

Jagadis Bose National Science Talent Search

ANNUAL REPORT 2016



In Pursuit of Excellence
Since 1960



“The whole world is a
living laboratory in which
the most wonderful experiments
are constantly being performed.
We should indeed be fascinated
if only we had eyes to see them.”



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
Sir Tarak Nath Palit Professor of Physics, University of Calcutta
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Principal Secretary, Department of Higher Education
Government of West Bengal, Bikash Bhavan
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SMT. REENA VENKATARAMAN, IAS

Additional Chief Secretary, Dept. of Science & Technology
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SHRI D. NARIALA, IAS

Secretary, Department of School Education, Government of West Bengal
Bikash Bhawan, 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)
Cyber City, DLF Phase III, Gurgaon, 122 002

SHRI Y. C. DEVESHWAR

Chairman, ITC Limited, Virginia House
37 J. L. Nehru Road, Kolkata - 700 071

SHRI SAMAR GHOSH, IAS

Member, State Administrative Tribunal, West Bengal Administrative Tribunal
Bikash Bhavan, Sector-1, Salt Lake, Kolkata 700 091

PROF. (DR.) AMITA CHATTERJEE

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

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Vice Chancellor, Amity University, Kolkata, Major Arterial Road,
Action Area II, Kadampukur Village, Rajarhat, Newtown, Kolkata 700 135

PROF. (DR) ABU TALEB KHAN

Vice Chancellor, Aliah University, New Town Campus
IIA/27, New Town (Near Eco Space), Kolkata 700 156

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



Chairman's message to the new Awardees



Welcome JBNSTS Awardees to the family! Through your talent, skills, and knowledge you have set yourself apart from your peers and earned a place in a very prestigious group. Previous JBNSTS awardees have distinguished themselves in whatever avenue they have chosen to explore, be it basic science, engineering, medicine, or any other endeavour. Today one can find ex-JBNSTS scholars anywhere in the world who cherish the time when through JBNSTS they were motivated and encouraged to scale new heights. I feel confident that in the years ahead you will carry the JBNSTS flag further forward and make the organisation proud.

Over the years under very able leaders JBNSTS has been doing a signal service to the nation through the nurturing of science and technology among the young. The Scholarships and Awards which you have been chosen for, needless to say, are the most widely known. But they are only a part of the many-faceted activities of JBNSTS. The institution runs science camps for high-ranking school students, fosters non-formal training methods, and provides laboratory training for the young, etc, all of which contribute to the development of a scientific outlook among the young minds. These modes of alternate education, running parallel as they do to formal schooling, are recognised today as an essential component in encouraging a questioning spirit and bringing out the best from the students.

In a country as big and as varied as ours organisations such as JBNSTS have a vital role in identifying the talent not just in top schools but also from less privileged backgrounds. There is a vast untapped resource of sharp youngsters who need to be shown the light of modern science. With limited resources in fund and manpower JBNSTS has been striving to provide a signal service in this direction. It is a matter of great pride that from today you will be a participant in this endeavour.

I take this opportunity to extend my warm congratulations to the entire JBNSTS family.

Prof. (Dr.) Amitava Raychaudhuri
Chairman, JBNSTS

“If you want to shine like a Sun,
First burn like a Sun”

– A. P. J. Abdul Kalam



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From the Director's Desk



Respected Chairman, Distinguished guests, members of the Governing Body of JBNSTS, dignitaries on the dais, JBNSTS scholars and awardees, students, guardians, my colleagues at JBNSTS, ladies and gentlemen,

It is my privilege to address this august gathering at the annual award ceremony of JBNSTS for the year 2016. I am going to complete the second year of my association with JBNSTS as Director within a month. I am happy to present before you that activities carried out during last one year, which indicates consolidation of our strength, honouring our commitments and to march forward in the direction of further development of our beloved organisation with more involvement of students, teachers, researchers, scientists, all creative minds and in one word all sections of people.

In this journey, we would like to acknowledge all sorts of help, support and encouragement from Government of West Bengal especially from our Hon'ble Chief Minister. As a mentor and guardian of our organisation, she always keeps a keen watch on the development of this organisation and encourages us for our achievements and thereby imparts confidence on us to take up new assignments and responsibilities even with limited staffs and resources. We do not have the audacity to thank her, but we gratefully acknowledge her support in all affairs of JBNSTS.

JBNSTS was founded with the idea of searching talented minds and nurturing them for development of human resources in the domain of Science. Following that tradition, this year also we conducted Senior Talent Search Test (STST) from July'16 to September'16 with the financial support of Higher Education Department, Government of West Bengal. Through this process, we have identified 47 scholars who will be awarded today. The identification of these students was carried out through three fold examinations - written, viva-voce and creativity test. We are all aware that the qualities and abilities of the awardees through such tests are well recognized at the national level. The awardees who are pursuing their careers in different subjects of Basic Science disciplines, will get their scholarships through INSPIRE Programme of Department of Science & Technology, Government of India. In the previous years, it was observed that since the results of our Talent Search examination



was normally announced in November-December of each year, the awardees used to face enormous problem to get their names registered under INSPIRE programme.

Keeping the difficulties of our scholars in mind, we have rescheduled the examination in the month of July so that the scholars get sufficient time to get registered in INSPIRE server within due time. This year 22 awardees will get scholarships under INSPIRE programme. Rest, who are pursuing either Technical or Medical streams, will be provided scholarships from JBNSTS directly as the fund is provided by different banks and corporate houses, Department of Health and Higher Education. We are happy to announce that for these scholars, we have enhanced the scholarship amount from Rupees one thousand per month to Rupees three thousand per month from this year.

For identification and nurturing the younger minds, we introduced, Junior Talent Search Test (JTST) from last year for the students who have passed the class X examination and now are in 11th Standard. JTST was conducted this year also with the financial support from Department of Science and Technology, Government of West Bengal. The identification of the talented minds was carried out through two stage examinations – written and viva-voce. This year number of scholarships have been increased from 100 of last year to 125. Not only that, the scholarship amount has also been increased from Rupees five hundred per month to Rupees one thousand per month. The book grants to the scholars have also been increased to Rupees two thousand per annum. Moreover, this year 50 encouragement awardees have been identified who will also get one time book grant of rupees two thousand.

Nurturing of these young talents and giving them exposure to the realm of science is one of the objectives of JBNSTS. We organised nurturing camps for both group of scholars where eminent scientists, researchers and even social reformers were present with the idea to broaden the horizons of their mind.

Role of schools in science education is commendable. Our declared policy is that we carry out our activities as complimentary to the school education. We sincerely believe that if we are serious about development of scientific temper in our country, there is desperate need to strengthen the scientific infrastructure of our schools. It is a matter to rejoice that Department of Science & Technology, Government of West Bengal has decided to encourage and boost up the laboratories of the schools which have produced Junior Scholars through JTST examination of 2015. Encouragement awards of Rupees one lakh to each of these schools are being disbursed to 35 schools all over West Bengal through us for capacity building of their science laboratories. It is a great initiative and I believe it will be translated into the capacity building of our school education.

“It is the supreme art of the teacher to awaken joy in creative expression and knowledge” as told by Albert Einstein. Keeping this in mind, like last year, this year also we are carrying out teachers training programme for the school teachers for developing skills and motivation of science teaching in an innovative manner. This year already we have conducted several such training camps where teachers from different schools were trained in three-day training camps. This programme is being sponsored by Department of Science & Technology, Government of West Bengal. I am really happy to announce that looking at the structure, curriculum and success of this teachers' training programme, Ministry of Science & Technology, Government of India has also come forward and sanctioned JBNSTS considerable amount of fund to organise more such camps in the coming days. That programme will start from January, 2017.

West Bengal District School Scheme is a running programme of JBNSTS. Developing scientific mind and culture among the pre-secondary students belonging to class-VIII and IX of secondary schools belonging to underprivileged and backward areas and also for nurturing and mentoring them, series of training

workshops covering five consecutive days are organised under this programme. This year, we have covered 10 such schools of Jangal Mahal, Sundarban and Birbhum district, including the tribal school Ekalavya of Jhargram. This year the quality and dimension of this program have been upgraded significantly. This programme is supported by Department of Higher Education, Government of West Bengal.

Motivating young talents for taking up science education and nurturing the passion within them for taking up science as a profession are great challenges. JBNSTS has organised four 5-days long INSPIRE camps during last one year in which 500 number of INSPIRE scholars participated. Eminent scientists, awardees of Padmasree, Bhatnagar and Swarnajayanti awards interacted with the young students to ignite their imagination. The scholars always enjoy visits to different laboratories like Centre for Research in Nanoscience and nanotechnology, Variable Energy Cyclotron Centre, Science City etc., which are part of these camps. These camps are sponsored by Department of Science & Technology, Government of India. So far, we have organised 54 such camps, which is definitely a commendable job.

Science communication and dissemination is a major task of JBNSTS. Like last year, this year also we are Co-organisers of State Science Fair to be held in January, 2017 by Department of Youth Services, Government of West Bengal.

JBNSTS was also co-organiser of State Science Congress, 2016 along with Presidency University and successfully organised and participated in the West Bengal Science Congress held in February, 2016.

JBNSTS cherishes the ambition to build up a Creativity Centre at our building to demonstrate the remarkable experiments of 14 Nobel Laureates and the achievements they had made for development of Science and Technology. This will be an opportunity for the young talented students who will carry out the experiments of their own to feel the wonders of science. I am happy to announce that Department of Science & Technology had come forward to sponsor this centre. This centre is being constructed and augmented by National Council of Science Museum, Government of India.

As we have recorded last year, expectations from JBNSTS are growing day by day. We are also committed to serve the nation with all our strength even with our limited space and man-power and expanding our fields of activities. There is a quantum jump in mobilisation of fund in the last financial year of 2015-16 from the previous year of 2014-15. The same trend is continuing in the current financial year of 2016-17 also.

For expansion of the office building of JBNSTS, the construction of the annex building is underway. The work is being carried out by Hooghly River Bridge Construction. The infrastructure of the existing office has been thoroughly repaired and renovated, interior furnishing made to convert it into a modern office. This work was also undertaken by Hooghly River Bridge Construction. Department of Higher Education has made generous funding to make these two projects possible. We are grateful to Hon'ble Chief Minister of West Bengal to take special initiative to make our dream fulfilled after visiting our campus in June, 2015.

It is a great pleasure to inform you that the dormitories of JBNSTS have been totally renovated and furnished with modern arrangements for making the stay of the students of rural areas comfortable here. Nevertheless to mention here, that this facility is being utilised throughout the year by the participating students.



Employees are the backbone of this institution. Although JBNSTS was set up in 1958, the employees of JBNSTS unfortunately were not included under Employees' Provident Fund Scheme. We have been able to start the GPF for the employees of JBNSTS only recently. That is really an achievement as a benefit to the employees. We must thank Department of Higher Education for taking all the initiative in this regard.

“Most People say that it is the intellect which makes a great scientist. They are wrong; it is character” as told by Albert Einstein. JBNSTS is pursuing its activities not for giving only information to the students, but also making all out efforts to build their character. In this pursuit, JBNSTS always believes active role of Society in building up of scientific temper amongst the student and inseparable relationship between Science and Society. That is the reason we make all kinds of arrangements of exposure of the scholars with different arena of Society. As told by Gurudev Rabindranath Tagore “The highest education is that which does not merely give us information, but makes our life in harmony with all existence”. But, this cannot be made successful unless all of us from different spheres of life actively participate in this endeavour. We sincerely call upon all to come forward and let us make this dream a reality.

Thank you all!!!

Prof. (Dr.) Maitree Bhattacharyya
Director of JBNSTS





Dr. Paromita Roy



Prof. (Dr.) Maitree Bhattacharyya



Mr. Joydip Das



Dr. Abhijit Kar

ORGANISATIONAL STRUCTURE OF JBNSTS



Dr. Smarajit Manna



Mr. Sujit Baran Chanda



Mr. Basudeb Dutta



Mr. Dipankar Sarkar



Mr. Abhijeet Bala



Mr. Prasenjit Chakraborty



Ms. Swapna Dey



Ms. Puspa Biswas



स जीवति मनो यस्य मननेन हि जीवति



Mr. Ranjit Kumar Mallick



Mr. Pushkar Naskar

ORGANISATIONAL STRUCTURE OF JBNSTS



Mr. Mahadev Das



Mr. Santimoy Biswas



Mr. Sougata Roy



Mr. Sudip Das



Ms. Paromita Majumder



Ms. Sweta Chakraborty



Ms. Monalisha Char



Mr. Debnarayan Mukherjee



Dr. Pijush Basak



THE JBNSTS SENIOR TALENT SEARCH TEST

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



Jagadis Bose National Science Talent Search (JBNSTS), an autonomous registered society, supported by the Department of Higher Education, Government of West Bengal is conducting the JBNSTS Senior Scholarships Test, since 1958. JBNSTS is the oldest and first talent search institute of India and this prestigious scholarship is very well recognized. The Senior Scholarship program of Jagadis Bose National Science Talent Search is designed for undergraduate students studying in Basic Sciences, Engineering & Medicine in recognized institutes of West Bengal. This program identifies talented students through a unique and rigorous method of selection followed by series of nurturing and motivational programs like 1) Those who make us proud, 2) Talent enrichment program, 3) Seminars, 4) short term research projects etc. These motivational programs expose them to the field of creativity & innovation. The following procedure is followed to identify the scholars every year.

(a) Written Test (First Phase): For all eligible applicants a three hour written test is arranged at 25 different examination centres across West Bengal.

JBNSTS has designed a unique method of testing and identifying talented students of STEM which is well recognized both nationally & internationally.

Written test is designed to judge the basic understanding of different science subjects, fundamental perception of subjects, the level of innovativeness & the passion for science & technology.



The students are evaluated on the basis of their subject wise knowledge in the first phase. In this phase, their originality of thinking is also judged through a specially designed thought passage.

(b) Personal Interview (Second Phase): The interview is essentially a scientific interaction with a panel of experts. During this personal interaction, students are exposed to nationally & internationally reputed scientists who judge their level of confidence, attitude towards life and finally



KNOWLEDGE IS NOTHING BUT FINDING UNITY IN THE MIDST OF DIVERSITY.

the ability to think differently & innovatively. They identify scientific talent and curiosity of the students towards research & technology. Students are also encouraged to activate their capacity to think independently & explore new horizons of science towards the innovation and development of science & technology.

(c) **Scientific Creativity Test (Final phase):**

Finally the students who succeed in the first two phases appear at this third phase known as "Scientific Creativity Test". Here the candidates are evaluated on the basis of their capability to handle a scientific problem which may or may not have any definite standard solution. This is an open book test, where the candidates spend 36 hours at JBNSTS to share their lunch and dinner with us, to think/work on different challenging problems assigned to them. They are allowed to consult books and to discuss with other candidates in a relaxed manner. The candidates then present / defend their approach to solve the chosen problem. This is evaluated by a panel of eminent domain experts. Finally the students who qualify even the SCT are identified as JBNSTS scholars.

ABOUT THE SCHOLARSHIP

- The most prestigious scholarship since 1960
- Duration of the scholarship is till the end of B.E. (4 yrs.) / M.B.B.S. (4½ yrs.) / M.Sc. degrees (5 yrs.)
- A scholarship amount of Rs. 1000/- (for Engg. / Med.) and or Rs. 5000/- (for Basic Science) per month and an annual book grant of Rs. 1000/-
- Exposure to seminars, colloquia, educational tour, scientific research projects

Scholarship Application

AWARDS OF JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH (SENIOR SCHOLARSHIP)

The scholars are awarded a scholarship amount of Rs. Three Thousand (Rs. 3000/-) per month in case of students of medicine and engineering, till they complete their graduation. They also receive the Annual Book Grant of Rs. Two Thousand (2000/-) per annum.

Since JBNSTS is recognized by DST-INSPIRE Govt. of India, the candidates selected from basic sciences are awarded the DST-INSPIRE scholarship & research grant (for projects) of Rs. Eighty Thousand (Rs. 60,000/- + Rs. 20,000/-) per annum till completion of their Masters degree. The scholars are awarded with the certificate and insignia during our Annual Award Ceremony every year.



The scholars are assigned to carry out an innovative research project for one year after their selection and on final presentation; the best three projects are awarded with MEDHA SAMMAN.

APPLICATION FOR JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH SENIOR SCHOLARSHIP TEST

Candidature for the JBNSTS examination needs to be an

- (1) Indian National and
- (2) Must have passed Higher Secondary (12th grade) or equivalent examination in the year of application and must be studying B.Sc. (Hons.), Engineering or Medicine in any institution registered in West Bengal. Details of the examination schedule etc. are usually published in the leading newspapers and also at our website i.e. www.jbnsts.org.



Interested eligible students can download the application form and the admit card from our official web portal. The students can also obtain 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 JBNSTS office, or write to scientific officer / in-charge of the examination. During last two years the complete system of Scholarship has been turned into online.

FACT SHEET FOR JBNSTS SENIOR TALENT SEARCH TEST 2016

This year JBNSTS Senior Talent Search Test was held on 24th July, 2016, at 25 centres across WEST BENGAL. Following is the number of candidates appeared in 3 different phases of selection.

PHASE OF TEST	DATE	NUMBER OF CANDIDATES APPEARED
Written Test	24/07/2016	794
Interview	10/09 - 11/09/2016	225
Scientific Creativity Test	24/09 - 25/09/2016	80

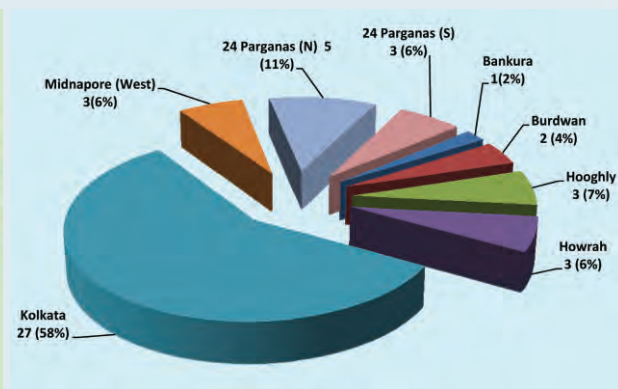
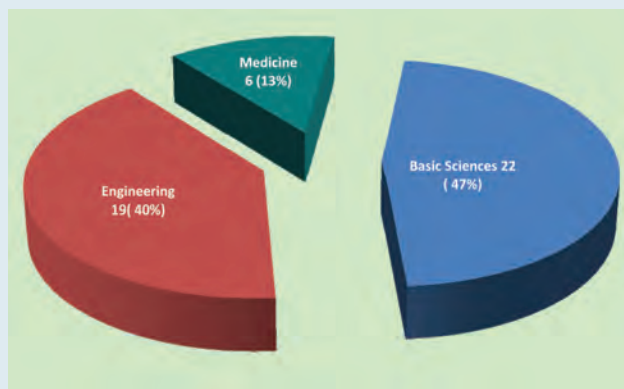
**JBNSTS SENIOR TALENT SEARCH EXAMINATION CENTRES
ACROSS WEST BENGAL IN 2016**

Sl. No.	Centre
1	A B N SEAL COLLEGE, COOCHBEHAR
2	BALURGHAT COLLEGE, BALURGHAT, DAKSHIN DINAJPUR
3	BANKURA SAMMILANI COLLEGE, BANKURA
4	BARRACKPORE RASHTRAGURU SURENDRANATH COLLEGE, NORTH 24 PARGANAS
5	BURDWAN RAJ COLLEGE, BURDWAN
6	FAKIR CHAND COLLEGE, DIAMOND HARBOUR, SOUTH 24 PARGANAS
7	HOOGLY MOHSIN COLLEGE, CHINSURAH, HOOGLY
8	J. K. COLLEGE, PURULIA
9	JADAVPUR UNIVERSITY, KOLKATA
10	KRISHNANAGAR GOVERNMENT COLLEGE, NADIA
11	KRISHNATH COLLEGE, BERHAMPORE, MURSHIDABAD
12	MALDA COLLEGE, MALDA
13	MIDNAPORE COLLEGE, PASCHIM MIDNAPORE
14	MOTIJHILL COLLEGE, DUMDUM, NORTH 24 PARGANAS
15	MURAGACHHA GOVT. COLLEGE, NADIA
16	NARASINHA DUTT COLLEGE, HOWRAH
17	NSHM KNOWLEDGE CAMPUS, DURGAPUR
18	PRABHAT KUMAR COLLEGE, CONTAI, PURBA MEDINIPUR
19	PRESIDENCY UNIVERSITY, KOLKATA
20	R. K. M. RESIDENTIAL COLLEGE, NARENDRAPUR, SOUTH 24 PARGANAS
21	R.K.M. VIDYAMANDIRA, BELURMATH, HOWRAH
22	RAIGANJ SURENDRANATH MAHAVIDYALAYA
23	SILIGURI COLLEGE, SILIGURI
24	VIDYASAGAR COLLEGE, KOLKATA
25	VISVA BHARATI, SHANTINIKETAN

On 3rd October, 2016, results of the 57th STST was published and 47 students were selected for the scholarship in the year 2016, which includes 22 students from Basic Sciences, 6 students from Medicine and 19 students from Engineering.

South Point High School and Vivekananda Mission School have been jointly selected for the Best School award considering maximum number of awardees passed higher secondary level examination from these schools. A Shield and a Library Grant of Rs. 5000/- each are awarded to the best school each year.

