering of services and / or use of Society's resources by third parties.

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. 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 ready for use. Costs of assets not ready for use at the Balance Sheet date are disclosed under Capital Work-In-Progress.
- 5.2. However, Assets under Special Reserve Fund are stated at their respective costs of acquisitions less depreciation upto the date of considering the same as assets of the Institute. No depreciation is charged on assets received under programmes or other old and used assets taken into account under Special Reserve Fund.
- 5.3. Gains or losses arising from de-recognition 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. 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.

7. 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.

8. 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.

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

9. 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.

10. Employee Benefits :

10.1. Short Term Employee Benefit is recognized as expense in the Income & Expenditure Account of the year in which related service is rendered.

10.2. Post employment and other Long Term Employee Benefits are provided in the Accounts in the following manner :

10.2.1. 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.

10.2.2. Leave encashment on termination of service - Albeit, the provisions towards liabilities for terminal salary for Leave Encashment, payable to the eligible staff members used to be made against the Maintenance Grants (Salary) being received from the Department of Higher Education, Govt. of West Bengal till Financial Year 2013-14, yet the requisite funds are not being made available in advance by the said Authority, thereafter. Further, expenditure towards Leave Encashment Salary is allowable only on actual payment basis under the Income Tax Act, 1961. Accordingly, the Society considers that, acknowledging the liability for terminal salary for Leave Encashment and creating a suitable resultant provision for the same, would be redundant. Thus, no liability towards the same is being provided for in the accounts.

10.2.3. Albeit the Institution is being funded by the Department of Higher Education, Govt. of West Bengal since its inception in the year 1958, yet its employees (both academic and non-academic), in spite of operating under the DCRB Scheme prescribed by the said Government, have not been privileged with any General Provident Fund facilities till

August, 2016. Accordingly, necessary steps and persistent efforts to bring the employees under the ambit of the relevant Act and implementing the provisions thereunder, have finally been proved successful. Accountant General (A & E), West Bengal has kindly provided approval for operating of Provident Fund transactions of all permanent employees of JBNSTS with effect from 1st September, 2016. Consequently, no provision towards Provident Fund dues has been made in the current year.

11. Provisions, Contingent Liabilities and Contingent Assets :

- 11.1. 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.
- 11.2. 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 an on going basis and only those having a largely probable outflow of resources are provided for.
- 11.3. Contingent Assets are neither recognized nor disclosed in the Financial Statements. Provisions, Contingent Liabilities and Contingent Assets are reviewed at each Balance Sheet date.
12. Subsequent negotiations and correspondence with Gas Authority of India Ltd. (GAIL), as regards the net amount of Rs. 22.50 Lacs purported to be received from the said Authority towards Sponsorship amount in support of the International Conference and “3 Year” Research Programme, as per reflection in the relevant Form No. 26AS for the Financial Year 2015-16, as noted in last earlier, have not resulted any further development in this regard during the year.
13. Grants-in-Aids, which are capital in nature, received during the year from different authorities have been tabulated below :

Sl. No.	Received from	Memo / File No. & Date	Purposes of the Grants	Amount (Rs.)	Credited to
1.	Dept. of Science & Technology, Govt. of West Bengal	118 (Sanc) / ST / P / S & T / Misc. - 17 / 2015 dt. 18.05.2016	For developing a Creative Corner	55,00,000.00	Development Fund
2.	Dept. of Higher Education, Govt. of West Bengal	984 (Sanc) / EH / SE / P / 1G - 08 / 15 dt. 21.02.2017	For completion of renovation of existing Building	15,33,427.00	- do - - do -
3.	Dept. of Bio-technology, Govt. of West Bengal	249 - (Sanc) / BT / P / Budgt / RD - 9 / 2017 dt. 30.03.2017	For setting up State-of-the Art Biotechnology Laboratory in West Bengal	1,03,30,000.00	- do - - do -
TOTAL :				1,73,63,427.00	



14. A list of several items of Fixed Assets, which are no longer in use, have been placed before the Disposal Committee formed for the purpose of identifying the functioning status of these assets. On their inspection, the Committee Members have recommended for disposal of the said assets to the highest bidder, to be selected through an open tender. Accordingly, the requisite Tendering process has been initiated at the fag end of the year (vide N.I.T. No. JB / DISP / 2016-17 / 01 dt. 23.03.2017) and all the items of Fixed Assets have been disposed of in the ensuing Financial Year.
15. **Grant of Rs. 11,50,000/= , *inter alia***, has been **released** in last year by the Deptt. of Higher Education, Govt. of West Bengal **through its Memo No. 1126 (Sanc) / EH / SE / P / 1G-08 / 15 dt. 04.03.2016** for developing Dining Space with Kitchen and other facilities to be located at the Rooftop of the existing Building of the Institute, on the basis of a Quotation furnished by M/s. Everest [vide Quotation dt. 06.01.2016]. The Architectural Consultancy Services towards the said work has duly been carried out during the year and the allied work is under progress. Considering the estimated expenditures **of Rs. 13,50,000/=** , the same including the Architect Fees has been considered as Capital work- in-progress during the year.
16. Liabilities towards Scholarship, Book Grants and Best School Award totaling Rs. 26,21,949.50, as reflected in Schedule - "F", represents dues payable in respect of several earlier years, as the same could not be discharged due to non-submission of the requisite information and documents by the concerned beneficiaries .
17. All the figures have been denominated in Indian Rupee.
18. Schedules "A" to "O" form an integral part of the Financial Statements.
19. The previous year's figures have been regrouped / recast / rearranged, wherever considered necessary.

Signed in terms of our report of even date.

On behalf of the Governing Body

For Pan & Associates
Chartered Accountants
Firm Regn. No. : 322655E

KOLKATA
The 12th September, 2017

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

Sd/-
Shekhar Kumar Pan
Proprietor
Membership No. 053883



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for the future
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