DISTRIBUTION PROFILE OF JBNSTS SCHOLARS 2016 OF WEST BENGAL



Total Number of JBNSTS Scholars Selected For Scholarship Award in 2016 is 47

Distribution of Scholars from West Bengal (district wise) according to their current studying institutions

LIST OF JBNSTS SENIOR SCHOLARS 2016



AGNIBHA BANERJEE
BS-MS
IISER, KOLKATA



ANANYA CHATTERJEE
PHYSICS
CHRISTIAN COLLEGE, BANKURA



ANURAG CHAKRABORTY
COMP.SC.& ENGINEERING
JADAVPUR UNIVERSITY



ANURAG SARKAR
PHYSICS
R.K. M. RES. COLLEGE,
NARENDRAPUR



ANURAJ LAHA
BS-MS (DUAL DEGREE)
IISER, KOLKATA



ARANI PAUL
BS-MS
IISER, KOLKATA



ARANI RAYCHAUDHURI
BS-MS (DUAL DEGREE)
IISER, KOLKATA



ARGHADIP DAS
ELECT. & TEL. COMM ENGG
JADAVPUR UNIVERSITY



ARIT BHATTACHARJEE
MBBS
MEDICAL COLLEGE, KOLKATA



ARKA BANERJEE
STATISTICS
R.K. M. RES. COLLEGE,
NARENDRAPUR



ARNAB CHOWDHURY
ELEC. ENGINEERING (D DEG)
IIEST, SHIBPUR



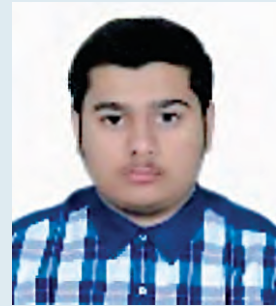
ARNAB NANDY
ELECT. & TEL. COMM ENGG.
IIEST, SHIBPUR



BHASKAR BANERJEE
COMP. SC. & ENGG.
GOVT. COLLG. OF ENGG. &
TEX. TECH., SERAMPORE



DEBAJYOTI BISWAS
PHYSICS
SCOTTISH CHURCH COLLEGE



DWAIPAYAN CHATTERJEE
MBBS
MEDICAL COLLEGE, KOLKATA



GARIMA RAJGURU
PHYSICS
BETHUNE COLLEGE, KOLKATA



KANCHAN KUMAR KOLE
PHYSICS
NETAJI MAHAVIDYALAYA,
HOOGHLY



KANKONIKA BHATTACHARYYA
CHEMISTRY
BETHUNE COLLEGE, KOLKATA



KAUSTAV PAL
ELECT. & COMM. ENGG.
IEM, SALLAKE



MAHORMI MAZUMDER
COMP. SC.& ENGINEERING
IEM, SALLAKE



PRATYUSH BHATTACHARJYA
CHEMISTRY
ST. XAV. COLLEGE, KOLKATA



PRITAM GHOSHAL
MECHANICAL ENGINEERING
JADAVPUR UNIVERSITY



PRITHWISH JANA
COMP. SC.& ENGINEERING
JADAVPUR UNIVERSITY



PRITI GOSWAMI
MBBS
MEDICAL COLLEGE, KOLKATA



RITAJA ROY
GEOLOGY
PRESIDENCY UNIVERSITY



RUDRASHIS CHAKRABARTI
ELECTRICAL ENGINEERING
JADAVPUR UNIVERSITY



SABUJ SAMANTA
PHYSICS
SURENDRANATH COLLEGE



SAIKAT SHAW
MBBS
MEDICAL COLLEGE, KOLKATA



SAMBHAB DAWN
MATHEMATICS
*R.K. M. RES. COLLEGE,
NARENDRAPUR*



SAPTARSHI DE
PHYSICS
*SERAMPORE COLLEGE,
HOOCHLY*



SAYAN BISWAS
MECHANICAL ENGINEERING
NIT, DURGAPUR



SHOUNAK SURAL
CHEMISTRY
IIT, KHARAGPUR



SHOVON SWARNAKAR
PHYSICS
RKMV, BELUR, HOWRAH



SHRAMAN PRAMANICK
ELECT. & TEL. COMM ENGG.
JADAVPUR UNIVERSITY



SINJOY SAHA
ELECT. & COMM. ENGG.
UNIVERSITY OF CALCUTTA



SOHAM DEY
MBBS
MEDICAL COLLEGE, KOLKATA



SOMSUNDAR SI
BIOTECHNOLOGY
AMITY UNIVERSITY, KOLKATA



SOUJAVA PAUL
BIOTECHNOLOGY
IIT, KHARAGPUR



SOUMYA CHAKRABORTY
ELECT. & COMM. ENGG.
UNIVERSITY OF CALCUTTA



SOUMYADIP SHOW
CHEMISTRY
VIVEKANANDA COLLEGE



SOURIM BANERJEE
MANUFACTURING ENGG.
(DUAL DEG.)
IIT, KHARAGPUR



SRIJAN KUMAR
PHYSICS
R.K. M. RES. COLLEGE,
NARENDRAPUR



SUDIP SHIL
PHYSICS
MAULANA AZAD COLLEGE



SUKANTA MANNA
ELECTRICAL ENGINEERING
NIT, DURGAPUR



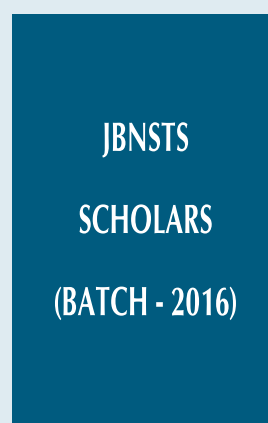
SURAJ DAWN
MBBS
R.G.KAR MEDICAL COLLEGE,
KOLKATA



SUTANU MUKHOPADHYAY
CHEMISTRY
SETH ANANDARAM JAIPURIA
COLLEGE, KOLKATA



SWAPNAVA CHAUDHURI
MECHANICAL ENGINEERING
JADAVPUR UNIVERSITY



“It would be possible to describe everything scientifically, but it would make no sense; it would be without meaning, as if you described a Beethoven symphony as a variation of wave pressure.”

— Albert Einstein



THE JBNSTS JUNIOR TALENT SEARCH TEST

A new initiative
to explore
young talent
all over
the West Bengal



Genesis of Junior Talent Search Test

Jagadis Bose National Science Talent Search (JBNSTS) has been conducting the time honoured and prestigious Senior Talent Search Test (STST) program in West Bengal to identify, nurture and motivate the talented undergraduate students of science, engineering and medicine towards the pursuit of excellence since its inception. The perception of JTST came through our work-experience of more than fifty years and it was realized that it would be more effective if we identify these “gifted learners” when they are very young. Accordingly, we submitted the proposal to the Government of West Bengal in 2015. By the virtue of foresightedness of our Hon'ble Chief Minister Ms. Mamata Banerjee, our proposal came into reality. After successful initiation in 2015, the endeavor (JTST) for class XI science students is continued in the year 2016 in a more pragmatic manner. Department of Science & Technology, Govt of West Bengal has funded this important.

Objectives of this program

JTST aims to motivate, identify and nurture talented science students (+ 2 level) of West Bengal by

- i) providing financial support to the accomplished science students and encouraging them to pursue science at higher level.
- ii) giving them exposure to the world of science and technology through interaction with scientists, visits to research laboratories, scientific project work etc.
- iii) encouraging and inculcating the creative aptitude of the students.

The process of identification of these accomplished gifted students is based on a well-thought out dual phase selection process.

- First phase : Written examination to judge the basic level of understanding of various science subjects.
- Second phase : Interview for the evaluation of advance level subject understanding and also the thought process and creativity of the students.

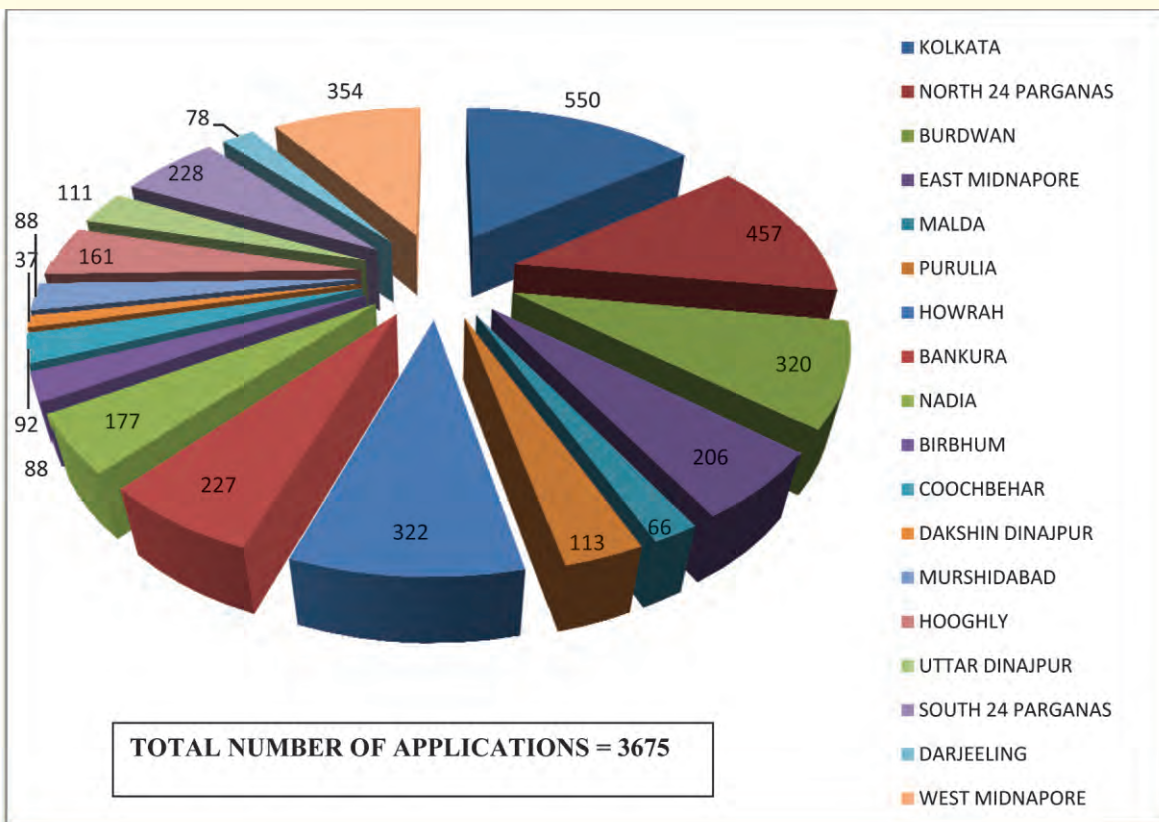
After identification, nurturing program is arranged for the talented students. Under this forum students avail the opportunity to interact with the eminent scientists and creative personalities from several other fields. Aim of this program is to provide the students an exposure towards diverse fields of modern scientific research and other creative fields.

A few snapshots regarding JTST 2016

- Planning: calendar was planned and English and Bengali posters/ leaflets were designed for awareness of the schools and the students.
- Awareness: Major awareness programs were initiated about 4 months prior to the written examination. JBNSTS communicated through email and telephone, letters, posters and leaflets regarding JTST 2016 to more than thousands schools across the state.
- Eligibility of the students: Students obtaining minimum 75% marks in their 10th Std. board examination of 2016 and studying science in class XI in any school in West Bengal.

- Mode of application: Both online and offline application procedure available.
- Total **3675** (2576 online + 1099 offline) candidates applied in 2016.
- Date of written examination: Written Test was held on 24th July, 2016 at 25 centres across West Bengal..
- Based on the performance in the written test, **296** candidates were shortlisted for interview.
- Interview: 22th and 23th October, 2016 through 9 panels of experts.
- Final Result was published in our website on 4th November, 2016.
- Finally, **125 students** were selected for scholarship and 50 students were selected for the encouragement award.
- The best school award is awarded to the school from where maximum numbers of students are selected for the scholarship in a particular year. In case of JTST 2016, this privileged school is “Ramakrishna Mission Ashrama Vidyalaya, Narendrapur” with 21 scholars of JTST 2016.
- The scholarship amount of Rs 1000/- per month for a tenure of two years and the book grant for the scholar is now 2500/- per annum for two years.
- One time book grant of Rs. 2000/- will be awarded to all of the encouragement awardees.
- This Junior Talent Search Test program is funded by Department of Science & Technology, Govt. of West Bengal.

District wise distribution of applicants in JTST 2016



List of JTST 2016 Scholars (In alphabetical order)

Sl. No.	Scholar Name	Present Institution
1	Abhijnan Maiti	Vidyasagar Vidyapith
2	Abhisek Panda	Contai Public School
3	Aditya Roy	Jodhpur Park Boys School
4	Agnideepa Sinha	The Heritage School
5	Aishik Rana	Ramkrishna Mission Vidyalaya,Narendrapur
6	Akash Bhattacharya	Sarada Vidyapith(H.S.)
7	Akash Singha Roy	Hariyana Vidyamandir
8	Akshat Lal	Delhi Public School
9	Alaap Chowdhury	Jadavpur Vidyapith
10	Aniket Goswami	Calcutta Boys' School
11	Animesh Maity	Egra J L (H.S.) High School
12	Aniruddha Hazra	Ramakrishna Mission Vidyabhavan Midnapore
13	Ankan Mistri	Ramkrishna Mission Vidyalaya,Narendrapur
14	Anshuman Sinha	Calcutta Boys School
15	Anusha Biswas	Sarat Kumari Girls High School
16	Anway Bhattacharyya	South Point High School
17	Anwika Das	Bhavan's Gangabux Kanoria Vidyamandir
18	Archisman Mazumder	South Point High School
19	Arisina Banerjee	South Point High School
20	Aritra Raj	Ramkrishna Mission Vidyabhavan
21	Arka Hatui	Jangipara D N High School
22	Arkaprava Ghosh	Ramkrishna Mission Vidyalaya,Narendrapur
23	Arkopal Sen	Calcutta Boys' School
24	Arpan Saha	Ramkrishna Mission Vidyalaya,Narendrapur
25	Atanu Samanta	Ramkrishna Mission Vidyalaya,Narendrapur
26	Avik Bhattacharyya	Arambagh High School
27	Avinandan Bose	South Point High School
28	Ayan Panja	Ramkrishna Mission Vidyalaya,Narendrapur
29	Baibhav Srivastava	Army Public School Barrackpore
30	Bijit Das	Delhi Public School



Sl. No.	Scholar Name	Present Institution
31	Bishnu Prasad Rakshit	Sutragarh Mn High School
32	Debanjan Datta	Maria's Day School, Howrah
33	Debarpita Jyoti	Kendriya Vidyalayano. 1, Salt Lake
34	Debarshi Ghosh	Dps Ruby Park Kolkata
35	Debosmita Pathak	The Bss School
36	Dibyoyoti Ghosh	Jodhpur Park Boys School
37	Digvijay Roy Varier	Cms School Barrackpore
38	Dipanjan Saha	Saltlake School (English Medium)
39	Dipanwita Guhathakurta	South Point High School
40	Heven Gangopadhyay	Ramkrishna Mission Vidyalaya, Narendrapur
41	Homagnic Bose	Ramkrishna Mission Vidyalaya, Narendrapur
42	Hritik Sarkar	Siliguri Boys High School
43	Imroz Ahamed	Jadavpur Vidyapith
44	Indrashis Mitra	Delhi Public School Ruby Park
45	Jayesh Shaw	Ramkrishna Mission Vidyalaya, Narendrapur
46	Jignasa Bhunia	Contai Public School
47	Jishnu Biswas	Krishnagar Collegiate School
48	Kanad Sen	M. C. Kejriwal Vidyapeeth, Liluah
49	Kazi Aatish Imroz	Rammohan Mission High School
50	Madhusree Seal	Garden High School
51	Maulindu Sarkar	Ramkrishna Mission Vidyalaya, Narendrapur
52	Mayank Kanoria	Delhi Public School, Ruby Park
53	Mayukh Khatua	Ramkrishna Mission Vidyalaya, Narendrapur
54	Mohee Datta Gupta	South Point High School
55	Mousam Maity	Contai Public School
56	Mrityunjoy Dey	Ramkrishna Mission Vidyalaya, Narendrapur
57	Niladdit Saha	Siksha Satra Visva Bharati
58	Nilarghya Datta	St.Xavier's Collegiate School
59	Nirmalya Mandal	Midnapore Collegiate School
60	Nirmalya Mukherjee	Ramkrishna Mission Vidyalaya, Narendrapur
61	Piyas Mallick	Wwa Cossipore English School
62	Prasun De	South Point High School

Sl. No.	Scholar Name	Present Institution
63	Pratim Kumar Mondal	Howrah Vivekananda Institution
64	Pritam Bera	Jodhpurpark Boys School
65	Raikhik Das	Tamluk Hamilton High School
66	Rajanti Dey	Mission Girls High School
67	Rajatava Mukhopadhyay	Patha Bhavan, Merlin Park
68	Ranajit Guchhait	Moyna Vivekananda Vidyamandir
69	Riddhi Manna	Our Lady Queen Of The Missions School
70	Rishiraj Dhar	Delhi Public School
71	Rupayan Sarkar	Midnapore Collegiate School
72	Sagnik Dey	Ramkrishna Mission Vidyalaya, Narendrapur
73	Sagnik Dutta	Jodhpur Park Boys School
74	Sagnik Roy	The Calcutta Boys School
75	Sagnik Sarkar	Don Bosco School Park Circus Kolkata
76	Saikat Das	Vidyasagar Shishu Niketan
77	Samim Mondal	Baduria Lms High School
78	Samiran Mukherjee	Kalyani University Experimental High School
79	Sampad Das	Barasat Peary Charan Sarkar Government High School
80	Samyadeep Sarangi	The Future Foundation School
81	Sandipan Bal	B. T. Road Govt. Sponsored H. S. School
82	Sandipan Haldar	Ramkrishna Mission Vidyalaya, Narendrapur
83	Sankhadeep Das	Tamluk Hamilton High School
84	Santanu Kundu	Barasat Peary Charan Sarkar Government High School
85	Sarthak Das	Future Campus School
86	Saswata Banerjee	Salt Lake School
87	Sayak Maji	Apeejay School
88	Sayonil Mollah	Saint Teresa's School
89	Shikhar Dutta	Gorabazar I.C. Institutiion
90	Shilpak Deb	Don Bosco School, Liluah
91	Shoubhik Raj Maiti	Ktpp High School
92	Shreya Ghosh	Buxarah Surendranath Girls High School
93	Shreya Pramanik	Mission Girls High School
94	Shreyans Chatterjee	Ramkrishna Mission Vidyalaya, Narendrapur

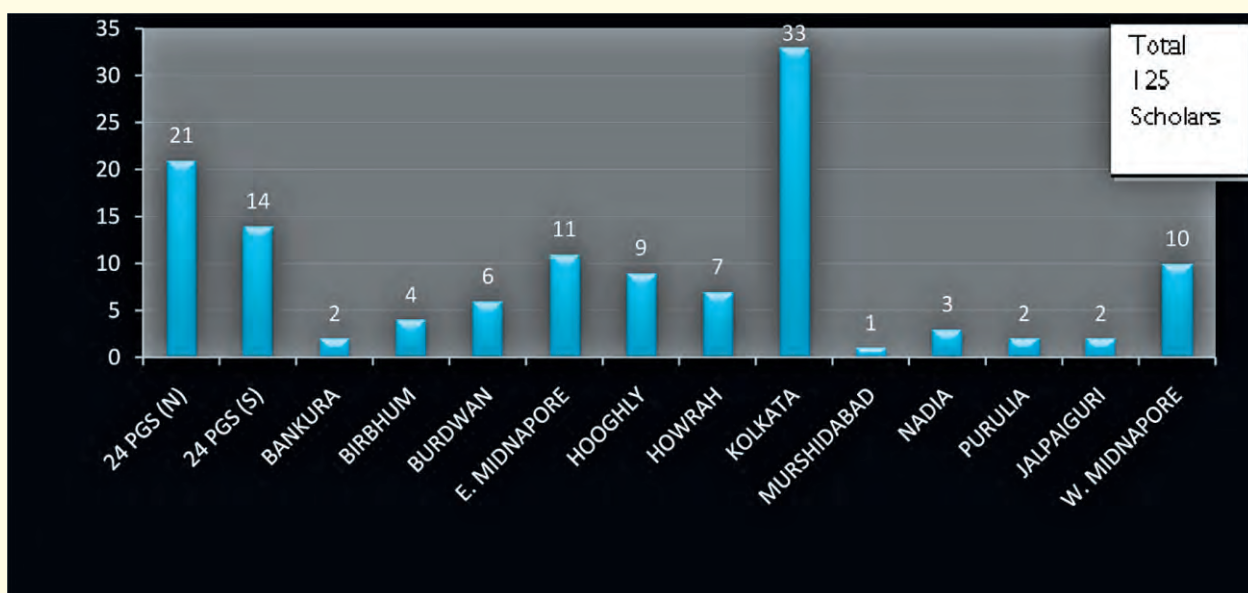


Sl. No.	Scholar Name	Present Institution
95	Shruti Mahata	Dps Megacity, Rajarhat
96	Shubhamay Das	Ramkrishna Mission Vidyalaya, Narendrapur
97	Smarak Kundu	Ramkrishna Mission Vidyalaya, Narendrapur
98	Sohan Debnath	Jodhpur Park Boys School
99	Soumik Samanta	Dav Model School
100	Soumili Basak	Serampore Girls' High School
101	Soumit Dutta	Ramkrishna Mission Vidyalaya, Narendrapur
102	Soumyasri Biswas	Sushila Birla Girls School
103	Sourajyoti Maiti	Tollygunge Bangur High School Hs
104	Sreejita Bose	Bengal Engineering College Model School
105	Srijan Acharya	Don Bosco School Park Circus
106	Srijani Chakraborty	Bsf Sr. Sec. Residential School
107	Subhaditya Basu	South City International School
108	Subham Chakrabarti	Mukhtarapur High School
109	Subham Layek	Bankura Banga Vidyalay
110	Subhashis Das	Delhi Public School Ruby Park
111	Suharto Saha	Ramkrishna Mission Vidyalaya, Narendrapur
112	Suhina Celosia	Gokhale Memorial Girls School
113	Suman Saha	Guptipara High School
114	Suprabha Pal Chowdhury	Barasat Peary Charan Sarkar Government High School
115	Sushim Mukul Maity	Ramkrishna Mission Vidyalaya, Narendrapur
116	Sutirtha Datta	Burdwan Municipal High School
117	Swapnil Ghosh	St.Xavier's Collegiate School
118	Swarnava Mitra	Uttarpara Govt.High School
119	Swarnendu Mondal	Dav Model School
120	Tanmoy Pati	Simlapal Madan Mohan High School
121	Tannistha Mondal	Patha-Bhavan
122	Timir Baran Das	Burdwan Municipal High School
123	Tushita Basak	La Martiniere For Girls
124	Wriju Mitra	Pearls Of God
125	Zaira Haram	South Point High School

Distribution of 125 JTST 2016 Scholars according to their gender and board of current course

Scholars	West Bengal Board	CBSE Board	ICSE Board	Others	TOTAL
MALE	61	19	23	1	104
FEMALE	8	9	4	0	21

District wise distribution of 125 JTST 2016 Scholars (according to the address of correspondence)



List of 50 Encouragement Awardee (In alphabetical order) in JTST-2016

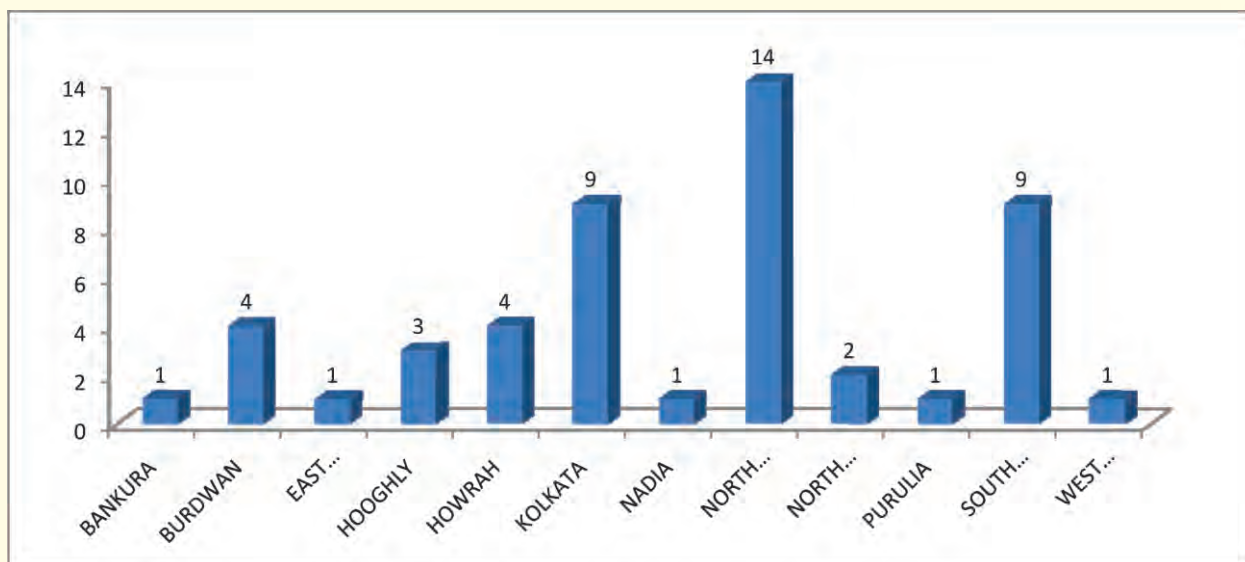
Sl. No.	Encouragement Awardee	Present Institution
1	Anubhav Mukherjee	Delhi Public School, Ruby Park
2	Anuranan Das	Ramkrishna Mission Vidyalaya, Narendrapur
3	Anushre Ray	Mugkalyan High School
4	Arani Bhattacharjee	Sri Aurobindo Institute Of Education
5	Arghadeep Ghosh	Bdm International
6	Arghya De	Ramkrishna Mission Vidyalaya, Narendrapur
7	Arkoprova Madhu	Ramkrishna Mission Vidyalaya, Narendrapur
8	Arpan Dutta Chowdhury	Apeejay School Salt Lake



Sl. No.	Encouragement Awardee	Present Institution
9	Arpan Mandal	Ramkrishna Mission Vidyalaya, Narendrapur
10	Atanu Mahapatra	Jhargram Kumud Kumari Institution
11	Atmadeep Ghosh	Delhi Public School Megacity
12	Atolanto Ghoshal	Ramkrishna Mission Vidyalaya, Narendrapur
13	Atridev Banerjee	Jodhpur Park Boys School
14	Avik Datta	Sudarsanpur D P U Vidyachakra
15	Dahik Ahmed Abbasi	Delhi Public School, Ruby Park
16	Debojyoti Bandyopadhyay	Kashiram Das Institution
17	Dipayan Parbat	Ramkrishna Mission Vidyalaya, Narendrapur
18	Izaz Ahamed	Raiganj Coronation High School Hs
19	Jishu Adhikary	Hare School
20	Kaushik Nandi	Narayanpur High School
21	Mainak Chowdhury	Ramkrishna Mission Vidyalaya, Narendrapur
22	Moumita Das	Auxilium Convent School, Kolkata
23	Nayanika Gangopadhyay	Gokhale Memorial Girls' School
24	Poulami Chatterjee	Kamala Girls School
25	Pracheta Pal	Springdale High School Hs
26	Pratim Kanrar	Bagnan High School
27	Priyanshu Chatterjee	Ramkrishna Mission Vidyalaya, Narendrapur
28	Rajarshi Maity	South Point High School, Kolkata
29	Rajdeep Ray	Burdwan Cms High School Hs
30	Ramkrishna Biswas	Santinagar High School
31	Ritesh Sur Chowdhury	Sodepur High School
32	Rohit Bera	Tamluk Hamilton High School
33	Rokeya Ghani	Our Lady Queen Of The Missions School
34	Samrat Dutta	Purulia Zilla School
35	Sapta Surya Palit	Ramkrishna Mission Boys Home High School
36	Saptarshi Roy	Burdwan Municipal High School

Sl. No.	Encouragement Awardee	Present Institution
37	Sarthak Bhar	Sri Aurobindo Vidyamandir
38	Saswata Mandal	Ramkrishna Mission Vidyalaya, Narendrapur
39	Sayantani Adhikari	Delhi Public School, Megacity, Rajarhat
40	Semanti Das	Salt Lake School English Medium
41	Shourjo Konar	Ramkrishna Mission Vidyalaya, Narendrapur
42	Shramana Ghosh	Delhi Public School
43	Soham Chatterjee	Apeejay School
44	Soham Ghosh	B.E.College Model School
45	Srijani Adhikary	Belghoria Mahakali Girls High School
46	Subhayu Paul	Ramakrishna Mission Vidyapith Purulia
47	Sudip Chakraborty	Bankura Banga Vidyalay
48	Sumit Sardar	Ramkrishna Mission Vidyalaya, Narendrapur
49	Tathagata Dey	Uttarpara Govt. High School
50	Utathya Raybarman	B D M International

District wise distribution of 50 Encouragement Awardee in JTST 2016
(according to the address of correspondence)



The Glimpses of Annual Award Ceremony, 2015



Annual Award Ceremony 2015, held on 16th January 2016

Left: Honoured (Prof. Anuradha Lohia, Vice Chancellor, Presidency University, Kolkata, Shri Vivek Kumar, Principal Secretary, Department of Higher Education, Government of West Bengal, Prof. Dipankar Chatterjee, Department of Molecular Biophysics, Indian Institute of Science, Bengaluru, Prof. Amitava Raychaudhuri, Chairman, JBNSTS and Sir Tarak Nath Palit Professor of Physics, University of Calcutta, Prof. Maitree Bhattacharyya, Director, JBNSTS, Kolkata) on the stage.

Right: Students and Scholars are taking their prize from Shri Vivek Kumar, IAS, Principal Secretary, Department of Higher Education, Government of West Bengal

Left: Narendrapur R K Mission Ashrama Vidyalaya being awarded as the best school for JTST 2015.

Right: Shri Arindam Ganguly performed a vibrant cultural program at the ceremony.

125 SCHOLARS OF JUNIOR TALENT SEARCH TEST 2016
(IN ALPHABETIC ORDER)



ABHIJNAN MAITI



ABHISEK PANDA



ADITYA ROY



AGNIDEEPA SINHA



AISHIK RANA



AKASH BHATTACHARYA



AKASH
SINGHA ROY



AKSHAT LAL



ALAAP CHOWDHURY



ANIKET GOSWAMI



ANIMESH MAITY



ANIRUDDHA HAZRA



ANKAN MISTRI



ANSHUMAN SINHA



ANUSHA BISWAS



ANWAY
BHATTACHARYYA



ANWIKA DAS



ARCHISMAN
MAZUMDER



ARISINA BANERJEE



ARITRA RAJ



ARKA HATUI



ARKAPRAVA GHOSH



ARKOPAL SEN



ARPAN SAHA



ATANU SAMANTA



AVIK
BHATTACHARYYA



AVINANDAN BOSE



AYAN PANJA



BAIBHAV
SRIVASTAVA



BIJIT DAS



BISHNU PRASAD
RAKSHIT



DEBANJAN DATTA



DEBARPITA JYOTI



DEBARSHI GHOSH



DEBOSMITA
PATHAK



DIBYOJYOTI GHOSH



DIGVIJAY ROY
VARIER



DIPANJAN SAHA



DIPANWITA
GUHATHAKURTA



HEVEN
GANGOPADHYAY



HOMAGNIC BOSE



HRITIK SARKAR



IMROZ AHAMED



INDRASHIS MITRA



JAYESH SHAW



JIGNASA BHUNIA



JISHNU BISWAS



KANAD SEN



KAZI AATISH IMROZ



MADHUSREE SEAL



MAULINDU SARKAR



MAYANK KANORIA



MAYUKH KHATUA



MOHEE DATTA GUPTA



MOUSAM MAITY



MRITYUNJOY DEY



NILADDIT SAHA



NILARGHYA DATTA



NIRMALYA MANDAL



NIRMALYA
MUKHERJEE



PIYAS MALLICK



PRASUN DE



PRATIM KUMAR
MONDAL



PRITAM BERA



RAIKHHIK DAS



RAJANTI DEY



RAJATAVA
MUKHOPADHYAY



RANAJIT GUCHHAIT



RIDDHI MANNA



RISHIRAJ DHAR



RUPAYAN SARKAR



SAGNIK DUTTA



SAGNIK DEY



SAGNIK ROY



SAGNIK SARKAR



SAIKAT DAS



SAMIM MONDAL



SAMIRAN MUKHERJEE



SAMPAD DAS



SAMYADEEP SARANGI



SANDIPAN HALDAR



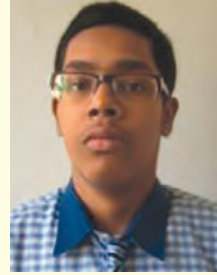
SANDIPAN BAL



SANKHADEEP DAS



SANTANU KUNDU



SARTHAK DAS



SASWATA BANERJEE



SAYAK MAJI



SAYONIL MOLLAH



SHIKHAR DUTTA



SHILPAK DEB



SHOUBHIK RAJ MAITI



SHREYA GHOSH



SHREYA PRAMANIK



SHREYANS CHATTERJEE



SHRUTI MAHATA



SHUBHAMAY DAS



SMARAK KUNDU



SOHAN DEBNATH



SOUMIK SAMANTA



SOUMILI BASAK



SOUMIT DUTTA



SOUMYASRI BISWAS



SOURAJYOTI MAITI



SREEJITA BOSE



SRIJAN ACHARYA



SRIJANI
CHAKRABORTY



SUBHADITYA BASU



SUBHAM LAYEK



SUBHAM
CHAKRABARTI



SUBHASHIS DAS



SUHARTO SAHA



SUHINA CELOSIA



SUMAN SAHA



SUPRABHA PAL
CHOWDHURY



SUSHIM MUKUL
MAITY



SUTIRTHA DATTA



SWAPNIL GHOSH



SWARNAVA MITRA



SWARNENDU MONDAL



TANMOY PATI



TANNISTHA MONDAL



TIMIR BARAN DAS



TUSHITA BASAK



WRIJU MITRA



ZAIRA HARAM

School laboratory development – A new initiative from DST- JBNSTS

It is a remarkable recognition for JBNSTS that Department of Science and Technology, Government of West Bengal has decided to grant Rs. 1.0 Lakh to each of the Government and Govt. sponsored schools which have at least one JBNSTS- Junior Talent Search Scholar, 2015. This Fund will be utilised to develop the laboratories which will definitely upgrade the science teaching and learning of the schools. The details regarding the schools are as follows :

Sl. No.	Name of the School	No. of scholars
1	B. T. ROAD GOVT. SPONSD. H.S. SCHOOL, KOLKATA	1
2	BALLYGUNGE GOVT. HIGH SCHOOL, KOLKATA	1
3	BANKURA BANGA VIDYALAY, BANKURA	1
4	BANKURA ZILLA SCHOOL, BANKURA	4
5	BARANAGAR RAJKUMARI MEMORIAL GIRLS' HIGH SCHOOL (H.S.), KOLKATA	1
6	BARASAT PEARY CHARAN SARKAR GOVT. HIGH SCHOOL, BARASAT, NORTH 24 PARGANAS	2
7	BARRACKPORE GOVT. HIGH SCHOOL, NORTH 24 PARGANAS	1
8	BASIRHAT HIGH SCHOOL, NORTH 24 PARGANAS	1
9	BENGAL ENGINEERING COLLEGE MODEL SCHOOL, HOWRAH	1
10	BETHUNE COLLEGIATE SCHOOL, KOLKATA	1
11	BHATPARA AMARKRISHNA PATHSALA (HS), NORTH 24 PARGANAS	1
12	BIDHANNAGAR GOVT. HIGH SCHOOL, SALT LAKE, KOLKATA	2
13	BK.T.P.P. PRABIR SENGUPTA VIDYALAYA, BIRBHUM	1
14	CHATRA NANDALAL INSTITUTION, HOOGHLY	1
15	DUM DUM KISHORE BHARATI HIGH SCHOOL (H.S.), KOLKATA	1
16	GARALGACHA HIGH SCHOOL, HOOGHLY	1
17	GHATAL VIDYASAGAR HIGH SCHOOL, WEST MIDNAPORE	1
18	HINDU SCHOOL, KOLKATA	1
19	HOOGHLY COLLEGIATE SCHOOL, HOOGHLY	1
20	HOWRAH ZILLA SCHOOL, HOWRAH	2
21	JALPAIGURI ZILLA SCHOOL, JALPAIGURI	1

Sl. No.	School Name	No. of scholars
22	K. T. P.P. HIGH SCHOOL(H.S.), EAST MIDNAPORE	1
23	KASHIRAM DAS INSTITUTION, KATWA, BURDWAN	1
24	KRISHNAGAR COLLEGIATE SCHOOL, NADIA	1
25	KRISHNATH COLLEGE SCHOOL, MURSHIDABAD	1
26	PATIRAM HIGH SCHOOL, SOUTH DINAJPUR	2
27	PURULIA GOVT. GIRLS H.S. SCHOOL, PURULIA	1
28	PURULIA ZILLA SCHOOL, PURULIA	1
29	RAIGANJ CORONATION HIGH SCHOOL, UTTAR DINAJPUR	1
30	RAMAKRISHNA MISSION ASHRAMA VIDYALAYA, NARENDRAPUR, KOLKATA	26
31	RAMAKRISHNA MISSION BOYS HOME HIGH SCHOOL, RAHARA, KOLKATA	4
32	RAMKRISHNA MISSION VIDYABHAVAN, WEST MIDNAPORE	1
33	RAMKRISHNA MISSION VIDYAPITH, PURULIA	3
34	SHYAMNAGAR KANTI CHANDRA HIGH SCHOOL, NORTH 24 PARGANAS	1
35	SUNDARBAN ADARSHA VIDYAMANDIR, SOUTH 24 PARGANAS	1

Science is a perception of the world around us. Science is a place where what you find in nature pleases you

--Subrahmanyan Chandrasekhar



THE JBNSTS WEST BENGAL DISTRICT SCHEME PROGRAM

The most sensitising
program to motivate
science education in
district schools of
West Bengal



A motivational and need based science program for middle school students and teachers from district schools of West Bengal



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. The state has been the core of scientific and academic activities 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. There is no dearth of talent in the state of West Bengal even in the remote rural areas. 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 barely get any exposure

to newer developments in science and technology, they also do not find opportunities to meet and interact with experts in the subject of science and almost no means to conduct scientific experiments for better understanding of scientific phenomenon. 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, This JBNSTS project with Government of West Bengal aims to create a better learning platform for middle school students through rigorous and innovative methods of curriculum leaching.

The Government of West Bengal, especially the Higher Education Department has been the essential foundation of JBNSTS by extending its valuable support since its inception. With the support of the academic, scientific, and student community of the state, JBNSTS is successfully carrying out the project for the underprivileged schools in the districts of West Bengal.



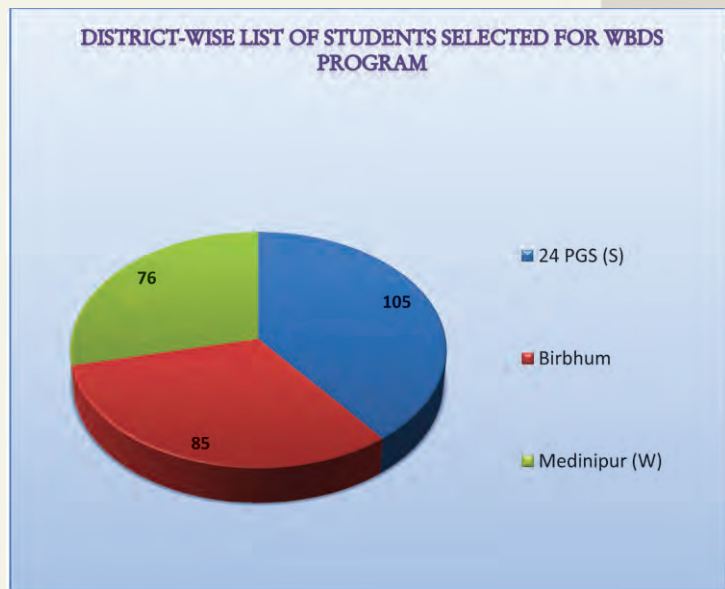
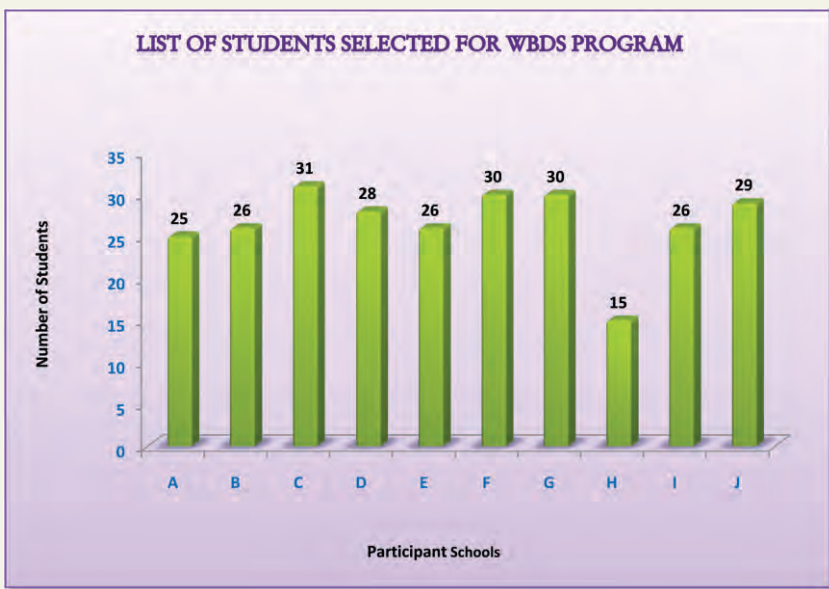
The West Bengal District Scheme Program of the JBNSTS for middle school students, which has been in existence since 1998, is involved in the challenging area for motivating bright students in the age group of 12-14 years in the district schools of West Bengal towards the learning of science using innovative and interactive methods. This Project is known as the “West Bengal District Scheme Project” under West Bengal District Scheme (WBDS) Program. JBNSTS designs and implements science programs for Grade 8 and 9 students who are of moderate or high ability. Depending on the design of the program, every year 800-1500 students of district level schools (rural or semi rural backgrounds) come under the realm of this program. This program has been enriched many fold during last two years.

In West Bengal, education is given priority over entrepreneurship and vocational training and parents continue to believe that education for their wards will ensure economic progress and better quality of lives. Unfortunately, in the rural areas the insufficiency of teachers and lack of infrastructure, extreme poverty are the reasons which make the education scenario really difficult and quite alarming in our state. 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 and JBNSTS has been successful in this initiative. JBNSTS have adopted the *Schoolwide Enrichment Model (SEM)*, an internationally acclaimed model for school students by Prof. Joseph Renzulli from University of Connecticut, USA. The detailed blueprint for total school improvement program allows schools to develop a collaborative school culture that takes advantage of resources and appropriate making opportunities to create meaningful high-level and potentially creative ambience for students to develop their talents. SEM suggests that educators should examine ways to make schools more inviting, friendly and enjoyable places that encourage the full development of the learner.

List of Selected schools in 2016-17

- A. Birbhum Zilla School, Birbhum
- B. Eklavya Model Residential School, West Midnapore
- 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 H.School, Birbhum
- I. Rani Benode Manjari Government Girls School, West Midnapore
- J. Suri Public & Chandragati Mustafi Memorial High School, Birbhum



An overview of WBDS program since 2005

West Bengal



Schools **Year**

- 2005
- 2006
- 2007
- 2008
- 2009
- 2010
- 2011
- 2012
- 2013
- 2014
- 2015
- 2016



Note: Each dot represents a school

Calendar of Events

May-June 2016

Baseline test in 10 schools for class VIII & IX students

June 2016

Middle school teacher training program in math and science for 31 teachers from 10 schools for 4 days at JBNSTS

July to September 2016

5 residential science workshops for 5 days each, involving students from 10 schools

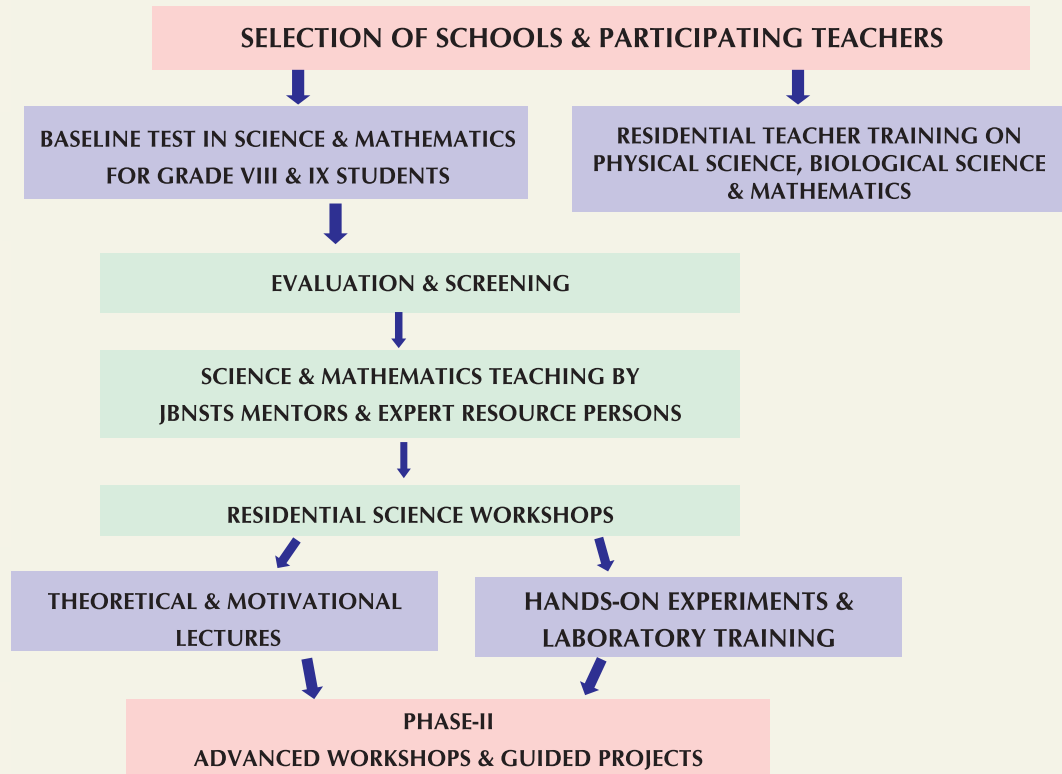
July 2016

Science program for students of isolated tribal community at Eklavya Model Residential School, Jhargram, Pashchim Medinipur



Students at Eklavya Model Residential School, Jhargram, Pashchim Medinipur

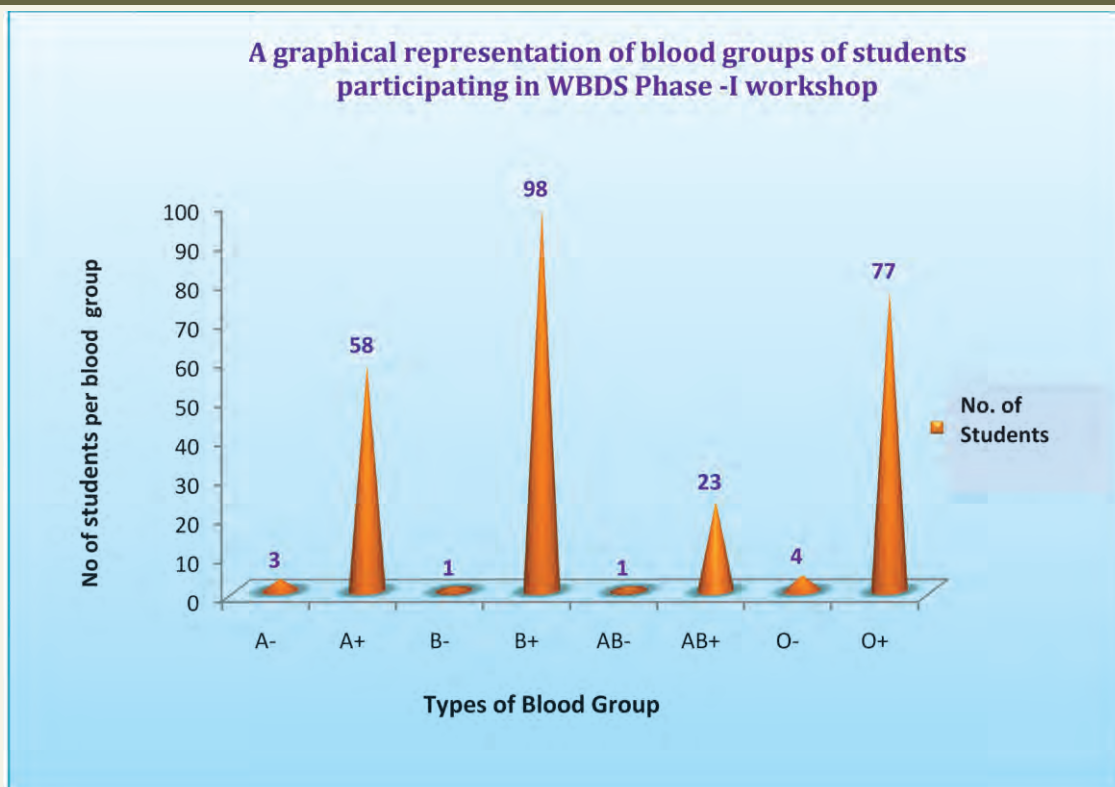
PROGRAM FLOWCHART 2016-17



A FEW INTERESTING TOPICS

Theoretical Lectures	Hands-on Experiments	
	Life Science	Physical Science
<ul style="list-style-type: none"> ● Biodiversity: Ecosystem of a mangrove ● Disease and human genome ● Evolution and role of DNA ● Environmental Pollution: Effect on air, water and soil ● Life of great Scientists ● Learning of periodic table and its utilization ● Using mathematical reasoning to solve equation and geometrical proofs 	<ul style="list-style-type: none"> ● Nutrition in food ● <i>Lactobacillus</i> under microscope and its use in curd preparation ● How to prepare homemade mosquito traps ● Microorganisms from different sources of water ● Slide preparation of bread mould (collection of moulds, staining, etc) ● Observation of different types of soils ● Observation of different types of cells (Onion, Squamous epithelium) ● Analysis of blood groups and microscopic observation 	<ul style="list-style-type: none"> ● Use of litmus and pH paper ● General chemical reactions and their conditions ● Behavior of solutions, solute and solvent ● Acid-base neutralization and indicators ● Archimedes principle: Buoyancy ● Measurement of frictional forces ● Determination of specific gravity ● Experiments on light: Refraction, reflection, use of different types of lenses.

BLOOD GROUP TEST BY THE PARTICIPATING STUDENTS



- Maximum numbers of students had B⁺ blood group type
- B⁻ & AB⁻ groups represented least numbers of students.



Students performed blood test by themselves under the mentorship of expert resource person

GLIMPSES FROM SEVERAL WORKSHOPS OF WBDS PROGRAM



Experiment on principle of submarine



Students extracting bread mould for examination



Students doing experiment on Archimedes Principal



Students expressing their views after conducting experiments



Students observing specimen under microscope



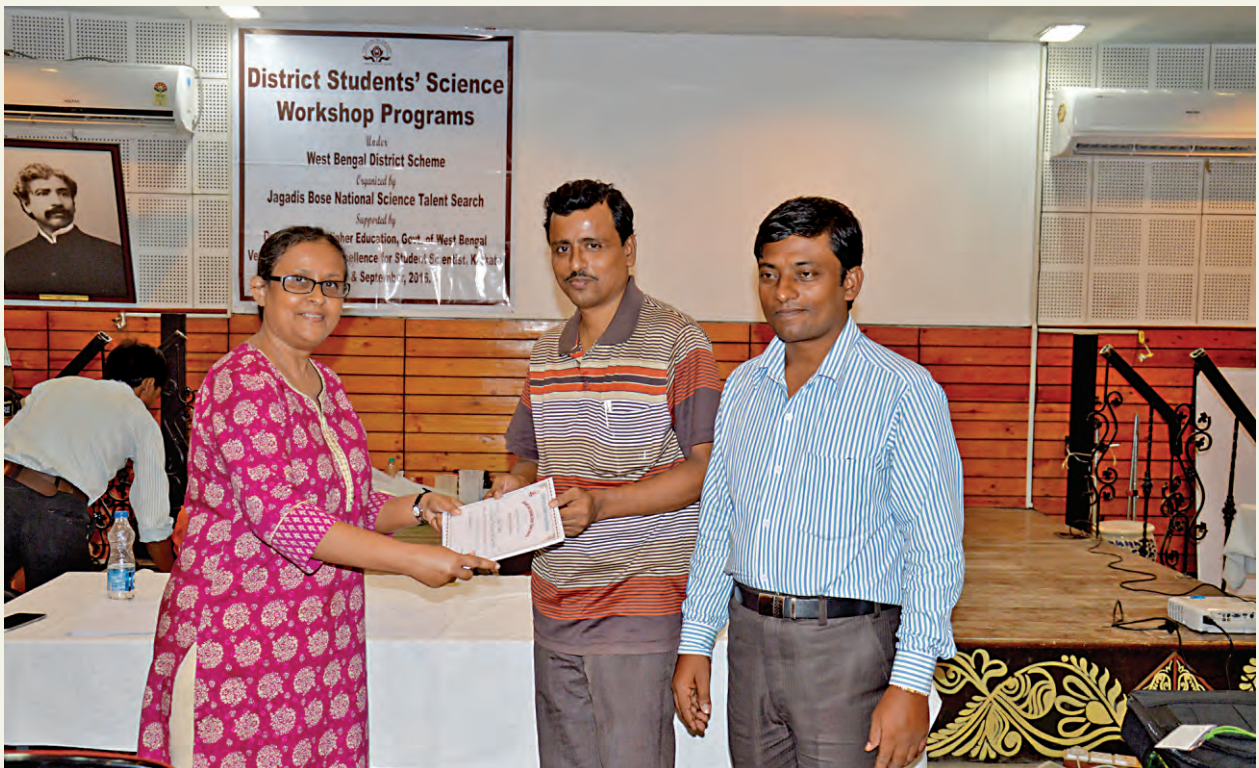
Students conducting soil pH test



Dr. Maana showing how to document an experiment



Participants collecting plant specimen



Valediction ceremony of Teacher's training program



THE JBNSTS DST INSPIRE SCIENCE CAMPS

Students enjoy
their learning.
54th Science
camp is under way.



Education is not the learning of facts, but the training of the mind to think.

Albert Einstein



“Innovation in Science Pursuit for Inspired Research (INSPIRE)” is one of the innovative programs developed by the Department of Science & Technology, Govt. of India for attraction of talent to science. The basic objective of INSPIRE is to communicate with the young population of the country to feel the excitements of creative pursuit of science, and to attract talent to the study of science at an early stage. JBNSTS attempts to motivate the brilliant youth to take up research career 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 will help building the required critical human resource pool for strengthening and expanding the Science & Technology system and R&D base of the nation. It also aims to excite the interns by rubbing shoulders with global leaders in science including Nobel Prize Winners to experience the joy of innovations.

To motivate the talented youth of the nation towards science and scientific research is one of the core missions of JBNSTS since its conceptualization, half a century ago. As the INSPIRE Program had been launched in 2008 by the Department of Science & Technology, Govt. of India with similar intend, JBNSTS started collaborating with DST for this noble cause by organizing INSPIRE Science camps. The first one came to its execution in June 2009. We are very proud to share that we will step for the 54th INSPIRE Science Camp in December, 2016. In this long journey, we put our best effort to harmonize DST's aim and receive colossal appreciation from all sections of the society.

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



DST INSPIRE Science Camp at JBNSTS: An unique learning experience

Understanding the inherent need of the brilliant students, JBNSTS has designed its science camp module under the guideline of the DST since the early days of such learning through science camp culture in India.

- **Motivational Lectures: Ignitions of the young minds**

JBNSTS invites the global leaders of science in different disciplines to deliver their lecture for the students. The topics are not like an information delivery fashion, rather these are concept-based to bring out the inter-disciplinary connections and excite the young minds about the mystery of science. These talks are interactive in nature which clear all possible doubts of interns and open newer avenues and ideas for them so that they can pursue their career according to their potential and willingness.

- **Hands-on Training: Learning through experiments**

Participating students carry out experiments at JBNSTS Laboratory under the guidance of established scientists. Students are taught the basic principles of interdisciplinary research methodologies and make them learn about fundamental concepts of several dry & wet laboratory facilities available at JBNSTS.

- Interns are allowed to plan and carry out research work for their projects under the guidance of different faculty members of JBNSTS and from other institutions. During this session, students are allowed to work independently/group utilizing several



Clockwise from the top : Prof. Soumitra Sengupta, Prof. Siddhartha Sen, Prof. Pradyut Ghosh, Prof. A. Ajayaghosh, Prof. Dhruvajyoti Chattopadhyay

instruments such as, Source Measuring Unit, Metallurgical Microscope, Biological Microscopes, Scanning Tunneling Microscope, Micro Centrifuge, UV-VIS Spectrophotometer, Millican Oil-drop Experimental Setup etc., Microbiological experiments.

SOME INTERESTING TOPICS, INTERNS WORKED ON.....

- √ Effect of wavelength on heat transfer
- √ Composite materials & its properties
- √ Chlorophyll – the wonder pigment
- √ Characterization of properties of composite materials: An experimental study
- √ Determination of an unknown mass by using various combination of spring
- √ Using the concept of vectors to determine the mass of different materials
- √ Water contamination removal
- √ Cost effective printing
- √ Chlorophyll and effect of acid rain on it
- √ Leaf chromatography
- √ Drinking water quality and water microbiology
- √ DNA and protein identification and estimation



Prof. Arghya Taraphder



Prof. Samita Basu

● Project Presentation by the Students: A remarkable achievements

Participants prepare projects based on the 'hands-on activity' at JBNSTS laboratory and present their experimental work before the panel of judges. During the camp period, they are trained towards the conventional way of systematizing scientific investigation i.e. tabulating & analyzing experimental data, drawing inference, making presentations and so on. These assignments create lots of excitement among the participants as they are exposed in such ambience for the first time.



- **Developing the Thought Process: An excellent exercise**

Participants are inspired to think on the issues of national importance by way of organizing sessions for writing on new and innovative ideas. The write ups are evaluated by the mentors and best three write-ups are selected and awarded during the valedictory function. Some unique and innovative ideas have already been received from the interns and these ideas might play important roles in countering the issues of national importance and these essays are preserved with DST, GOI.



- **Academic Visit: Exposure to the world of science**

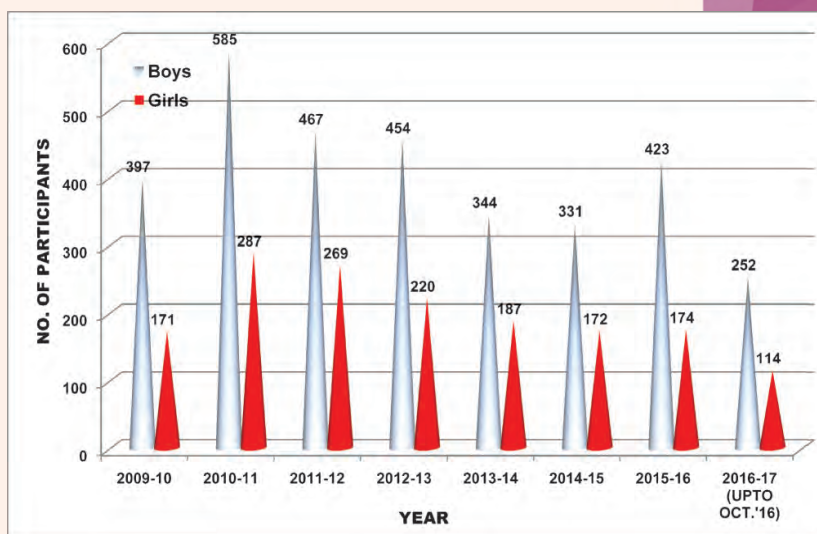
JBNSTS focuses is to give the students an exposure towards cutting edge research activities of the modern era. Apart from the program, an academic visit (one in each camp) is organized to different R&D laboratories where the requirements can be fulfilled. The list includes *Indian Association for the 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* etc. The students get the opportunity to visit research and technology facilities which broaden their scientific horizon.



A MOMENTARY LOOK



Period	Camps	Interns	Schools	Mentors
June, 2009 - Oct., 2016	53	4847 (Male:3253 Female:1594)	~ 215	~ 330
Jan. - Oct., 2016	4	466 (Male: 322 Female: 144)	~ 56	~ 60



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

Acharya Jagadis Chandra Bose



THE JBNSTS NURTURING PROGRAMS FOR SCHOLARS

Unique enrichment
program to motivate
our young
scholars



Science workshop for JTST 2015 scholars : June 8-11, 2016

A four day semi residential science workshop was organised for the JTST 2015 scholars under the “**scholar nurturing programme**”. The main objective of the workshop was to expose JTST 2015 scholars to the interaction of eminent scientists. In the workshop, scholars had the opportunity in both listening to the lectures of various experts and conducting innovative science projects and experiments. In the activity session, emphasis was given to built an aptitude to group activity. Nine group of scholars comprising 10 members each conducted different projects in the JBNSTS laboratory facilities. Scholars were encouraged to think independently and act cohesively to make a successful group presentation. Students learnt a lot during this session and enjoyed enormously regarding the process of research.

The program had grand success which was reflected through the positive feedback of the participating scholars.

Speakers and the title of their talk in this workshop:

- i. Prof. Maitree Bhattacharyya, Director, JBNSTS (**Welcome address**).
- ii. Dr. G. P. Das, Senior Professor, Indian Association for the Cultivation of Science, Kolkata (*"Nano-Science and Technology : Promises, Expectations and Challenges"*)
- iii. Dr. Amit Roy, DAE Raja Ramanna Fellow, Variable Energy Cyclotron Centre, Kolkata (*"Quest for the origin of elements"*)
- iv. Dr. Soumitra Sengupta, Senior Professor, Indian Association for the Cultivation of Science, Kolkata (*"Journey from Classical Physics to Quantum Physics"*)
- v. Dr. Ritabrata Munshi, Professor, Indian Statistical Institute, Kolkata (*"The mystery of the primes"*)
- vi. Dr. Siddhartha Roy, Senior Professor and Dean of Studies, Bose Institute, Kolkata, (*"Science Beyond Boundaries: Can we break the self-imposed glass barriers?"*)
- vii. Dr. Arnab Chakraborty, Assistant Professor, Indian Statistical Institute, Kolkata, (*"Magic.....bit by bit"*)
- viii. Dr. Sambuddha Banerjee, Assistant Professor, Amity University, Kolkata Campus (*"Chemistry: Beyond the boring classroom lectures"*)
- ix. Dr. Bhabatosh Biswas, Vice Chancellor, The West Bengal University of Health Science, Kolkata (*Motivational Lecture on Medical Science*)
- x. Pandit Anindya Bandopadhyay, Musician, Kolkata
- xi. Dr. Samita Basu, Senior Professor, Saha Institute of Nuclear Physics, Kolkata (*"Chemistry through interface probed by fluorescence"*)
- xii. Dr. Madhumita Roy, Director of Amity School of Planning and Architecture, Amity University, Kolkata Campus, (*Motivational Lecture on Engineering Science*)
- xiii. Dr. Smarajit Manna, Student Advisor, JBNSTS, Kolkata (*Laboratory activity session*)
- xiv. Dr. Abhijit Kar, Scientific Officer, JBNSTS, Kolkata (*Laboratory activity session*).

Glimpses of workshop during June 8 -11, 2016



Prof. Bhabotosh Biswas, Vice Chancellor, West Bengal University of Health Science, Kolkata delivering "Motivational Lecture on Medical Science".



Prof. Samita Basu, SINP, Kolkata is interacting with the participants



Prof. Soumitra Sengupta, IACS, Kolkata during his inspiring lecture



Pandit Anindya Bandopadhyay sharing his experience regarding how to nourish creativity

Those who make us proud

A nurturing workshop for JBNSTS Scholars

A two-day nurturing workshop was held on 5-6th November, 2016. This Program aims to expose our scholars to several fields of creative world like basic science, medicine, engineering, performing arts etc. In this program scholars get the opportunity to interact with eminent scientists and creative personalities. Sixty six scholars participated in this program and enriched themselves through the interaction with great personalities.

Dr. Suvendranath Bhattacharyya, the Bhatnagar award winner of 2016 presented a mesmerizing lecture on “A Journey towards molecular understanding of life”.

In the next session, Dr. Nibaran Gangopadhyay, a renowned ophthalmic surgeon delivered an outstanding speech on the philosophy of life and art of living. The interaction was unique and enriching to the students. In the afternoon session, famous Rabindra sangeet singer Shri Prabuddha Raha made a charismatic appearance to discuss the persuasion of music in life.

On second day, Padmasri Prof. Bimal Kumar Roy from Indian Statistical Institute, Kolkata delivered an inspiring lecture to the students. In his lecture, Prof. Roy highlighted his work involving cryptology and various applied part of statistics. His analytical lecture was really thought provoking.

Second interactive lecture was presented by the eminent scientist and winner of swarna jayanti award, 2016 Dr. Chilla Malla Reddy, IISER (Kolkata) on “Crystallography in our Daily Life”. His unique style of delivering speech and the interest generated among the audience was phenomenal.

In post lunch session, prominent cartoonist Shri Debashis Deb (ABP Group) interacted with the scholars and shared his experience regarding interaction with the Oscar winning film director Mr. Satyajit Ray during his early days of career. He also demonstrated how the idea can be translated into a cartoon.

In the last session, Ms. Alakananda Roy, a famous dancer and the philanthropist discussed her journey of life and her noble initiative to work with the prisoners of Alipore Jail. Her touching experience encouraged many of these future pillars of the society to work on a social issue and to think independently for the development of the nation.

The program had a great success and far reaching impact which was reflected through the positive interaction and feedback of the participating scholars.



Dr. Suvendu Nath Bhattacharyya delivering his lecture

Glimpses of "Those who make us proud"



Dr. Nibaran Gangopadhyay with the scholars



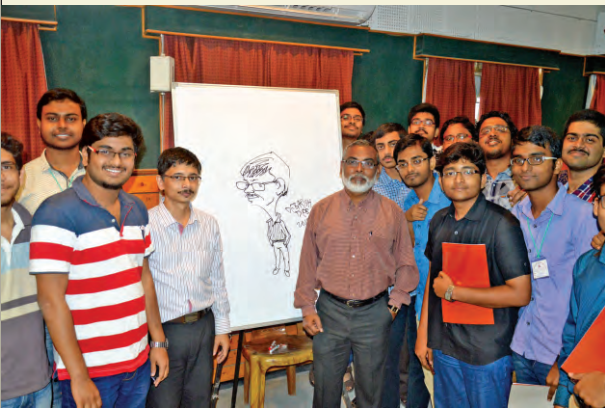
Shri Prabuddha Raha interacting with scholars



Prof. Bimal Kumar Roy was felicitated by Prof. Maitree Bhattacharyya before his lecture



Dr. Chilla Malla Reddy giving speech on "Crystallography"



Shri Debashis Deb showing his skills of caricature.



Renowned dancer Ms. Alakananda Roy with JBNSTS Scholars

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

Under the financial support from Department of Science and Technology, Govt. 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. West Bengal Academy of Science and Technology (WAST) is also our collaborator in implementing this program. This program is basically a learner-centered method where the teacher is both a teacher and a learner at the same time, so that his classroom extends to intellectual horizons rather than boundary of a mere school.

OBJECTIVES OF THE PROGRAM

- To improve the standard quality of teaching. A trained teacher would be able to teach scientific events in a more interesting way so that the students shall have a transparent idea about the subject.
- To develop new methods of teaching so that the students get motivated to learn science and develop scientific temper.
- To help the teachers to understand the student psychology so that they can be able to realize the difficulties faced by the students in their classroom and environment.

These programs address the gap between knowledge acquired during classroom teaching and its application into real world of research and applications. This initiative will develop a functional scientific literacy to build up stronger future for young students. Most importantly, teachers will be able to strengthen the intellectual human resource pool, which in turn will help to develop our country and the nation. The program will support transformative science teaching methodology, to develop a student community with creative mind and innovative aptitude.



CALENDAR OF EVENTS

❖ **Workshop I:** March 1 - 4, 2016.

Participation: 39 teachers from 16 schools of Nadia and South 24 PGS.

Focusing area: Physical Science, Life Science, and Mathematics.

❖ **Workshop II:** September 19 - 20, 2016.

Participation: 57 teachers from 35 schools of South-24pgs, Nadia, North 24-Pgs, West Midnapore and Birbhum.

Focusing area: Mathematics.

List of the participating schools

Districts	Sl. No	Name of the Participating Schools
South 24 PGS	1	Balarampur Manmathanath Vidyamandir
	2	Baruipur Rashmoni Balika Vidyalaya
	3	Baruipur High School
	4	Basudebpur High School
	5	Bawali Pallimangal High School
	6	Canning David Sassoon High School
	7	Chowbaga High School
	8	Dhablat Lakshman Parabesh High School
	9	Ganipur High School
	10	Garia Baradaprasad High School
	11	Ghoramara Milan Vidyapith
	12	Ghutiarisharif B. M. Vidyapith
	13	Gopalpur Sikshaniketan
	14	Gosaba RR Govt. Sponsored Institution
	15	Gournagar High School
	16	Gurudaspur Mahendra Indra Vidyamandir
	17	Janapriya Nagar Janapriya Vidyalaya (H.S.)
	18	Jaynagar Institution
	19	Kalash High School
	20	Khansaheb Abad High School
	21	Madarat Ishan Chandra Balika Vidyalaya
	22	Pranta Palli Balika Vidyalaya
	23	Sarangabad Jajneswari Pathsala Girls' High School
	24	Sundarban Adarsha Vidyaniketan
	25	Tangrakhali P.J.P. High School



List of the participating schools

Districts	Sl. No	Name of the Participating Schools
Nadia	1	Aranghata Upendra Memorial Institution
	2	Asannagar High School
	3	Baganchra High School
	4	Bhimpur Swamiji Vidyapith
	5	Birnagar High School
	6	Debagram Sivram Anandamayee Vidyapith
	7	Fulia Krittibas Smriti Vidyalaya
	8	Kanthal Beria Harakumar Vidyaniketan
	9	Krishnagar High School
	10	Majdia Railbazar High School
	11	Matiari Rampada Sen Memorial High School
	12	Ranaghat Brojobala Girls' High School (H.S)
	13	Swarnakhali Paikpara Vivekananda High School
	14	Swarupganj Bhagirathi Vidyapith
	15	Tehatta High School
	16	Tentulberia High School
North 24 PGS	1	Barasat Girls' High School
West Midnapore	1	Eklavya Model Residential School
Birbhum	1	Birbhum Zilla School

Prof. Sarmistha Roy Chaudhury
with the participants



COLLABORATION WITH EUROPE

In 2014, a European Talent Support Network was formed and in two years more than 250 cooperating Talent Centers and Talent Points from 25 European countries were registered. The focus of this network is to share best practices in gifted education and talent support, to organize exchanges of experts and young talents, to apply to joint funding requests and for many other forms of cooperation. Jagadis Bose National Science Talent Search is the only institute in India and this region of the continent to have been selected as a recognized Associated European Talent Point in 2016. Further collaborations under this network are to be initiated soon.

CERTIFICATE

This is to certify that

Jagadis Bose National Science Talent Search

became qualified for the title of
ASSOCIATED EUROPEAN TALENT POINT.



Prof. Péter Csermely
President of ECHA



Csilla Fuszek
coordinator of the European Talent Support Network



ETSN | European Talent
Support Network

1st June 2016

Science Workshop in memory of Late Prof. Amarnath Bhaduri

A one day science workshop was jointly organized by JBNSTS and A N Bhaduri Memorial Foundation at JB-Centre of Excellence, Kolkata on January 22, 2016. Sixty students of class VIII & IX from 5 schools ((Howrah Jogesh Chandra Girls' School, Howrah, Barrackpore Government School, North 24 Parganas, Supapusuri High School, Supapusuri, Midnapore Jiaganj Raja Bijoy Singh Vidyamandir, Murshidabad and Garfa Dharendra Nath Memorial High School (H.S) participated in this program. The whole programme included motivational lectures, hands on activities and a session on different technical integrities of magic show.

The programme was a great success. The students enjoyed the learning with great enthusiasm.

Name of the experts

1. Shri Milan Chandra Gain, Uttar Rabindra Nagar Vivekananda High School, Dum Dum Cant., Kolkata
2. Dr. Amiya Bagchi, Institute of Development Studies, Kolkata
3. Mrs. Reena Bhaduri, Kolkata
4. Dr. Manju Ray, Emeritus Professor of CSIR, Bose Institute, Kolkata
5. Dr. Dhruvajyoti Chattopadhyay Vice Chancellor, Amity University, Kolkata
6. Prof. Shyamal Chakrabarti, Calcutta University, Kolkata
7. Shri Kaushik Bhaduri, Ex- Microsoft, Magician

Science Workshop in memory of Late Prof. Amarnath Bhaduri



Shri Milan Chandra Gain is guiding students

23rd West Bengal State Science & Technology Congress

West Bengal State Science & Technology Congress was held at Presidency University, Kolkata during 28th and 29th February, 2016. As a part of the program, JBNSTS was assigned with the responsibility to conduct model presentation program and quiz competition for school students.

District school students from JBNSTS presented two models:

Model-1: Evolution of Astronomical Instruments

Participants: 1.Soham Chattopadhyay and 2.Tanmay Chanda , Hooghly Collegiate School.

Model-2: Modern technique for better Irrigation & Cultivation

Participants: 1. Shreyam Das and 2. Shatabda Chaudhury, Hooghly Collegiate School.

JBNSTS also organized a Science Quiz for students of class IX and X during 28th February, 2016 “The Science Day” as a part of this congress. Forty-three students from thirteen schools participated in this program which was conducted by two promising quiz masters. Ballygunge Government High School, Barasat P C S Government High School and Baruipur High School secured the first, second and third position respectively. The students of the respective schools were awarded a prize money. All the students enjoyed a lot with their active participation.

Glimpses of JBNSTS activities at 23rd West Bengal State Science & Technology Congress



Students and guardians collecting leaflets and posters at JBNSTS stalls.



Students at JBNSTS Stalls at Presidency university campus.

Students' quiz session organized by JBNSTS at Science & Technology Congress.



A student from Hooghly Collegiate School demonstrating scientific concept behind his model.

The model "Solar Sprinkler irrigation system" created great enthusiasm among the visitors.





One Day National Seminar on Photonics

Organized Jointly By

JBNSTS Kolkata - VIGYAN PRASAR (DST-GOI), Delhi

25 October, 2016



VIGYAN PRASAR

'One Day National Seminar on Photonics' was organized at JBNSTS in collaboration with VIGYAN PRASAR (DST-GOI) on October 25, 2016. The program was a grand success with the participation of more than 100 students.



Genesis of The Day of Photonics

On 21 October 1983, the General Conference of Weights and Measures adopted the value of 299792.458 km/sec for the speed of light. To celebrate of the anniversary, several activities are organized around the world, encompassing demonstrations and discussions on the impact of photonics on our day-to-day life. DAY OF PHOTONICS is an annual event that promotes "Photonics" in the world to describe the significance and relevance of the photonic industry.

Purpose of the Seminar

The seminars and workshops aim to create awareness of how optical technologies promote sustainable development and provide solutions to worldwide challenges in energy, education, agriculture, communications and health.

Illuminating Lectures Delivered at JBNSTS

- **Prof. Maitree Bhattacharyya**

Director, Jagadis Bose National Science Talent Search, presented the welcome address.

- **Dr. Kuttanellore Muraleedharan**

Director, CSIR-Central Glass And Ceramic Research Institute, Kolkata was the chief guest who explained the importance of photonics and development of optical fiber and its role to develop information and communication technology.

- **Shri Rintu Nath**

Senior Scientist, Vigyan Prasar, an organization under the Department of Science and Technology, discussed electromagnetic spectrum and its relevance from quantum mechanical point of view.

- **Dr. Samita Basu**

Head, Chemical Science Division, Saha Institute Of Nuclear Physics, Kolkata, delivered a lecture on the topic "Laser and the amplification of lights in this device".

- **Dr. Abhijit Kar**

Scientific Officer, Jagadis Bose National Science Talent Search, Kolkata and the coordinator of this program, discussed uses of photonics for the characterization of different structures of materials.

- **Dr. Manas Pratim Das**

Program Executive of All India Radio, Kolkata. Dr. Das conducted quiz competition on photonics and its application, 13 teams from different schools comprising of 4 students in each team participated in the program

You have to dream before your dreams can come true.

- **APJ Abdul Kalam**

Prof. Maitree Bhattacharyya, Director, JBNSTS is involved in research activities in different fields like Microbial Ecology, Diabetes and Cardiovascular disease and Structural Biology. A few of her research publications are cited here:

Microbial Ecology

1. Manas Kumar Guria, Medha Majumdar, Maitree Bhattacharyya, Green synthesis of protein capped nano-gold particle: An excellent recyclable nano-catalyst for the reduction of nitro-aromatic pollutants at higher concentration. *Journal of Molecular Liquids*, 2016, 222 549–557.
2. Satabdi Banerjee, Arnab Pramanik, Sanghamitra Sengupta, Dhrubajyoti Chattopadhyay, Maitree Bhattacharyya .Distribution and source identification of heavy metal concentration in Chilika Lake, India: An assessment over salinity gradient . *Current science (Accepted)*, 2016.
3. Pijush Basak, Arnab Pramanik, Sohan Sengupta, Sudip Nag, Anish Bhattacharyya, Debojyoti Roy, Rudradip Pattanayak, Abhrajyoti Ghosh, Dhrubajyoti Chattopadhyay, Maitree Bhattacharyya, Bacterial diversity assessment of pristine mangrove microbial community from Dhulibhashani, Sundarbans using 16S rRNA gene tag sequencing, *Genomics Data* , 2016 , 7:76–78.
4. Arnab Pramanik, Pijush Basak, Satabdi Banerjee, Sanghamitra Sengupta, Dhrubajyoti Chattopadhyay, Maitree Bhattacharyya, Metagenomic exploration of the bacterial community structure at Paradip Port, Odisha, India, *Genomics Data* , 2016, 7: 94–96.

Diabetes

5. Kakali Ghoshal, Sangita Das, Krishnendu Aich, Shyamaprosad Goswami, Subhankar Chowdhury, Maitree Bhattacharyya, A novel sensor to estimate the prevalence of hypochlorous (HOCl) toxicity in individuals with type 2 diabetes and dyslipidemia,. *Clinica Chimica Acta*, 458 (2016) 144–153.

Structural Biology

6. Paulami Mandal, Maitree Bhattacharya and Joydeep Chowdhury, Targeting G-quadruplex DNA and B-DNA with a natural alkaloid: a comparative spectroscopic study, *RSC Adv*, 2016, 6 , 109846-109856 , DOI: 10.1039/C6RA22776G.
7. Subarna Dutta, Maitree Bhattacharyya and Kaushik Sengupta. Implications and Assessment of the Elastic Behavior of Lamins in Laminopathies, *Cells* 2016, 5, 37; doi:10.3390/cells5040037
8. Rudrdip Pattanayak , Pijush Basak , Srikanta Sen and Maitree Bhattacharyya Interaction of KRAS G-quadruplex with natural polyphenols: A spectroscopic analysis with molecular modeling , *International Journal of Biological Macromolecules* , 2016 , 89 , 228–237
9. Pijush Basak, Tanay Debnath, Rajat Banerjee and Maitree Bhattacharyya: Selective binding of divalent cations towards heme proteins, *Frontiers Biology*, 2016, Vol. 11 Issue (1): 32-42 doi:10.1007/s11515-016-1388-0.

10. Rittik Kumar Ghosh, Turban Kar, Pijush Basak and Maitree Bhattachayya. Hydrophobic profiling of heated and unheated Leghemoglobin, Myoglobin, Cytochrome c and Hemoglobin proteins in differential pH conditions. *International Journal of Scientific and Research Publications*, 6(9), 2016.

Dr Paromita Roy, Deputy Director, JBNSTS, now a recognized researcher on gifted education in India and overseas has been actively pursuing the area since 2014. In the year 2016 she was invited to the 13th Asia Pacific Federation on Giftedness Conference at Macao, China SAR between July 11-14, 2016 to conduct a workshop on Benefits and Challenges in Labeling Gifted Children of Today". Earlier this year she was the only delegate from India to participate in the 15th International ECHA Conference "Talents in Motion". Vienna, Austria March 2-5, 2016 and was invited to speak on at the European Youth Summit organized by AISTAP (Italy), Vienna, March 1, 2016. Due to her participation in several European forum on Talent and Giftedness, JBNSTS is now a recognized Associated Talent Point of the European Talent Network. Dr Roy has just completed an 18 month project funded by Maulana Abul Kalam Azad Institute for Asian Studies (MAKAIAS), Department of Culture, Government of India on "Education and Identification of Talented students of India" and has completed a large study involving more than 2000 respondents from India on "conception of Giftedness in India".

Publications:

1. 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
2. Roy, P., Mondal, M., Bakuli, K. and Mishra. A. (2016). *Education and Identification of Gifted Students of India*. Maulana Abul Lalam Institute of Asian Studies. Kolkata
3. Roy, P. and Dai, D.Y. (2016). Conception of Giftedness in the Indian context. Submitted for publication.
4. Leana Tascilar, M. Z., Blumen, S., Eberle, T., Escobedo, P. S., Jurisevic, M., Li, X., Roy, P., Sak, U., Shi, J., Vialle, W., Ziegler, A. (2016). How intelligent, popular and nice are high achieving students according to the perceptions of their school teachers? Results of a cross-cultural study with teachers from eight countries. Paper presented at 15th International ECHA Conference "Talents in Motion". Vienna, March 3, 2016.
5. Roy, P. (2016). Away From Home: Trajectories of Four Generations of Indian High Ability Students. Paper presented at the 15th International ECHA Conference "Talents in Motion". Vienna, March 3, 2016.
6. Roy, P. (2016). Science mentoring of moderately high ability disadvantaged students in an inclusive setup: An Indian experience. Paper presented at the 15th International ECHA Conference "Talents in Motion". Vienna, March 5, 2016.
7. Roy, P. (2016). "Indian gifted students: Their place in this world". Invited lecture at the European Youth Summit organized by AISTAP (Italy), Vienna, March 1, 2016.
8. Roy, P., Alencar, E. S., Clark, T., Lee, E., Mc Laughlin, H.J., (USA), Mendaglio, S., Tan, V., (2016). The under representation of certain groups of children in gifted programs in each of our countries. International Panel Discussion at the International 15th International ECHA Conference "Talents in Motion". Vienna, March 3.



Dr. Smarajit Manna, Student Advisor, JBNSTS, has research interests to contribute in the field of Bioinformatics, Material Science and Cognitive Science. In Bioinformatics, he wants to explore evolutionary relatedness among various species and vaccine designing through mathematical modeling of DNA sequences. In Material Science, he has been working on super capacitors and electrical sensors. In Cognitive Science, he wants to find some mathematical tuning parameter through time series analysis related to different cognitive traits.

Publications:

Journals-

1. Dwaipayan Sen, Subhadeep Dasgupta, Indrajit Pal, Smarajit Manna, Subhash C. Basak, Ashesh Nandy and Gregory D. Grunwald, "Intercorrelation of Major DNA/RNA Sequence Descriptors - A Preliminary Study" *Current Computer-Aided Drug Design*, 12, 3, 2016, 216-228.
2. Kuntal Maity, Biswajit Mahanty, Tridib Kumar Sinha, Samiran Garain, Anirban Biswas, Sujoy Kumar Ghosh, Smarajit Manna, Samit K. Ray and Dipankar Mandal, "Two-dimensional MoS₂ Modulated High Performance Ultrasensitive Piezoelectric Nanogenerator and Nanosensor Made of PVDF Nanofiber Webs" *Energy Technol.* 2016, 4, 1 – 11.

Conference proceedings-

3. Subhadeep Dasgupta, Dwaipayan Sen, Indrajit Pal, Smarajit Manna, New 2d method for quantitative representation of DNA sequences using Polar Co-Ordinates, 23rd West Bengal State Science & Technology Congress, 2016 28 - 29 February 2016, Presidency University, Kolkata
4. Indrajit Pal, Subhadeep Dasgupta, Smarajit Manna, Ashesh Nandy, A method to quantitatively assess differences in phylogenetic trees of same rank. 23rd West Bengal State Science & Technology Congress, 2016 28 - 29 February 2016, Presidency University, Kolkata
5. Ashesh Nandy, Subhash C Basak, Subhadeep Dasgupta, Niladri Dutta, Dwaipayan Sen, Smarajit Manna and Gregory D. Grunwald, "DNA sequence descriptors, intercorrelation and applications to computational vaccine design" 12th meeting of the International Academy of Mathematical Chemistry and the International Conference on Mathematical Chemistry, At Nankai University, Tianjin, China, July 2016.

Dr. Abhijit Kar, Scientific Officer, JBNSTS: Some of the research activity carried out by him during 2015-2016

Project Completed

1. Successfully completed Project entitled 'Development and reliability of the use of nanostructured lead free solder and soldering technique for electronic and microelectronics applications' under the DST-Govt. of India, Young Scientist Project (Total Grant. 25.3L) as Principal Investigator
2. Cost effective synthesis of graphene and metal-incorporated graphene: their application as sensors of environmental gases, Funded by Department of Information & Technology- Govt. of India (90.6L) as Collaborative Partner.

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 (Total Grant 37.9L) 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 (47L) as Collaborative Partner

Project due for final sanction

1. Environment friendly nanostructured lead free solders and understanding its performance in high-reliability microelectronics applications (financial assistance from DST-Govt. of West Bengal) as Principal Investigator
2. Development of high strength, corrosion and heat resistant, durable polymer matrix composite material for different building construction and energy harvesting applications (financial assistance from DST-Govt. of India) as Principal Investigator

Publication:

1. Abhinanda Kar, Harshita Kaul, Debasruti Boral, Sampurna Mukherjee, Rashmi Das, Riddhi Majumder, Abhijit Kar; Antimicrobial effect of silver nanoparticles- a possible substitute to handle multidrug resistant bacteria; 23rd West Bengal State Science & Technology Congress, 28-29, February, 2016; (Best Paper Award in the Medical Science Section).
2. Nanoelectronics and Materials Development, Book Edited by Dr. Abhijit Kar; Published by InTech Publisher, ISBN 978-953-51-4734-3; August 2016
3. Monalisa Char, Amit K Chakraborty, Subhrangsu Aditya, Abhijit Kar; Reliability prediction of lead free solder to copper joint interface Developed by transient liquid phase soldering for microelectronics (Communicated , under review)

##Supervising 1 PhD student working (Registered at NIT-Durgapur)on the nanostructured lead free materials development for microelectronics applications.

“Develop a passion for learning. If you do,
you will never cease to grow.”

– Anthony J. D'Angelo



MENTORS, ADVISORS, FACILITATORS AND EXPERTS WITH JBNSTS

Year long programs of JBNSTS are possible only because of the broad network of teachers, mentors and facilitators who spare their time and share their expertise with the entire spectrum of students and teachers attending these programs. JBNSTS expresses its heartfelt gratitude to all academicians/scientists/educators for walking this road with us.



**Our sincere acknowledgement towards the involvement of
Mentors, Advisors, Facilitators and Experts
in several academic activities of JBNSTS**

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Shri Subhash Bhattacharyya	Jadavpur University, Kolkata
Shri Subhra Chatterjee	Vikramshila Education Resource Society
Shri Subhrangsu Aditya	Jadavpur University, Kolkata
Shri Subir Nag	Satyapriya Roy College of Education, Kolkata
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“A sense of curiosity is nature's original school of education.”

– Smiley Blanton

HAPPY MOMENTS



January 2016

16/01/16: Annual Award Ceremony: Held at Derozio hall, Presidency University, Kolkata

Scientific Session: Lecture delivered by

- (1) Prof. Amitava Raychaudhuri, Chairman, JBNSTS and Sir Tarak Nath Palit Professor of Physics, University of Calcutta
- (2) Prof. Dipankar Chatterjee, Department of Molecular Biophysics, Indian Institute of Science, Bengaluru

Prize Distribution Session: Inaugural Address by Prof. Anuradha Lohia, Vice Chancellor, Presidency University, Kolkata.

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

Lecture delivered by the 'Guest of Honor' Shri Vivek Kumar, Principal Secretary, Department of Higher Education, Government of West Bengal.

Presidential address by Prof. Amitava Raychaudhuri, Chairman, JBNSTS and Sir Tarak Nath Palit Professor of Physics, University of Calcutta.

Lecture delivered by the 'Chief Guest' Prof. Dipankar Chatterjee, Department of Molecular Biophysics, Indian Institute of Science, Bengaluru

Shri Vivek Kumar, Principal Secretary, Department of Higher Education, Government of West Bengal and Prof. Amitava Raychaudhuri gave away the Certificates of Merit to JBNSTS Junior Scholars of batch 2015.

Prof. Dipankar Chatterjee and Dr. Sudip Chatterjee, gave away the Certificates of Merit to JBNSTS Senior Scholars of batch 2015.

Prof. Partha Pratim Majumder, handed over the 'Junior Best School Trophy' for the year 2015 to the students and teachers of Ramakrishna Mission Vidyalaya, Narendrapur, Kolkata.

Prof. Majumder also handed over the 'Senior Best School Trophy' and the 'Rotating Shield' for the year 2015 to the students and teachers of South Point High School, Kolkata.

Shri Arindam Ganguly, an eminent actor and folk singer, performed in the cultural program.

The program was ended with vote of thanks followed by National Anthem.

19/01/ – 21/01/16: West Bengal District Students' Science Workshop (WBDS) supported by Department of Higher Education, Government of West Bengal for middle school students (56) from 4 selected schools (Howrah Jogesh Chandra Girls' School, Howrah, Barrackpore Government School, North 24 Parganas, Supapusuri High School, Supapusuri, Midnapore and Jiaganj Raja Bijoy Singh Vidyamandir, Murshidabad) held at JB-Centre of Excellence, Kolkata.

Speakers:

1. Session on Physics by Dr. Soumitra Sengupta, Indian Association for the Cultivation of Science, Kolkata
2. Session on Mathematics by Dr. Parthasarathi Mukhopadhyay, R K M Residential College, Narendrapur, Kolkata

3. Session on Chemistry by Dr. Samita Basu, Saha Institute of Nuclear Physics, Kolkata
4. Session on Life Science by Dr. Sanghamitra Sengupta, University of Calcutta, Kolkata
5. Guidance for future studies by Dr. Paromita Roy, JBNSTS, Kolkata.

22/01/16: One day Science Workshop in memory of Late Prof. Amarnath Bhaduri, for middle school students (71) in Kolkata, jointly organized by JBNSTS and A N Bhaduri Memorial Foundation held at JB-Centre of Excellence, Kolkata.

Speakers:

1. Shri Milan Chandra Gain, Uttar Rabindra Nagar Vivekananda High School, Dum Dum Cant., Kolkata
2. Dr. Amiya Bagchi, Institute of Development Studies, Kolkata
3. Mrs. Reena Bhaduri, Kolkata
4. Dr. Manju Ray, Emeritus Professor of CSIR, Bose Institute, Kolkata
5. Dr. Dhruvajyoti Chattopadhyay Vice Chancellor, Amity University, Kolkata
6. Prof. Shyamal Chakrabarti, Calcutta University, Kolkata

February 2016

15/02/ – 18/02/16: West Bengal District Students' Science Workshop (WBDS) supported by Department of Higher Education, Government of West Bengal for middle school students (59) from 3 selected schools (Gurudaspur Mahendra Indra Vidyamandir, Partharpratima, South 24 Parganas, Dhablat Lakshma Parabesh High School, Sagar and Uttar Rabindranagar Vivekananda High School, Dum Dum) held at JB-Centre of Excellence, Kolkata.

Speakers:

Sessions on Life Science by

1. Dr. Chaitali Mukherjee, Santoshpur Rishi Aurobindo Balika Vidyapith, Kolkata
2. Dr. Mrinal Mukherjee, Nangi High School, South 24 Pgs
3. Dr. Punarbasu Chaudhuri, Calcutta University, Kolkata

Sessions on Mathematics by

1. Shri Siddhartha S Chattopadhyay, Bidhannagar Govt. High School, Kolkata
2. Shri Sabyasachi Mitra, Calcutta International School, Kolkata

Session on Physical Science by

1. Dr. Gautam Basu, Bose Institute, Kolkata
2. Shri Pintu Kr. Sinha, Katwa Kasiram Das Institution, Burdwan

Participants of the Science Workshop visited 'Innovation Hub' at BITM, Kolkata.

19/02/ – 22/02/16: West Bengal District Students' Science Workshop (WBDS) supported by Department of Higher Education, Government of West Bengal for middle school students (52) from 3 selected schools (Sundarban Adarsha Vidyamandir, Kakdwip, Sundarban Adarsha Vidyaniketan, Basanti and Rameshwarpur Union Adarsha Vidyalaya, Hasnabad) held at JB-Centre of Excellence, Kolkata.



Speakers:

Sessions on Mathematics by

1. Shri Subir Bhattacharya, Dum Dum Kishore Bharati High School, Kolkata
2. Shri Sabyasachi Mitra, Calcutta International School, Kolkata
3. Dr. Parthasarathi Mukhopadhyay, R K M Residential College, Narendrapur, Kolkata

Sessions on Physical Science by

1. Mr. Partha Pratim Roy, South Point High School, Kolkata
2. Shri Saptarshi Mondal, Tangrakhali High School, South 24 Parganas
3. Dr. Goutam Basu, Bose Institute, Kolkata

Session on Life Science by

1. Dr. Mrinal Mukherjee, Nangi High School, South 24 Parganas
2. Dr. Chaitali Mukherjee, Santoshpur Rishi Aurobindo Balika Vidyapith
3. Shri Arup Sengupta, Garfa DNM High School, Kolkata

Participants of the Science Workshop visited 'Innovation Hub' at BITM, Kolkata.

28/02/ - 29/02/16: "23rd West Bengal State Science & Technology Congress" was held at Presidency University, Kolkata. In this forum, JBNSTS had the responsibility to conduct model presentation program by school students and quiz competition for school students.

Three counters had been allotted for JBNSTS. One of them was occupied by displays/posters of JBNSTS. Lots of visitors/participants of the congress including dignitaries interacted with JBNSTS people and they came to know about various activities of JBNSTS including Junior and Senior Talent search Test.

Rest two counters were engaged with two groups of school students with their displays and science models. The following is the details of their models:

Model-1: *Evolution of Astronomical Instruments*

Participants: 1. Soham Chattopadhyay and 2. Tanmay Chanda

Model-2: *Modern technique for better Irrigation & Cultivation*

Participants: 1. Shreyam Das and 2. Shatabda Chaudhury

All the students along with escort teacher were from Hooghly Collegiate School.

JBNSTS also organized a Science Quiz for students of class IX/X during 2:30 p.m. to 5:00 p.m. on 28th February, 2016 as a part of this congress. Forty-three students from thirteen schools participated in this quiz program which was conducted by two quiz masters - Shri Chirantan Roy and Shri Tirtham Mukherjee from IEST, Shibpur. There were several rounds such as elimination, final dry, audio visual, the challenger and rapid snakes and ladder in this session and finally students of Ballygunge Government High School, Barasat P C S Government High School and Baruipur High School secured the first, second and third position respectively. The students of the respective schools were awarded a prize money.

March 2016

01/03/ - 04/03/16: WB-DST Teachers' Training Workshop for middle school teachers' (38) held at JBNSTS, Kolkata.

Inaugural lecture by Shri G S Rautela, Director General (H.Q.), National Council of Science Museums

Interaction with the teachers regarding the concept & objective of the program: Professor Maitree Bhattacharyya, Director, JBNSTS, Dr. Abhijit Kar, Scientific Officer and Dr. Smarajit Manna, Student Advisor, JBNSTS

Speakers:

- (1) ***"Introductory remarks on science pedagogy NCF comments & NCERT learning indicators"*** by Dr. Subhra Chatterjee & Dr. Atanu Sain, Vikramshila Education Resource Society, Kolkata
- (2) ***"Science Teacher' Training Overview"*** by Prof. Dhrubojyoti Chattopadhyay, Amity University, Kolkata
- (3) ***"Principles of physics & concept of analogies, assumptions and modeling"*** by Dr. Bhupati Chakraborty, City College (Retd), Kolkata
- (4) ***"Demonstrating classroom teaching skill related to biological science"*** by Dr. Subir Nag, St. Xavier's College, Kolkata
- (5) ***Interaction with the teachers to understand their problems: discussion on polynomials and equations, mathematical computation, algebra meets geometry, number systems and geometry"*** by Dr. Sumitra Purkayastha, Indian Statistical Institute, Kolkata and Dr. Sourav Sengupta, Indian Statistical Institute, Kolkata
- (6) ***"Activity based teaching of chemistry – fundamental principles and problem formulation"*** by Shri Santosh Kr. Mitra, BITM (Retd.), Kolkata
- (7) ***"Photosynthesis : air to starch"*** by Dr. Sarmistha Raychaudhury, University of Calcutta, Kolkata
- (8) ***"Concept development, problem solving"*** by Dr. Partha Karmakar, Muragacha Government College, Muragacha, Nadia
- (9) ***"Enhancing public understanding of science : role of science museum in India & abroad"*** by Dr. Jayanta Sthanpati, Formerly National Council of Science Museum, Kolkata
- (10) Lecture by Dr. Rajendra N. Basu, CGCRI, Kolkata
- (11) Valedictory session by Professor Amitava Raychaudhury, University of Calcutta, Kolkata

09/03/ – 12/03/16: West Bengal District Students' Science Workshop (WBDS) supported by Department of Higher Education, Government of West Bengal for middle school students (52) from 3 selected schools (Basirhat Town School, Basirhat, Guptipara High School, North 24 Parganas and Dwarbasini Girls High School, Hooghly) held at JB Centre of Excellence.

Speakers:

Session on Life Science by

1. Dr. Chaitali Mukherjee, Santoshpur Rishi Aurobindo Balika Vidyapith, Kolkata



2. Dr. Mrinal Mukherjee, Bankura University, Batanagar High School, Kolkata
3. Shri Arup Sengupta, Garfa DNM High School, Kolkata
4. Dr. Sharmistha Bhattacharya, Ananda Ashram Balika Vidyalaya, Kolkata

Session on Mathematics by

1. Shri Subir Bhattacharya, Dum Dum Kishore Bharati High School, Kolkata
2. Shri Siddhartha S Chattopadhyay, Bidhannagar Government High School, Kolkata

Session on Physical Science by

1. Dr. Samir Dutta, Formerly of Indian Institute of Chemical Biology, Kolkata
2. Dr. Goutam Basu, Bose Institute, Kolkata
3. Shri Saptarshi Mondal, Tangrakhali High School, South 24 Parganas
4. Shri Pintu Kr. Sinha, Katwa Kasiram Das Institution, Burdwan

15/03/ - 19/03/2016: DST — Inspire Internship Science Camp in association with JBNSTS entitled 'Learning Science' for Class XI science students (100) 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) ***“Contractibility – An old Enigma”*** by Dr. Parthasarathi Mukhopadhyay, R K Mission Residential College, Narendrapur, Kolkata
- (3) ***“Let's improve your research aptitude – do some active research”*** by Dr. Abhijit Kar and Dr. Smarajit Manna, JBNSTS, Kolkata
- (4) ***“Evolution of life and the role of chemistry”*** by Dr. Abhishek Dey, Indian Association for the Cultivation of Science, Kolkata
- (5) ***“Curiosity – A miracle that survives formal education!”*** by Dr. Sujoy Ghosh, Institute of Post Graduate Medical Education and Research, Kolkata
- (6) ***“Science Experiments: a different approach”*** by Shri Samar Bagchi, Kishore Bharati Development Society, Kolkata
- (7) ***“Plate tectonics and Earthquake”*** by Dr. Santanu Bose, University of Calcutta, Kolkata
- (8) ***“Targeted Drug Delivery”*** by Dr. Pijush Kanti Das, Indian Institute of Chemical Biology, Kolkata
- (9) ***“How we defend ourselves against intruding pathogens : Our own immune system”*** by Dr. Anindita Ukil, University of Calcutta, Kolkata
- (10) ***“Puzzles and Magic with Mathematics”*** by Dr. Arnab Chakraborty, Indian Statistical Institute, Kolkata

An academic visit was organized for the participants of the Science Camp at “Centre for Research in Nanoscience and Nanotechnology”, Calcutta University, Salt Lake Campus, Kolkata.

May 2016

17/05/ - 21/05/2016: DST — Inspire Internship Science Camp in association with JBNSTS entitled 'Learning Science' for Class XI science students (133) of West Bengal, held at JB-Centre of Excellence, Kolkata.

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

Speakers & Lectures:

- (1) ***"The Voice of the Cosmos – Einstein and the gravitational wave"*** by Dr. Soumitra Sengupta, Indian Association for the Cultivation of Science, Kolkata
- (2) ***"Let's improve your research aptitude – do some active research"*** by Dr. Abhijit Kar and Dr. Smarajit Manna, JBNSTS, Kolkata
- (3) ***"LASER and its applications in light – induced reactions"*** by Dr. Samita Basu, Saha Institute of Nuclear Physics, Kolkata
- (4) ***"Natural and acquired resistance to infection"*** by Dr. Bhaskar Saha, National Centre for Cell Science, Pune
- (5) ***"Science Experiments: a different approach"*** by Shri Samar Bagchi, Kishore Bharati Development Society, Kolkata
- (6) ***"Chemical sensing of ions and its clinical application"*** by Dr. Pradyut Ghosh, Indian Association for the Cultivation of Science, Kolkata
- (7) ***"Genetics and precision medicine"*** by Dr. Sanghamitra Sengupta, University of Calcutta, Kolkata
- (8) ***"Puzzles and magic with mathematics"*** by Dr. Arnab Chakraborty, Indian Statistical Institute, Kolkata

Participants of the science camp visited at BITM, Kolkata.

June 2016

08/06/ - 11/06/2016: Workshop for JBNSTS Junior Scholars (83) of batch 2015 held at JB-Centre of Excellence, Kolkata.

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

Speakers:

1. ***"Nano-Science and Technology: Promises, Expectations and Challenges"*** by Dr. G. P. Das, Indian Association for the Cultivation of Science, Kolkata
2. ***Activity Session at JBNSTS Laboratory*** by Dr. Smarajit Manna and Dr. Abhijit Kar, JBNSTS
3. ***"Quest for the origin of elements"*** by Dr. Amit Roy, Variable Energy Cyclotron Centre, Kolkata
4. ***Lecture on Physics*** by Dr. Soumitra Sengupta, Indian Association for the Cultivation of Science, Kolkata
5. ***"The mystery of the prime"*** by Dr. Ritabrata Munshi, Indian Statistical Institute, Kolkata



6. **“Science beyond boundaries: Can we break the self-imposed glass barriers?”** by Dr. Siddhartha Roy, Bose Institute, Kolkata
7. **“Magic bit by bit”** by Dr. Arnab Chakraborty, Indian Statistical Institute, Kolkata
8. **“Chemistry: beyond the boring classroom lectures”** by Dr. Sambuddha Banerjee, Amity Institute of Applied Science, Amity University, Kolkata
9. **Motivational lecture on Medical Science** by Dr. Babatosh Biswas, Vice Chancellor, The West Bengal University of Health Science
10. **“Chemistry through interface probed by fluorescence”** by Dr. Samita Basu, Saha Institute of Nuclear Physics, Kolkata
11. **Motivational lecture on Engineering science** by Dr. Madhumita Roy, Director, Amity School of planning and Architecture, Amity University, Kolkata
12. Pandit Anindya Bandopadhyay, a renowned musician of Kolkata shared his experience and interacted with the participating scholars regarding the process of nurturing different creative faculties.

20/06/ - 24/06/2016: 1200 Students (Class VIII) appeared for **WBDS Baseline Test** at the following 10 centres.

(1) Khansaheb Abad High School, Sagar, South 24 Parganas (2) Suri Public and Chandraghati Mustafi Memorial High School, Suri, Birbhum, (3) Birbhum Zilla High School, Suri, Birbhum (4) Janapriyanagar Janapriya Vidyalaya, Basanti, South 24 Parganas (5) Nalhati Hariprasad High School, Nalhati, Birbhum (6) Kakdwip Birendra Vidyaniketan High School, Kakdwip, South 24 Parganas (7) Ghutiarisharif B. M. Vidyapith, Bansra, South 24 Parganas (8) Eklavya Model Residential School, Jhargram, West Mednipur, (9) Jhargram Kumud Kumari Institution, Jhargram, West Mednipur (10) Rani Binode Manjari Government Girls' School, Jhargram, West Mednipur.

26/06 – 29/06/2016: Residential Teachers Science Workshop under the JBNSTS WBDS Program held at JB-Centre of Excellence for middle school teachers (31) from 10 selected schools (Janapriyanagar Janapriya Vidyalaya, Basanti, South 24 Parganas, Khansaheb Abad High School, Sagar, South 24 Parganas, Ghutiarisharif B. M. Vidyapith, Bansra, South 24 Parganas, Kakdwip Birendra Vidyaniketan (H.S.), Kakdwip, South 24 Parganas, Birbhum Zilla School, Suri, Birbhum, Nalhati Hariprasad High School, Nalhati, Birbhum, Suri Public and Chandraghati Mustafi Memorial High School, Suri, Birbhum, Eklavya Model Residential School, Jhargram, West Midnapur, Jhargram Kumud Kumari Institution, Jhargram, West Midnapur, Rani Binode Manjari Government Girls' School, Jhargram, West Midnapur).

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

Speakers:

- (1) Interaction Session on Mathematics by Dr. Parthasarathi Mukherjee, R K M Residential College, Narendrapur, Kolkata
- (2) Interactive session on Mathematics by Dr. Subrata Biswas, SCERT, Kolkata
- (3) Interactive session on Physical Sciences by Dr. Satyajit Kar, RK Mission, Belur Math, Howrah
- (4) Interactive Session on Life Science by Dr. Subir Nag, St. Xavier's College, Kolkata

- (5) Interactive session on Life Science by Dr. Mrinal Mukherjee, Batanagar High School, Kolkata
- (6) Interactive session on Life Science by Dr. Chaitali Mukherjee, Santoshpur Rishi Aurobindo Balika Vidyapith, Kolkata
- (7) Interactive session on Mathematics by Shri Siddhartha S Chattopadhyay, Bidhannagar Govt. High School, Kolkata
- (8) Interactive session on Physical Science by Dr. Arati Mukhopadhyay, Howrah Jogesh Chandra Girls' School, Howrah
- (9) Interactive session on Life Science by Dr. Punarbasu Chaudhuri, Calcutta University, Kolkata
- (10) Interactive session on Life Science by Dr. Sharmistha Bhattacharya, Ananda Ashram Balika Vidyalaya, Kolkata
- (11) Interactive session on Life Science by Shri Arup Sengupta, Garfa, DNM High School, Kolkata
- (12) Interactive session on Life Science by Smt. Sudipta Chaudhuri, Sujata Devi Vidyamandir, Kolkata
- (13) Interactive session on Mathematics by Shri Subir Bhattacharya, Dum Dum Kishore Bharati School, Kolkata
- (14) Interactive session on Physical Science by Shri Pintu Kr. Sinha, Katwa Kasiram Das Institution, Burdwan
- (15) Interactive session on Physical Science by Shri Saptarshi Mondal, Tangrakhali High School, South 24 Parganas.
- (16) Interactive session on Mathematics by Smt. Anupama Sengupta, Science Communicators Forum, Kolkata

July 2016

01/07 – 09/07/2016: WBDS Science Project Competition held at the following schools :

(1) Dwarbasini Girls' High School, Pandooah, Hooghly, (2) Guptipara High School, Guptipara, Hooghly, (3) Basirhat Town High School, Basirhat, South 24 Parganas. (Students from Rameshwarpur Union Adarsha Vidyalaya, Hasnabad, South 24 Parganas also participated in the program at Basirhat Town High School) (4) Sundarban Adarsha Vidyaniketan, Basanti, South 24 Parganas, (5) Sundarban Adarsha Vidyamandir, Kakdwip, South 24 Parganas, (6) Dhahlat Lakshman Parabesh High School, Sagar, South 24 Parganas, (7) Uttar Rabindra Nagar Vivekananda High School, Dum Dum, Kolkata, (8) Gurudaspur Mahendra Indra Vidyamandir, Patharpratima, South 24 Parganas.

24/07/2016: 57th Senior Talent Search Test: 1252 undergraduate science students applied for STST examination and 794 students appeared for the test from West Bengal at the following 25 examination centres:

(1) A B N Seal College, Coochbehar, (2) Balurghat College, South Dinajpur (3) Bankura Sammilani College, Bankura, (4) Barrackpore Rastraguru Surendranath College, North 24 Parganas,



(5) Burdwan Raj College, Burdwan, (6) Fakir Chand College, South 24 Parganas, (7) Hooghly Mohsin College, Hooghly, (8) J K College, Purulia, (9) Jadavpur University, Kolkata, (10) Krishnanagar Government College, Nadia, (11) Krishnath College, Murshidabad (12) Malda College, Malda, (13) Midnapore College, Midnapore, (14) Motijhill College, Dum Dum, Kolkata, (15) Muragachha Government College, Nadia, (16) Narasinha Dutta College, Howrah, (17) NSHM Knowledge Campus, Durgapur, (18) Prabhat Kumar College, Contai, East Midnapore, (19) Presidency University, Kolkata, (20) Raiganj Surendranath Mahavidyalaya, North Dinajpur, (21) R K Mission Vidyamandira, Belur Math, Howrah, (22) R K Mission Residential College, Narendrapur, South 24 Parganas, (23) Siliguri College, Darjeelling (24) Vidyasagar College, Kolkata, (25) Visva Bharati University, Shantiniketan, Birbhum

24/07/2016: 2nd Junior Talent Search Test : 3675 Science students (Class XI) applied for JTST examination and 3146 students from West Bengal appeared for the test at the following 25 centres.

(1) A B N Seal College, Coochbehar, (2) Balurghat College, South Dinajpur, (3) Bankura Sammilani College, Bankura, (4) Barrackpore Rastraguru Surendranath College, North 24 Parganas, (5) Burdwan Raj College, Burdwan, (6) Ekalavya Model Residential School, Jhargram, West Midnapore, (7) Fakir Chand College, South 24 Parganas, (8) Hooghly Mohsin College, Hooghly, (9) J K College, Purulia, (10) Jadavpur University, Kolkata, (11) Krishnanagar Government College, Nadia, (12) Krishnath College, Murshidabad, (13) Malda College, Malda, (14) Midnapore College, West Midnapore, (15) Motijhill College, Dum Dum, Kolkata, (16) Muragachha Government College, Nadia, (17) Narasinha Dutta College, Howrah, (18) NSHM Knowledge Campus, Durgapur, (19) Prabhat Kumar College, Kontai, East Midnapore, (20) R K Mission Residential College, Narendrapur, South 24Parganas, (21) R K Mission Vidyamandira, Belur Math, Howrah, (22) Raiganj Surendranath Mahavidyalaya, North Dinajpur, (23) Siliguri College, Darjeeling, (24) Vidyasagar College, Kolkata, (25) Visva Bharati University, Shantiniketan, Birbhum.

28/07 – 01/08/2016: “WBDS Students Science Workshop” supported by Department of Higher Education, Government of West Bengal for middle school students (51) from 2 selected schools (Rani Binod Monjari Girls High School, Midnapore and, Suri Govt. Zilla High School, Birbhum), held at JB-Centre of Excellence, Kolkata.

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

Inauguration lecture by Dr. Sanghamitra Sengupta, University of Calcutta, Kolkata

Speakers:

Life science session by

1. Dr. Mrinal Mukherjee, Nangi High School, South 24 Parganas and
2. Dr. Chaitali Mukherjee, Santoshpur Rishi Aurobindo Balika Vidyapith, Kolkata

Laboratory Session by

1. Dr. Abhijit Kar, JBNSTS, Kolkata
2. Dr. Smarajit Manna, JBNSTS, Kolkata
3. Dr. Arnab Pramanik, Calcutta University, Kolkata
4. Dr. Pijush Basak, Calcutta University, Kolkata
5. Dr. Satabdi Banerjee, Calcutta University, Kolkata

Physical science session by

1. Shri Pintu Kr. Sinha, Katwa Kasiram Das Institution, Burdwan
2. Shri Saptarshi Mondal, Tangrakhali High School, South 24 Parganas

Mathematics session by

Shri Siddhartha S Chattopadhyay, Bidhannagar Govt. High School, Kolkata

Participants of the WBDS Program visited at Birla Industrial and technological Museums, Kolkata

August 2016

09/08/ - 13/08/2016: DST — Inspire Internship Science Camp in association with JBNSTS entitled 'Learning Science' for Class XI science students (116) 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 in the eyes of an inorganic chemist"** by Dr. Somdatta Ghosh, Indian Association for the Cultivation of Science, Kolkata
- (2) **"Let's improve your research aptitude – do some active research"** by Dr. Abhijit Kar and Dr. Smarajit Manna, JBNSTS, Kolkata
- (3) **"The story of calculus"** by Dr. Parthasarathi Mukhopadhyay, R K Mission Residential College, Narendrapur, Kolkata
- (4) **"Technical write-up session"** by Dr. Gitanjali Sundaram and Dr. Anindita Ukil, University of Calcutta, Kolkata
- (5) **"Collective organization: emergent behavior in physical systems"** by Dr. Argha Taraphder, Indian Institute of Technology, Kharagpur
- (6) **"Site-specific drug targeting : magic bullet approach"** by Dr. Pijush Kanti Das, Indian Institute of Chemical Biology, Kolkata
- (7) **"Laser : basic principles and applications"** by Dr. Samita Basu, Saha Institute of Nuclear Physics, Kolkata
- (8) **"Exploration Antarctica : adventure and science"** by Dr. B B Bhattacharya, S N Bose National Centre for Basic Sciences, Kolkata
- (9) **"Science, technology and nation building"** by Dr. Ajaya Ghosh, National Institute for Interdisciplinary Science and Technology (NIIST), Trivandrum
- (10) **"Origin of life"** by Dr. Dhruvajyoti Chattopadhyay, Amity University, Kolkata
- (11) **Project presentation** by the participants – Judges: Dr. Debajyoti Ghoshal, Jadavpur University, Kolkata and Dr. Soumen Basak, Saha Institute of Nuclear Physics, Kolkata

Participants of the science camp visited at Centre for Research in Nanoscience & Nanotechnology (CRNN), Salt Lake Campus, Kolkata

30/08 – 03/09/2016: "WBDS Students Science Workshop" supported by Department of Higher Education, Government of West Bengal for middle school students (54) from 2 selected schools



(Ekalavya Model School, Jhargram, West Midnapore and Janapriyanagar High school Basanti, South 24 Parganas), held at JB-Centre of Excellence, Kolkata.

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

Inaugural lecture by Dr. Punarbasu Chaudhuri, Calcutta University, Kolkata.

Speakers:

Life science session by

1. Shri Araup Sengupta, Garfa DNM High School, Kolkata
2. Smt. Sudipta Choudhury, Sujata Devi Vidyamandir, Kolkata

Laboratory Session by

1. Dr. Abhijit Kar, JBNSTS, Kolkata
2. Dr. Smarajit Manna, JBNSTS, Kolkata
3. Dr. Arnab Pramanik, Calcutta University, Kolkata
4. Dr. Pijush Basak, Calcutta University, Kolkata
5. Dr. Satabdi Banerjee, Calcutta University, Kolkata

Physical science session by

1. Dr. Arati Mukhopadhyay, Howrah Jogesh Chandra Girls' School, Howrah
2. Shri Pintu Kr. Sinha, Katwa Kasiram Das Institution, Burdwan

Mathematics session by

Shri Subir Bhattacharya, Dum Dum Kishore Bharati School, Kolkata

Participants of the WBDS Program visited at Birla Industrial and Technological Museums, Kolkata

September 2016

05/09 – 09/09/2016: “WBDS Students Science Workshop” supported by Department of Higher Education, Government of West Bengal for middle school students (55) from 2 selected schools (Jhargram Kumud Kumari Institution and Suri Public and CM High School), held at JB-Centre of Excellence, Kolkata.

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

Inaugural lecture by Dr. Punarbasu Chaudhuri, Calcutta University, Kolkata, and Dr. Satabdi Banerjee, Calcutta University, Kolkata.

Life science session by

1. Smt. Sharmistha Bhattacharjee, Ananda Ashram Balika Vidyalaya, Kolkata
2. Dr. Chaitali Mukherjee, Santoshpur Rishi Aurobindo Balika Vidyapith, Kolkata

Laboratory Session by

1. Dr. Abhijit Kar, JBNSTS, Kolkata
2. Dr. Smarajit Manna, JBNSTS, Kolkata
3. Dr. Arnab Pramanik, Calcutta University, Kolkata

4. Dr. Pijush Basak, Calcutta University, Kolkata
5. Dr. Satabdi Banerjee, Calcutta University, Kolkata

Physical science session by

1. Dr. Arati Mukhopadhyay, Howrah Jogesh Chandra Girls' School, Howrah
2. Shri Pintu Kr. Sinha, Katwa Kasiram Das Institution, Burdwan

Mathematics session by

Mathematics session by Shri Siddhartha S Chattopadhyay, Bidhannagar Govt. High School, Kolkata

Participants of the WBDS Program visited at Birla Industrial and technological Museums

10/09 – 11/09/16: Interview (2nd Phase of Senior Talent Search Test) for short listed (225) students of West Bengal held at JB - Centre of Excellence, Kolkata.

13/09 – 17/09/2016: “WBDS Students Science Workshop” supported by Department of Higher Education, Government of West Bengal for middle school students (60) from 2 selected schools (Khansaheb Abad High School, Sagar, South 24 Parganas and Kakdwip Birendra Vidyaniketan, South 24 Parganas) held at JB-Centre of Excellence, Kolkata.

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

Inaugural lecture by Dr. Shyamal Chakraborty, Calcutta University, Kolkata.

Speakers:

Life science session by

- (1) Shri Arup Sengupta, Garfa DNM High School, Kolkata
- (2) Dr. Sharmistha Bhattacharya, Ananda Ashram Balika Vidyalaya, Kolkata

Laboratory Session by

1. Dr. Abhijit Kar, JBNSTS, Kolkata
2. Dr. Smarajit Manna, JBNSTS, Kolkata
3. Dr. Arnab Pramanik, Calcutta University, Kolkata
4. Dr. Pijush Basak, Calcutta University, Kolkata
5. Dr. Satabdi Banerjee, Calcutta University, Kolkata

Physical science session by

- (1) Dr. Mita Choudhury, Retd. Asansol Girls' College, Asansol
- (2) Smt. Arati Mukhopadhyay, Howrah Jogesh Chandra Girls' School, Howrah

Mathematics session by Smt. Anupama Sengupta, Science Communicators Forum, Kolkata

Participants of the WBDS Program visited at Birla Industrial and Technological Museums, Kolkata

19/09 – 20/09/16: Teachers' Training Program: Held at JB-Centre of Excellence, Kolkata for teachers (57) of different schools of West Bengal

Welcome address was given by Prof. Maitree Bhattacharyya. Director, JBNSTS, Kolkata

**Speakers:**

- (1) Interactive lecture by Prof. Siddhartha Sen, School of Physics, Trinity College, Dublin, Ireland
- (2) Interactive lecture by Prof. Kallol Pal, Jadavpur University, Kolkata
- (3) Interactive lecture by Prof. Partha Karmakar, Muragachha Government College, Nadia
- (4) Interactive lecture by Prof. Partha Sarathi Mukhopadhyay, R K Mission Residential College, Narendrapur, Kolkata

24/09 – 25/09/16: Scientific Creativity Test (3rd and final Phase of Senior Talent Search Test) for short listed (80) undergraduate science students of West Bengal held at JB - Centre of Excellence, Kolkata.

26/09 – 29/09/2016: “WBDS Students Science Workshop” supported by Department of Higher Education, Government of West Bengal for middle school students (46) from 2 selected schools (Nalhati Hariprasad High School, irbhum and Ghutiarisharif G M Vidyaniketan, South 24 Parganas) held at JB-Centre of Excellence, Kolkata.

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

Speakers:

Life science session by

- (1) Dr. Mrinal Mukherjee, Nangi High School, South 24 Parganas
- (2) Dr. Chaitali Mukherjee, Santoshpur Rishi Aurobindo Balika Vidyapith, Kolkata

Laboratory Session by

1. Dr. Abhijit Kar, JBNSTS, Kolkata
2. Dr. Smarajit Manna, JBNSTS, Kolkata
3. Dr. Arnab Pramanik, Calcutta University, Kolkata
4. Dr. Pijush Basak, Calcutta University, Kolkata
5. Dr. Satabdi Banerjee, Calcutta University, Kolkata

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

Physical science session by

- (1) Shri Pintu Kumar Sinha, Katwa Kasiram Das Institution, Burdwan
- (2) Shri Saptarshi Mondal, Tangrakhali High School, South 24 Parganas

Mathematics session by

- (1) Smt. Arundhati Mukherjee, Gokhale Memorial School, Kolkata and
- (2) Mr. Abdul Halim Seikh, Ramakrishna Ashram Institute, Baruipur, South 24 Parganas

Participants of the WBDS Program visited at Birla Industrial and Technological Museums, Kolkata

October 2016

01/10/ - 05//10/2016: DST — Inspire Internship Science Camp in association with JBNSTS entitled 'Learning Science' for class XI science students (126) 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) ***"Anker dhnadha ityadi"*** by Dr. Arnab Chakraborty, Indian Statistical Institute, Kolkata
- (3) ***"Let's improve your research aptitude – do some active research"*** by Dr. Smarajit Manna and Dr. Abhijit Kar, JBNSTS, Kolkata
- (4) ***"The Story of Calculus"*** by Dr. Parthasarathi Mukhopadhyay, R K Mission Residential College, Narendrapur, Kolkata
- (5) Technical Write-up Session by Dr. Rajat Banerjee and Dr. Anindita Ukil, Calcutta University, Kolkata
- (6) ***"Einstein and Gravitation: the voice of the Black holes and the Universe"*** by Dr. Soumitra Sengupta, Indian Association for the Cultivation of Science, Kolkata
- (7) ***"Nanoscience : the Idiosyncratic Thinking, Tiny Machine and the Missing Link"*** by Dr. Dulal Senapati, Saha Institute of Nuclear Physics, Kolkata
- (8) ***"Essential Dance of Life and Its Crucial Measurement Strategies"*** by Dr. Samir Kumar Pal, SN Bose National Centre for Basic Sciences, Kolkata
- (9) ***"Disaster Mitigation : Use of Modern Technology"*** by Dr. Kalyan Kumar Bhar, Indian Institute of Engineering Science and Technology, Shibpur, Howrah
- (10) Motivational Lecture by Dr. Siddhartha Sen, Trinity College, Dublin, Ireland
- (11) ***"What makes the Sun shine?"*** by Dr. Amit Roy, Variable Energy Cyclotron Centre, Kolkata
- (12) ***"Making sense of junk DNA"*** by Dr. Sanghamitra Sengupta, Calcutta University, Kolkata
- (13) ***Project presentation session for participating students:*** Judges were : Dr. Soumen Basak, Saha Institute of Nuclear Physics, Kolkata and Dr. Debasis Das, Calcutta University, Kolkata

22/10 – 23/10/16: Interview (2nd and final Phase of Junior Talent Search Test) for short listed (296) class XI science students of West Bengal held at JB - Centre of Excellence, Kolkata.

25/10/2016: One day Seminar: ***"Day of Photonics"*** jointly organized by Vigyan Prasar, Department of Science & Technology, Government of India and Jagadis Bose National Science Talent Search held at JB-Centre of Excellence, Kolkata.

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

Speakers:

- (1) Inaugural lecture by Dr. K Muraleedharan, Director, Central Glass & Ceramic Research Institute, Kolkata



- (2) Invited lecture by Mr. Rintu Nath, Scientist, Vigyan Prasar, Department of Science & Technology, Delhi
- (3) Invited lecture Dr. Samita Basu, Saha Institute of Nuclear Physics, Kolkata
- (4) Invited lecture by Dr. Abhijit Kar, Scientific Officer, JBNSTS, Kolkata
- (5) Quiz competition conducted by Dr. Manas Pratim Das, Program Executive, All India Radio, Kolkata

November 2016

05/11 – 06/11/2016: Two days seminar entitled “Those Who Make Us Proud” for JBNSTS senior scholars (69) of batch 2015 and 2016 held at JB-Centre of Excellence, Kolkata

Speakers:

- 1) **“A Journey towards molecular understanding of life”** by Dr. Suvendra N. Bhattacharyya, Indian Institute of Chemical Biology, Kolkata
- 2) Motivational lecture by Dr. Nibaran Gangopadhyay, Nayan Tara Eye Care & Clinics, Kolkata
- 3) Motivational lecture by Prof. Bimal Kumar Roy, Indian Statistical Institute, Kolkata
- 4) **“Crystallography in our Daily Life”** by Dr. Chilla Malla Reddy, IISER, Kolkata

Interaction with JB-Scholars by the following eminent creative personalities:

- (1) Shri Prabuddha Raha, Singer, Kolkata
- (2) Shri Debashis Deb, Cartoonist and Illustrator, ABP, Kolkata
- (3) Ms. Alokanda Roy, Dancer, Kolkata

“Success is not final, failure is not fatal:
it is the courage to continue that counts.”

— **Winston S. Churchill**

Shri Neelabja Chatterjee, Senior JBNSTS Scholar of batch 2010, is currently pursuing Ph.D at University of Oslo, Norway.

Shri Sthitadhi Maiti, Senior JBNSTS Scholar of batch 2011, joined in the Ph.D. program in Chemistry at Arizona State University, USA.

Ms. Apala Chaudhuri, Senior JBNSTS Scholar of batch 2011, is currently pursuing Ph.D at Yale University, USA.

Shri Rahul Mallik, Senior JBNSTS Scholar of batch 2011, is pursuing Masters of Electrical Engineering at Indian Institute of Science, Bangaluru.

Shri Subhajit Dasgupta, Senior JBNSTS Scholar of batch 2011, has qualified CSIR NET in life sciences with rank 18, GATE in Biotechnology with all India rank 2. He is currently enrolled as a graduate student at UT Southwestern Medical Center, Dallas Texas, USA.

Shri Pratim Guha Niyogi, Senior JBNSTS Scholar of batch 2011, is currently studying at Department of Statistics and Probability at Michigan State University, MI, USA. Pratim has also been selected for Debesh-Kamal Scholarship for higher studies from The Ramakrishna Mission Institute of Culture, Golpark, Kolkata for the academic year 2016-2017.

Shri Samprit Ghosh, Senior JBNSTS Scholar of batch 2011, have joined the Department of Mathematics in University of Toronto, Canada, as a PhD student.

Shri Rajorshi Paul, Scholar of the Batch 2012, graduated from IIT Kharagpur with Dr. Bidhan Chandra Roy Memorial Gold Medal for the best all-round performance among graduating B.Tech. students this year. He has recently won the Medury Bhanumurthy Memorial prize (Best performance in Extra-curricular activities among all graduating students from IIT Kharagpur. He got the opportunity to join University of Alberta for his Masters degree in Mechanical Engineering on full scholarship. His research paper titled "Experimental investigation on the Electro hydrodynamic motion and Shape Deformation of a sedimenting Drop under Uniform Alternating Electric Field" was presented at the Joint Electrostatics Conference 2016 at the Purdue University, USA.

Shri Sudhakantha Girmohanta, Senior JBNSTS Scholar of batch 2012, currently pursuing his Masters in Physics at IIT Guwahati. He has been awarded with Jadav Prasad Chahila Award for academic excellence in 2016 for being the topper of 1st and 2nd semester in Physics.

Shri Sayantan Dutta, Senior JBNSTS Scholar of batch 2013, selected for prestigious S N Bose scholars' program this year and had the opportunity for the internship programme in The University of Texas, Austin.

Shri Avilash Mukherjee, Senior JBNSTS Scholar of batch 2013, has an accepted research paper in VLSI Design Conference 2017, named "Ultra Low Power Sensor Node for Security Applications, Facilitated by Algorithm-Architecture Co-Design".

Prof. Papiya Nandy, a first batch JBNSTS Senior scholar, was elected as a Fellow of the National Academy of Science, India, Allahabad.

A. SCHOLARS RESERVE FUND

i) Donations (General)

1 Armenian Holy Church of Nazareth	121,500.00	
2 MP Birla Smarak Kosh (South Point)	108,000.00	
3 Luxmi Charitable Trust	13,500.00	
4 Daulat Ram Mehndiratta Charitable Trust	27,000.00	
5 Mayukh Mitter Foundation	54,000.00	324,000.00

B. DEVELOPMENT FUND

i) Donation - Corpus

Shri Anirban Bhattacharyya (Scholar- 2011 batch)	1,000.00	
		1,000.00

C. LABORATORY FUND

i) Donation - Corpus

1 Dr.Somenath Bhattacharyya	3,500.00	
2 Shri Sarnab Bhattacharyya (Scholar - 2012 batch)	2,678.00	6,178.00

ii) DONATION (General)

1 Dr. Madhumita Dobe	1,500.00	
2 Dr.Bhabatosh Biswas	2,000.00	
3 Shri Anwesh Majumder (Scholar -2014 batch)	2,000.00	
4 Shri Soumya Roy (Scholar - 2014 batch)	2,000.00	
5 Shri Saugata Paul (Scholar- 2014 batch)	2,000.00	
6 Shri Durbadal Ghosh (Scholar - 2014 batch)	2,000.00	
7 Shri Biswarup Roy (Scholar - 2014 batch)	2,000.00	
8 Ms.Soumi Mukherjee (Scholar - 2014 batch)	2,000.00	
9 Shri Aritra Krishna De (Scholar - 2014 batch)	2,000.00	
10 Shri Anirban Mukhopadhyay (Scholar - 2014 batch)	2,000.00	
11 Shri Souvik Bhattacharya (Scholar - 2014 batch)	2,000.00	
12 Ms Saptarashmi Bandyopadhyay (Scholar - 2014 batch)	2,000.00	
13 Shri Writobroto Naharoy (Scholar - 2014 batch)	2,000.00	
14 Ms. B Smriti (Scholar - 2014 batch)	2,000.00	
15 Shri Sudipta Rakshit (scholar - 2014 batch)	2,000.00	
16 Shri Ketan Agarwal (Scholar - 2014 batch)	2,000.00	
17 Shri Abhinanda Kar (Scholar - 2014 batch)	2,000.00	
18 Shri Babhrubahan Bose (Scholar - 2014 batch)	2,000.00	
19 Shri Spandan Chowdhury (Scholar - 2014 batch)	2,000.00	37,500.00

HAPPY MOMENTS



THE JBNSTS FUNDS AND ACCOUNTS



Financial Report

The JBNSTS is happy to report a period of steep growth during which receipts exceeded all previous levels. The largest receipt was from the Department of Higher Education, Govt. of West Bengal. The funds of the institution came from multiple sources which reflect its image of high physical accountability of the expenditure and it is inevitable that during a year all the sponsors may not have been forthcoming with their assistance to our best advantage.

Apart from regular sanction of grant for maintenance, the Department of Higher Education, Govt. of West Bengal, in the year 2015-16, funded significant amounts for Innovation Centre at JBNSTS and renovation of existing Building. The receipt from the Department of Higher Education, Government of West Bengal for regular maintenance was increased to meet staff salaries and Office & Programme expenses. They sanctioned for West Bengal District Scheme almost three times more in comparison to the last year's sanction, which have been translated into the service of remote village schools including jungle mahal.

The Department of Science and Technology, Govt. of West Bengal also sanctioned funds for Junior Talent Search Test and Teacher Training Programme, which have great impact. 125 Scholarships for Junior Scholars have been fixed at Rs 1000/- per month with a book grant of Rs 2000/-per year.

The DST, Govt. of India and CSIR, Govt. of India also sanctioned their recurring grants for Science Camp and Talent Enrichment Programme respectively.

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

- | | | | |
|--|-----------------------------------|--------------------|-------------------|
| A. Department of Higher Education, Govt. of West Bengal : | | | |
| ● | construction of innovation centre | Rs. 2,25,26,086.00 | |
| ● | renovation of existing building | Rs. 78,43,312.00 | |
| ● | development of infrastructure | Rs. 21,34,000.00 | |
| ● | maintenance grant | Rs. 1,61,69,027.00 | |
| ● | West Bengal District Scheme | Rs. 17,50,000.00 | |
| ● | Scholarship scheme | Rs. 36,00,000.00 | Rs. 5,40,22,425/- |
| B. Department of Science & Technology, Govt. of West Bengal: | | | |
| ● | establishment of Science corner | Rs. 5,00,000.00 | |
| ● | Junior Talent Search Test Program | Rs. 38,57,000.00 | |
| ● | Teacher Training Program | Rs. 30,49,935.00 | Rs. 74,06,985/- |
| C. Department of Youth services, Govt. of West Bengal
(for Science fair) | | | Rs. 1,50,000/- |



D. Department of Science & Technology, Govt. of India (for Science Camp)	Rs. 37,78,375/-
E. Council of Scientific & Industrial Research, Govt. of India (for Talent Enrichment Programme)	Rs. 5,00,000/-
F. Department of Health & Family Welfare, Govt. of West Bengal (for Senior Scholarship Scheme)	Rs. 1,17,000/-

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

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, 2016 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.

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

4.1. In course of our physical verification of Fixed Assets, we have come across a few items thereof, which have been marked as 'Scrap'. Albeit, said fact was also pointed out by the previous auditor alongwith the fact of the Management's tentative assertions about writing off those impaired assets from the books of accounts of the Society, yet no such accounting treatment has been found effected during the year. Thus, the absence of any suitable valuation of these scrapped assets as well as the resultant 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. Non-provision of liabilities towards Gratuity payable to employees 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.

5. 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, 2016; 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 28th September, 2016

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

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

**JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH**

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

BALANCE SHEET AS ON 31ST MARCH, 2016

PREVIOUS YEAR		SCHEDULES	CURRENT YEAR	
₹			₹	₹
SOURCES OF FUNDS				
35,642,052.53	Funds	A	72,117,789.77	
3,387,580.07	Liabilities for Unutilised Grants	B	13,279,726.07	
39,029,632.60	TOTAL :			85,397,515.84
APPLICATION OF FUNDS				
13,129,916.04	Fixed Assets	C	20,845,483.80	
24,441,336.00	Investments	D	60,841,455.75	
Net Current Assets -				
4,942,669.06	Current Assets	E	18,511,998.79	
3,484,288.50	Less : Current Liabilities	F	14,801,422.50	
1,458,380.56			3,710,576.29	
39,029,632.60	TOTAL :			85,397,515.84

Signed in terms of our report of even date.

On behalf of the Governing Body

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

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

Sd/-
Shekhar Kumar Pan
 Proprietor
 Membership No. 053883

KOLKATA
 The 28th September, 2016

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, 2016

Previous Year	Particulars	Government of West Bengal					Government of India					Current Year Total	
		Sch. (DHE) - Grants	Deptt. of Higher Edn., (WBDS) - Maint. Grants	West Bengal From DHE	Junior Talent Search Tests (DHE - JTST)	Teachers' Training Programme (DST - TTP)	Ministry of North-East Region (MDONER)	Deptt. of Science & Technology (DST)	Schm. for Early Science & At'rctn of Talent for Science (DST - SEATS)	Talent Enrichment Programme (CSIR)			
	INCOME												
	General :												
9,013,549.00	Grant-in-aid			1,750,000.00	3,507,000.00	3,857,000.00					3,778,375.00	500,000.00	32,611,337.00
	Last year's Surplus / (Deficit) / Unutilized Grant												
3,034,005.20	after adjustment / refund during the year	1,981,657.42	442,178.49							108,311.75	56,786.05	177,188.11	2,766,121.82
2,987,872.02	Liabilities no longer required written back												
8,701.00	Interest earned from Saving Bank Deposits												
15,044,127.22	TOTAL INCOME	18,150,684.42	2,192,178.49	3,507,000.00	3,857,000.00	3,049,935.00	108,311.75	56,786.05	3,778,375.00	677,188.11	35,377,458.82		
	EXPENDITURES												
	General :												
5,360,993.00	Establishment	6,663,536.00											6,663,536.00
4,812,429.00	Programme Expenses	1,271,968.00	1,867,909.00			319,165.00			3,885.00	3,778,375.00	496,615.00	10,325,908.00	
2,084,427.90	Office & Administrative Expenses	5,967,200.78											5,967,200.78
12,257,849.90	TOTAL EXPENDITURES	13,902,704.78	1,867,909.00	2,587,991.00	2,730,770.00	319,165.00	108,311.75	3,885.00	3,778,375.00	496,615.00	22,956,644.78		
2,786,277.32	BALANCE	4,247,979.64	324,269.49	3,507,000.00	1,269,009.00	2,730,770.00		52,901.05			180,573.11	12,420,814.04	
2,786,277.32	Unutilised / (Deficit) Grants - Carried forward	4,247,979.64	324,269.49	3,507,000.00	1,269,009.00	2,730,770.00	108,311.75	52,901.05	-	180,573.11	12,420,814.04		

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/-
Prof. (Dr.) Maitree Bhattacharyya
Director

Sd/-
Shekhar Kumar Pan
Proprietor
Membership No. 053883

KOLKATA
The 28th September, 2016

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, 2016

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 :								
212,500.00	Grants		360,000.00						360,000.00
331,000.00	Donations		349,000.00						349,000.00
1,116,666.75	Interests on Investments		1,396,099.78						1,396,099.78
58,041.00	Liabilities no longer required, written back		-						-
176,816.00	Registration Fees (For Senior / Junior Talent Search Tests)		620,735.00						620,735.00
	- Development Fund :								
500,000.00	Grants			-					-
1,500.00	Donations			-					-
579,843.43	Interests on Investments			603,593.64					603,593.64
	- Interests earned on Savings / Short-term Deposits			1,041,868.75					1,041,868.75
13,311.00	Liabilities no longer required, written back			-					-
	- Laboratory Fund :								
4,000.00	Donations				34,000.00				34,000.00
143,575.73	Interests on Investments				163,754.25				163,754.25
25,000.00	Overhead				-				-
3,150.00	Fees for usage of Laboratory Facilities				20,000.00				20,000.00
	JBNSTS - Own Generation Fund :								
127,050.00	Rent Earned					94,469.00			94,469.00
655,855.10	Accommodation					653,750.00			653,750.00
75,000.00	Overhead					122,000.00			122,000.00
308,243.79	Interests on Investments					325,353.33			325,353.33
	Staff Welfare & Medical Fund :								
37,299.43	Interests on Investments						62,245.41		62,245.41
	Infrastructure Development Fund :								
40,807.37	Interests on Investments							66,753.34	66,753.34
4,409,659.60	TOTAL INCOME		2,725,834.78	1,645,462.39	217,754.25	1,195,572.33	62,245.41	66,753.34	5,913,622.50
	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, 2016 (contd...)

Previous Year	Particulars	Sch.	Scholars' Reserve Fund	Development Fund	Laboratory Fund	JBNSTS-Own Gen. Fund	Staff Welfare & Medical Fund	Infrastructure Development Fund	Total
₹			₹	₹	₹	₹	₹	₹	₹
4,409,659.60	TOTAL INCOME		2,725,834.78	1,645,462.39	217,754.25	1,195,572.33	62,245.41	66,753.34	5,913,622.50
	LESS : EXPENDITURES								
	General -								
1,157,817.00	Scholars' Reserve Fund	J	1,313,776.00						1,313,776.00
648,760.23	Development Fund	K		875,664.65					875,664.65
135,382.97	Laboratory Fund	L			115,038.24				115,038.24
410,315.38	JBNSTS - Own Generation Fund	M				156,381.68			156,381.68
5,430.00	Staff Welfare & Medical Fund	N					NIL		-
	- Infrastructure Development Fund							NIL	-
2,357,705.58	TOTAL EXPENDITURES		1,313,776.00	875,664.65	115,038.24	156,381.68	-	-	2,460,860.57
2,051,954.02	BALANCE		1,412,058.78	769,797.74	102,716.01	1,039,190.65	62,245.41	66,753.34	3,452,761.93
18,884.50	Less : Expenditures made from Govt. Grant, now adjusted with Own Fund			-	-	-	-	-	-
2,033,069.52	Excess of Income over Expenditures, i.e., SURPLUS, transferred to Specific Funds		1,412,058.78	769,797.74	102,716.01	1,039,190.65	62,245.41	66,753.34	3,452,761.93

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 28th September, 2016

JAGADISH 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, 2016

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 Instt. of Asian Studies (MAKAIAS) Dr. Paromita Roy	
₹	Sch.	₹	₹	₹	₹
	INCOME				
	General :				
460,000.00	Grant-in-aid	-	1,080,000.00	333,941.00	1,413,941.00
	Last year's Surplus / (Deficit) /				
89,586.50	Unutilized Grant after adjustment / refund during the year	325,230.00	-	-	325,230.00
549,586.50	TOTAL INCOME	325,230.00	1,080,000.00	333,941.00	1,739,171.00
	EXPENDITURES				
	General :				
243,241.00	Programme Expenses	186,526.72	404,944.00	321,620.00	913,090.72
243,241.00	TOTAL EXPENDITURES	186,526.72	404,944.00	321,620.00	913,090.72
306,345.50	BALANCE	138,703.28	675,056.00	12,321.00	826,080.28
	Add : Expenditures made from Govt. Grant, now adjusted with Own Fund	-	-	-	-
325,230.00	UNUTILISED GRANTS Carried forward	138,703.28	675,056.00	12,321.00	826,080.28

Signed in terms of our report of even date.

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

Sd/-

Shekhar Kumar Pan
Proprietor
Membership No. 053883

On behalf of the Governing Body

Sd/-

Prof. (Dr.) Maitree Bhattacharyya
Director

KOLKATA
The 28th September, 2016

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 :		
10,388,871.54	Balance as per last account	11,126,078.29	
737,206.75	Add : Surplus for the year as per Income & Expenditure Account	1,412,058.78	
11,126,078.29			12,538,137.07
	DEVELOPMENT FUND :		
15,787,638.05	Balance as per last account	16,291,032.25	
57,500.00	Add : Donation (Corpus)	1,000.00	
-	Add : Capital Grants received during the year	33,003,398.00	
445,894.20	Add : Surplus for the year as per Income & Expenditure Account	769,797.74	
16,291,032.25			50,065,227.99
	LABORATORY FUND :		
1,995,926.37	Balance as per last account	2,036,269.13	
40,342.76	Add : Surplus for the year as per Income & Expenditure Account	102,716.01	
2,036,269.13			2,138,985.14
	SPECIAL RESERVE FUND :		
40,524.43	Balance as per last account	28,365.09	
12,159.34	Less : Assets Written Off	-	
28,365.09			28,365.09
1,129,204.06	PROJECT CAPITAL ASSETS FUND (Sub-schedule - A 1)		1,205,373.37
	CONTINGENCY FUND :		
1,000,000.00	Balance as per last account		1,000,000.00
	JBNSTS - OWN GENERATION FUND :		
2,726,822.14	Balance as per last account	3,263,771.15	
736,949.01	Add : Surplus for the year as per Income & Expenditure Account	1,039,190.65	
3,463,771.15		4,302,961.80	
	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)	
3,263,771.15			4,102,961.80
	STAFF WELFARE & MEDICAL FUND :		
203,015.15	Balance as per last account	334,884.58	
100,000.00	Add : Transfer from JBNSTS - Own Generation Fund	100,000.00	
31,869.43	Add : Surplus for the year as per Income & Expenditure Account	62,245.41	
334,884.58			497,129.99
	INFRASTRUCTURE DEVELOPMENT FUND :		
225,572.39	Balance as per last account	366,379.76	
100,000.00	Add : Transfer from JBNSTS - Own Generation Fund	100,000.00	
40,807.37	Add : Surplus for the year as per Income & Expenditure Account	66,753.34	
366,379.76			533,133.10
	RETIREMENT BENEFIT FUND - (Provident Fund) :		
7,874.22	Balance as per last account	8,161.22	
313.00	Add : Interests earned during the year	315.00	
(26.00)	Less : Current Year's Expenses	-	
8,161.22			8,476.22
	INTERNATIONAL CONFERENCE FOR GIFTED MINDS (ICGM) FUND :		
-	Balance as per last account	57,907.00	
1,524,927.00	Add : Donations received during the year	-	
1,467,020.00	Less : Current Year's Expenses (Sub-schedule - A 2)	57,907.00	
57,907.00			-
35,642,052.53	TOTAL :		72,117,789.77



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	
1,353,582.72	Balance as per last account	1,129,204.06	-	1,129,204.06
-	Add : Capital Grant received during the year	-	270,000.00	270,000.00
1,353,582.72		1,129,204.06	270,000.00	1,399,204.06
224,378.66	Less : Depreciation for the year	177,917.11	15,913.58	193,830.69
1,129,204.06	TOTAL:	951,286.95	254,086.42	1,205,373.37

SCHEDULE - A 2

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

Rs.		Rs.	Rs.
95,582.00	a) Expenditures for Conferences	-	
699,669.00	b) Expenditures for Research Activities	-	
-	c) Expenditures for Research Activities (Nuremberg) -		
-	Computer & Peripherarls	22,523.00	
1,362.00	Meeting Expenses	-	
2,000.00	Honorarium to Data Collector	29,350.00	
-	City Conveyance (For Co-ordinator and Data Collector)	5,734.00	
37,668.00	Printing & Stationery	-	
-	Miscellaneous Expenses	300.00	
400.00	Postage	-	
630,339.00	Last year's overspent amount met out of Current Year's Donations	-	
1,467,020.00	TOTAL :		57,907.00

SCHEDULE - "B"

LIABILITIES FOR UNUTILISED GRANTS

A. In respect of Grants Received from different Authorities of Govt. of West Bengal -			
1,981,657.42	a) Deptt. of Higher Education (DHE)	4,247,979.64	
442,178.49	b) DHE - West Bengal District Scheme (WBDS)	324,269.49	
-	c) DHE - Junior Talent Search Tests (JTST)	3,507,000.00	
-	d) Deptt. of Science & Technology (DST) - Junior Talent Search Tests	1,269,009.00	
-	e) DST - Teachers' Training Programme (TTP)	2,730,770.00	
30,000.00	f) West Bengal Academy of Science & Technology (WAST) [As per last account]	30,000.00	
2,831.75	g) DST - (WAST) [As per last account]	2,831.75	
2,456,667.66	Sub Total :		12,111,859.88
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	
56,786.05	b) Deptt. of Science and Technology (DST)	52,901.05	
263,396.50	c) DST - Fund for Improvement in Science and Technology (FIST)	-	
177,188.11	d) Council of Scientific & Industrial Research, Talent Enrichment Programme	180,573.11	
605,682.41	Sub Total :		341,785.91
C. In respect of Project Grants received from different Authorities of Govt. of India -			
a) Science & Engineering Research Bureau (SERB) under DST -			
325,230.00	i) Principal Investigator - Dr. Abhijit Kar	138,703.28	
-	ii) Principal Investigator - Dr. Pijush Basak	675,056.00	
	Sub Total :	813,759.28	
-	b) Maulana Abul Kalam Azad Instt. of Asian Studies (MAKAIAS), Principal Investigator - Dr. Paromita Roy	12,321.00	
325,230.00	Sub Total :		826,080.28
3,387,580.07	TOTAL :		13,279,726.07

JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH

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

SCHEDULE - "C"

FIXED ASSETS

Description of Assets	Written Down Value as on 01.04.2015	Adjustments / Written off during the year	Addition during the year	Value as on 31.03.2016	Rate of Depreciation	Depreciation for the year	Written Down Value as on 31.03.2016
	₹	₹	₹	₹	%	₹	₹
A. Assets pertaining to Development Fund -							
1) Leasehold Land	2,075,669.00	-	-	2,075,669.00	-	-	2,075,669.00
2) Building	7,503,940.34	-	-	7,503,940.34	5%	375,197.02	7,128,743.32
3) Rain Water Harvesting System	59,429.83	-	-	59,429.83	5%	2,971.49	56,458.34
4) Mural	37,448.34	-	-	37,448.34	5%	1,872.42	35,575.92
5) Electrical Equipment	244,325.21	-	232,882.00	477,207.21	15%	71,356.54	405,850.67
6) Electrical Fittings	191,807.80	-	-	191,807.80	10%	19,180.78	172,627.02
7) Furniture	299,600.62	-	81,795.00	381,395.62	10%	38,139.56	343,256.06
8) Office Equipment	14,907.85	-	244,247.00	259,154.85	15%	36,732.05	222,422.80
9) Science Indoor Exhibits	55,478.90	-	60,480.00	115,958.90	15%	17,393.84	98,565.06
10) Computers	840.00	-	49,684.00	50,524.00	60%	28,696.20	21,827.80
11) Laboratory Equipment	-	-	14,837.00	14,837.00	15%	2,225.55	12,611.45
12) Computers & Accessories funded by GoWB	-	-	36,927.00	36,927.00	60%	11,078.10	25,848.90
13) Printer / Scanner / Photocopier funded by GoWB	-	-	286,197.00	286,197.00	60%	85,859.10	200,337.90
A1. Capital Work-in-Progress pertaining to Development Fund -							
14) Building (Innovation Centre)	-	-	112,986.00	112,986.00	NA	-	112,986.00
15) Interior Decoration & Renovation	-	-	7,100,138.00	7,100,138.00	NA	-	7,100,138.00
Sub-total (Development Fund) :	10,483,447.89	-	8,220,173.00	18,703,620.89		690,702.65	18,012,918.24
B. Assets pertaining to Laboratory Fund -							
1) Furniture	178,215.63	-	-	178,215.63	10%	17,821.57	160,394.06
2) Laboratory Equipment	519,136.03	-	144,975.00	664,111.03	15%	97,216.67	566,894.36
Sub-total (Laboratory Fund) :	697,351.66	-	144,975.00	842,326.66		115,038.24	727,288.42
C. Assets pertaining to DHE, Govt. of West Bengal -							
1) Office Equipment	3.54	-	-	3.54	15%	0.53	3.01
2) Furniture	1,901.41	-	-	1,901.41	10%	187.45	1,713.96
Sub-total (Dept. of Higher Edn., Govt. of WB) :	1,904.95	-	-	1,904.95		187.98	1,716.97
D. Assets pertaining to JBNSTS - Own Generation Fund -							
1) Laboratory Equipment	615,751.35	-	-	615,751.35	15%	92,362.70	523,388.65
2) Computers	6,394.40	-	15,383.00	21,777.40	60%	13,066.44	8,710.96
3) Office Equipment	45,105.77	-	85,000.00	130,105.77	15%	19,515.87	110,589.90
4) Electrical Equipment	46,947.45	-	107,951.00	154,898.45	15%	23,234.77	131,663.68
5) Furniture	19,950.00	-	67,000.00	86,950.00	10%	5,345.00	81,605.00
6) Electrical Fittings	-	-	19,046.00	19,046.00	15%	2,856.90	16,189.10
Sub-total (JBNSTS - Own Generation Fund) :	734,148.97	-	294,380.00	1,028,528.97		156,381.68	872,147.29
E. Assets pertaining to Capital Fund -							
1) Laboratory Equipment	1,110,234.06	-	-	1,110,234.06	15%	166,535.11	943,698.95
2) Computers	18,970.00	-	-	18,970.00	60%	11,382.00	7,588.00
Sub-total (Capital Fund) PI : Dr. A. Kar :	1,129,204.06	-	-	1,129,204.06		177,917.11	951,286.95
F. Laboratory Equipment (SERB) PI : Dr. P.Basak) :	-	-	212,181.00	212,181.00	15%	15,913.58	196,267.42
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 :	13,129,916.04	-	8,871,709.00	22,001,625.04		1,156,141.24	20,845,483.80
Previous Year :	13,693,162.52	12,159.34	416,758.00	14,097,761.18		967,845.14	13,129,916.04



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 -			
1,967,336.00	a) With State Bank of India, Kasba Branch	2,550,000.00		
-	b) With United Bank of India, Bosepukur Rajdanga Branch	34,500,000.00		
1,967,336.00	Sub Total :		37,050,000.00	
	B. Interests Accrued on above Fixed Deposits -			
-	a) With State Bank of India, Kasba Branch	17,336.00		
-	b) With United Bank of India, Bosepukur Rajdanga Branch	196,283.75		
-	Sub Total :		213,619.75	
1,967,336.00	TOTAL :			37,263,619.75
	LONG - TERM INVESTMENTS -			
	A. Investments in Long-Term Fixed Deposits -			
18,500,000.00	a) With State Bank of India, Kasba Branch	19,300,000.00		
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		
22,474,000.00	Sub Total :		23,274,000.00	
	B. Interests Accrued on above Fixed Deposits -			
-	a) With State Bank of India, Kasba Branch	274,570.00		
-	b) With Housing Development Finance Corporation Ltd.	18,957.00		
-	c) With State Bank of India (FC), Salt Lake, Sector - 1 Branch	10,309.00		
-	Sub Total :		303,836.00	
	TOTAL :			23,577,836.00
24,441,336.00	GRAND TOTAL :			60,841,455.75

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		
₹		₹	₹	₹
A. CURRENT ASSETS -				
36,898.00	a) Cash in hand (As physically verified)	9,416.00		
	b) Cash at Bank (Held in Savings Bank Accounts with)			
125,906.88	i) SBI, Kasba Branch - Development Fund (A/c. No. 10415825360)	474,192.88		
170,985.52	ii) SBI, Salt Lake, Sector - 1 Branch - FC (A/c. No. 10836429242)	208,944.52		
998,474.06	iii) SBI, Kasba Branch - Project (A/c. No. 10415825359)	1,715,696.06		
219,253.35	iv) SBI, Kasba Branch - Scholars' Res. Fund (A/c. No.10415825348)	376,250.80		
581,039.03	v) United Bank of India (UNI), Bosepukur Rajdanga (A/c. No. 5486)	10,339,137.53		
7,910.67	vi) UNI, Bosepukur Rajdanga - Provident Fund (A/c. No. 5657)	8,225.67		
263,396.50	vii) Union Bank of India, Ballygunge Branch (A/c. No. 301202010009819)	9,533.00		
-	viii) SBI, Kasba (Govt. Aided Project 01 - Dr. Pijush Basak)	730,325.00		
-	ix) SBI, Kasba (Govt. Aided Project 02 - Dr. Paromita Roy)	3,665.00		
-	x) SBI, Kasba (Govt. Aided Project 03 - Dr. Abhijit Kar)	150,630.28		
2,366,966.01	Sub Total :		14,016,600.74	
	c) Cash at Bank (Held in Current Accounts with)			
-	i) SBI, Kasba Branch (A/c. No. CA - 35061192770)	16,791.00		
458,248.00	ii) SBI, Kasba Branch (A/c. No. CA - 33224282758)	10,000.00		
458,248.00	Sub Total :		26,791.00	
2,825,214.01	TOTAL :			14,043,391.74
2,862,112.01	TOTAL (A) :			14,052,807.74
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	13,000.00		
13,578.10	ii) For Electricity	92,827.10		
26,578.10	Sub Total :		105,827.10	
	b) Grant-in-Aids Receivable -			
1,849,215.00	i) From Deptt of Higher Education, Govt. of West Bengal	3,615,442.00		
-	ii) From Council of Scientific & Industrial Research, Govt. of India	500,000.00		
150,601.00	iii) From Deptt. of Science & Technology, Govt. of India (SEATS)	58,127.00		
1,999,816.00	Sub Total :		4,173,569.00	
1,500.00	c) Advance against Salary	3,500.00		
7,295.00	d) Advances to Staff against Tours / Programmes	49,168.00		
1,688.95	e) Advance for Office Expenses (Postage)	82.95		
-	f) Prepaid Expenses	14,239.00		
43,679.00	g) Tax Deducted at Sources (Refundable)	112,805.00		
2,080,557.05	TOTAL (B) :			4,459,191.05
4,942,669.06	GRAND TOTAL (A + B) :			18,511,998.79

**JAGADIS 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 :		
1,697,271.00	Scholarships	1,860,561.00	
298,962.50	Book Grants	331,070.50	
-	Senior Talent Search Test Expenses	53,940.00	
-	Junior Talent Search Test Expenses (DST, GoWB)	53,940.00	
7,475.00	Project Presentation Award	-	
15,000.00	Best School Award	15,000.00	
-	Teachers' Training Programme (TTP) Expenses (DST, GoWB)	77,975.00	
6,704.00	West Bengal District Scheme (WBDS) Programme Expenses (GoWB)	101,443.00	
33,149.00	Talent Enrichment Programme (TEP) Expenses (CSIR, GOI)	-	
258,800.00	Scheme for Early Attraction of Talent for Science (SEATS) Exps. (DST, GOI)	73,210.00	
50,000.00	Science & Engg. Research Bureau (SERB) Expenses (DST, GOI)	12,474.00	
9,900.00	Development Fund Expenses	11,385.00	
23,200.00	Remuneration Payable to Project Staff	-	
	Repair & Maintenance Expenses -		
109,333.00	a) For General purposes	-	
254,833.00	b) For Building	-	
26,250.00	Contingency	-	
1,732.00	Printing & Stationery	-	
918.00	Postage & Telephone	1,758.00	
25,684.00	City Conveyance	42,290.00	
48,825.00	Laboratory Equipment (Laboratory Fund)	31,680.00	
-	Office Equipment (Development Fund)	18,849.00	
	Interior Decoration & Renovation (Development Fund)	7,003,571.00	
-	Computer & Accessories	34,230.00	
-	Cleaning Expenses	9,048.00	
-	Electricity	25,490.00	
14,850.00	Security Service Charges	19,800.00	
-	Books & Journals	8,337.00	
17,100.00	Audit Fees	34,500.00	
-	Property Taxes	3,319,768.00	
2,060.00	Profession Tax (Employees)	2,390.00	
19,035.00	Income Tax Deducted at Sources (Contractors)	13,254.00	
26,956.00	Work Contract Tax Deducted at Sources	10,204.00	
2,948,037.50	Sub Total :		13,166,167.50
74,801.00	B. Security Deposits from Contractors (Civil)		132,228.00
-	C. Liabilities towards Grants from DST (SEATS), GOI -		
-	a) Grants received in Advance (For Forthcoming Camps)	800,000.00	
461,450.00	b) Grants Refundable (For Finished Camps)	703,027.00	
	Sub Total :		1,503,027.00
3,484,288.50	TOTAL:		14,801,422.50

SCHEDULE - "G"

ESTABLISHMENT

PREVIOUS YEAR		CURRENT YEAR	
₹		₹	₹
5,345,579.00	Salaries & Allowances	6,601,880.00	
15,414.00	Contribution to Provident Fund (Office)	61,656.00	
5,360,993.00	TOTAL :		6,663,536.00

JAGADIS BOSE NATIONAL SCIENCE TALENT SEARCH

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SCHEDULE - "H"

PROGRAMME EXPENSES

PREVIOUS YEAR		CURRENT YEAR	
₹		₹	₹
	I. Expenses funded by Deptt. of Higher Education, Govt. of West Bengal -		
516,029.00	Talent Search Test	869,317.00	
27,438.00	Awareness Programmes	134,197.00	
5,000.00	Best School Award	5,000.00	
16,798.00	Books & Journals	51,375.00	
48,976.00	Annual Award Ceremony	212,079.00	
614,241.00	Sub Total :		1,271,968.00
	II. Expenses funded by Deptt. of Higher Education, Govt. of West Bengal (WBDS) -		
-	Academic Meeting	18,884.00	
-	Base Line test	44,750.00	
-	Follow-up Workshop	637,231.00	
741,761.00	Science Workshop	590,805.00	
-	Teachers' Training Programmes	114,116.00	
-	Project Competitions	462,123.00	
741,761.00	Sub Total :		1,867,909.00
	III. Expenses under Govt. of West Bengal [DST - Junior Talent Search Test (JTST)]		
-	Annual Award Ceremony	285,238.00	
-	Best School Award	5,000.00	
-	Encouragement Awards	47,000.00	
-	Book Grants	102,000.00	
-	Scholarship	594,000.00	
-	Science Workshop	6,481.00	
-	Talent Search Tests	955,196.00	
-	Awareness Programmes	59,311.00	
-	Teaching Aid	94,140.00	
-	Remuneration	285,484.00	
-	Contingency	3,029.00	
-	Publicity Materials	99,536.00	
-	Office Overhead	28,615.00	
-	Postage & Telephone	22,961.00	
-	Sub Total :		2,587,991.00
	IV. Expenses under Govt. of West Bengal (DST)		
-	Teachers' Training Programmes		319,165.00
3,631.00	V. Expenses under Govt. of India (DST)		3,885.00
	Science Workshop for Contact Programmes		
3,153,601.00	VI. Expenses under Govt. of India (DST - SEATS)		3,778,375.00
	Science Camp (INSPIRE)		
	VII. Expenses funded by Talent Enrichment Programme (CSIR), Govt. of India		
-	City Conveyance	8,821.00	
-	Postage & Telephone	820.00	
-	Remuneration	138,400.00	
55,954.00	Seminar	1,000.00	
-	Travels	107,180.00	
-	Visit to Science Institutions	240,394.00	
55,954.00	Sub Total :		496,615.00
	VIII. Expenses under Science & Engg. Research Bureau (SERB), DST, Govt. of India		
243,241.00	a) Research Activities (Principal Investigator - Dr. Abhijit Kar)	186,526.72	
-	b) Research Activities (Principal Investigator - Dr. Pijush Basak)	404,944.00	
243,241.00	Sub Total :		591,470.72
	X. Expenses funded by Maulana Abul Kalam Azad Instt. of Asian Studies (MAKAIAS)		
-	Research Activities (Principal Investigator - Dr. Paromita Roy)		321,620.00
4,812,429.00	TOTAL :		11,238,998.72



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SCHEDULE - "I"

OFFICE & ADMINISTRATIVE EXPENSES

PREVIOUS YEAR		CURRENT YEAR		
₹		₹	₹	₹
86,713.00	Postage & Telephone		47,665.00	
128,115.00	Contingency		191,066.80	
143,880.00	Electricity		292,190.00	
45,766.00	Printing & Stationery		82,292.00	
233,651.00	City Conveyance		424,589.00	
15,200.00	Property Tax		3,343,768.00	
	Repair & Maintenance Expenses -			
29,503.00	a) For Computers & Other Equipment	88,368.00		
863,766.00	b) For Building	990,431.00		
271,204.00	c) For General purposes	<u>144,674.00</u>	1,223,473.00	
186,167.00	Security Service Charges		238,209.00	
49,478.00	Cleaning Expenses		65,260.00	
19,500.00	Legal Fees & Expenses		24,000.00	
11,276.00	Audit Fees		34,500.00	
208.90	Depreciation		187.98	
2,084,427.90	TOTAL :			5,967,200.78

SCHEDULE - "J"

EXPENSES UNDER SCHOLARS' RESERVE FUND

₹		₹	₹
1,022,000.00	Scholarship	1,062,000.00	
93,000.00	Book Grants	128,000.00	
-	Encouragement Award	11,000.00	
6,000.00	Science Project Presentation Award	-	
36,817.00	Workshop on Science & Scientists	112,776.00	
1,157,817.00	TOTAL :		1,313,776.00

SCHEDULE - "K"

EXPENSES UNDER DEVELOPMENT FUND

₹		₹	₹
124,973.00	Repairs & Maintenance Expenses	161,000.00	
-	Fabrication & Furnishing Expenses	23,962.00	
16,560.00	Library Development Expenses	-	
2,000.00	Advance to Others Written Off	-	
151.00	Miscellaneous Expenses	-	
505,076.23	Depreciation	690,702.65	
648,760.23	TOTAL :		875,664.65

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SCHEDULE - "L"

EXPENSES UNDER LABORATORY FUND

PREVIOUS YEAR		CURRENT YEAR	
₹		₹	₹
23,969.00	Laboratory Fund Expenses	-	
111,413.97	Depreciation	115,038.24	
135,382.97	TOTAL :		115,038.24

SCHEDULE - "M"

EXPENSES UNDER JBNSTS - OWN GENERATION FUND

₹		₹	₹
283,548.00	Honorarium to Honorary Director	-	
126,767.38	Depreciation	156,381.68	
410,315.38	TOTAL :		156,381.68

SCHEDULE - "N"

EXPENSES UNDER STAFF WELFARE & MEDICAL FUND

₹		₹	₹
5,430.00	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, 2016

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.

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. 1,08,000/= and Rs.315/= 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. 90,268/= 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. 10,41,868.75 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 in 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 services to be rendered are reported as liabilities until all conditions for revenue recognition are met.

4. Use of Estimates :

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

5. Fixed Assets :

- 5.1. 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 :

- a) 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.
- b) 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.
- c) 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 date. 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. On an application to the Kolkata Municipal Corporation [KMC] for Reassessment of the Property and Taxes for the existing Building of the Society (vide Letter No. JB / bldg / 2015-16 / 51 dt. 29.03.2016), the said Authority has raised a claim for Property Tax for the period from the 2nd Quarter of the Financial Year 2001-02 to the 4th Quarter of the Financial Year 2015-16, involving a total imbursement of Rs. 33,19,768/= for the said period. The KMC has also intimated the claim for the ensuing Financial Year 2016-17, amounting to Rs. 3,61,288/=. The cumulative Tax burden has duly been discharged by the Society on 02.06.2016 with a timely assistance by the Dept. of Higher Education, Govt. of West Bengal, in the form of a non-recurring Grant amounting to Rs. 36,15,442/=, released through Memo No. 122 (Sanc) / EH / SE / P / 1G - 03 / 2015 dt. 15.06.2016.
- This event, albeit has occurred after the Balance Sheet date, yet has been considered as a significant one and accordingly, the said expenditure as well as the corresponding **non-recurring** Grant, have duly been considered in the current year's Financial Statements.
13. A net amount of Rs. 22.50 Lacs purported to be received from Gas Authority of India Ltd. (GAIL) 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, has not been taken into account due to non-receipt of the same till date.
14. 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
1.1.	Dept. of Higher Education, Govt. of West Bengal	169 (Sanc) / EH / SE / P / 1G - 03 / 15 dt. 14.07.2015	For construction of Innovation Centre	2,25,26,086.00	Development Fund
1.2.	- do - - do -	320 (Sanc) / EH / SE / P / 1G - 08 / 15 dt. 26.08.2015	For renovation of existing Building	78,43,312.00	- do -
1.3.	- do - - do -	668 (Sanc) / EH / P / M / 5G-1 / 2001 dt. 11.12.2015	For High-speed Printer, Desktops and Other peripherals	4,54,000.00	- do -
1.4.	- do - - do -	1126 (Sanc) / EH / SE / P / 1G-08 / 15 dt. 04.03.2016	For installation of Air-conditioners and fabrication of Dining Hall with Kitchen and other facilities for Dormitory	16,80,000.00	- do -
2.	Dept. of Science & Technology, Govt. of West Bengal	1172 (Sanc) / ST / P / S & T / Misc. -17/2015 dt. 02.03.2016	For establishment of Science Corner	5,00,000.00	- do -
			TOTAL :	3,30,03,398.00	
3.	Science & Engineering Research Bureau (SERB) under DST, Govt. of India	YSS / 2015 / 001123 dt. 06.11.2015	For Research Equipment	2,70,000.00	Project Capital Assets Fund



12. Grant of Rs. 78,43,312/= has been released during the year by the Deptt. of Higher Education, Govt. of West Bengal through its Memo No. 320 (Sanc) / EH / SE / P / 1G - 08 / 15 dt. 26.08.2015 for construction of proposed work of interior furnishing and fabrication of the existing Building of the Institute. The said work, has duly been commenced on the basis of a Memorandum of Understanding (MOU) dated 15th October, 2015, executed with the Office of Hooghly River Bridge Commissioners (HRBC) during the current year, and almost 95% of the related work has been completed till the date of completion of audit for the year. Considering the aforesaid degree of completion and the event occurring after the Balance Sheet date, the proportionate Tendered Amount of Rs. 70,03,571/=, has been capitalized during the year alongwith the Agency Fee payable to HRBC for executing the work as per Clause III of the said MOU.
13. Expenditures incurred out of various Project Funds towards procurements of the following items, albeit are of capital in nature, yet have been treated as revenue expenditures due to the fact that, these have been procured on connection with carrying out the relevant programmes / activities, which are still in continuing phases :

Sl. No.	Name of the Project Funds	Item procured	Name of the Suppliers	Amount	
				Rs.	Rs.
1.	Scheme for Early Attraction of Talent for Science (SEATS) under Dept. of Science & Technology (DST), Govt. of India				
1.1.		Laptop with cover (HP- 42)	Xcel Infotech	30,187/=	
1.2.		Pendrives	- do - do -	8,000/=	
1.3.		External Hard Disk	- do - do -	8,982/=	
1.4.		Laserjet Printer (HP)	Peetel Solutions	8,531/=	
1.5.		Fire Extinguishers	Cease Fire Industries	32,262/=	87,962/=
2.	International Conference for Gifted Minds (ICGM) Fund - Research Activities (Nuremberg)	Computer and UPS			22,523/=
3.	Science & Engineering Research Bureau (SERB) u / DST - Principal Investigator - Dr. Pijush Basak	Laptop (Dell NB INS)	Trishita Marketing Pvt. Ltd		82,425/=
TOTAL :					1,92,910/=

17. Liabilities towards Scholarship, Book Grants and Best School Award totaling Rs. 22,06,631.50, as reflected in Schedule - "F", includes Rs. 20,11,233.50 payable on account of several earlier years.
18. All the figures have been denominated in Indian Rupee.
19. Schedules "A" to "O" form an integral part of the Financial Statements.

20. 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 28th September, 2016

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

Sd/-
Shekhar Kumar Pan
Proprietor
Membership No. 053883



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