FORTY-SEVENTH ANNUAL CONVOCATION

June 2, 2017

Address by Guest-in-Chief

Dr. Sekhar Basu

Chairman
Atomic Energy Commission

ENLIGHTENMENT TO PERFECTION

Accredited by NAAC with 'A' Grade

UNIVERSITY OF NORTH BENGAL

Rajarammohunpur, P.O. NBU, Dist. Darjeeling
West Bengal, Pin 734013

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Chairman, Atomic Energy Commission
&
Secretary, Department of Atomic Energy

Raja Rammohunpur
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DR. SEKHAR BASU
Chairman,
Atomic Energy Commission
&
Secretary,
Department of Atomic Energy

Good Morning to all of you. Prof. Somnath Ghosh, Vice-Chancellor, University of North Bengal, dignitaries in the dais, Faculty members and dear students.

It is a great honour for me to be here with you on this important day of convocation.

I am very happy to note the mission of your University. "To encourage and provide for instruction for teaching, training and research in various branches of learning and course of study; to promote advancement and dissemination of knowledge and learning and to extend higher education to meet the growing needs of society". It is heartening to note that you are fulfilling the objectives of imparting higher education and research to the students in this part of the country. Your efforts in associating yourself with social needs of this area is commendable.

My dear young friends,

Congratulations to all of you. Today marks an important day in your lives and a significant milestone in your life's journey. As you entered this institution through competitive process, your mission for learning began with great enthusiasm, but it will not end here. Learning is a continuous process and goes beyond getting a degree. Ultimate proof of learning is in the application of our knowledge for the upliftment and betterment of society. I am sure you will do your part to serve the system which has brought you to this stage and will bring much more for you. It is a moment of great satisfaction for you as much as it is for your teachers, parents and those who had any part in shaping your life so far. Congratulations to all, who contributed to the success of the students.

Now the young brains have to start thinking big for great success in any field you opt. Start thinking big, make big efforts,

big success will be yours. Hurdles will be there. Success is, pursuing your goals in spite of obstacles.

Remember, whatever be the hurdle, there is light at the end of the tunnel.

As in the rest of the world, as a developing country, we are facing enormous challenge from globalisation. We are considered only as a market by the developed nations. This approach is to suppress the development of technology within the country. We are being looked at as a labour force. While this may be easy way out in some sense, this will never allow India to emerge as a strong nation. We cannot be a free nation without being strong – economically, technologically and strategically.

Looking back, the industrial development pursued for growth, leading to improvement in living standards and quality of life has seen intesive energy use. The 200 years of industrialization has seen energy consumption grow many folds, leading to ruthless exploitation of the natural resources.

The unprecedented climatic events and the projections by various agencies paint a very frightening picture of the future. Our continued existence is threatened. Be it global warming, acidification of sea, increasing level of pollution in air and sea, the impact of climate change could impede the economic growth itself. This is not a sustainable process.

Dear Friends,

Since Independence, our country has made significant progress in the growth of R&D resulting in significant improvement in agriculture, Industry, Infrastructure, Information Technology, *etc.* In my life time I have seen how our industry has made progress. But this has largely been based on borrowed technology. We have

not established our own identity in the technology domain. The same is true in the domain of basic sciences.

India has an unique position in the world in the field of atomic energy. As you are aware, nuclear energy programme covers most areas of science and technology. Due to certain events in the past, high end technology and Research and Development help from outside was not available to our country in this sector. Although, this resulted in setback for faster growth of nuclear energy in India, this came as a boon for us which made India totally self-reliant in most areas of nuclear science and technology. Indian Atomic Energy Programme deals in many areas which include reactors, reprocessing, waste management, fuel fabrication, enrichment *etc.* Even the developed nations wants to collaborate with us in some of these areas. Our nuclear programme is medium sized today, but has the capability to provide long term, sustainable, clean energy solution for the country. Even the second green revolution can also come through nuclear agriculture and food preservation. Nuclear technology also play very major role in health care and water resources management.

At this stage I would like to mention about a few areas in which we are contributing to the development of this part of our nation, including West Bengal. We have two research centres, the Saha Institute of Nuclear Physics (SINP) and Variable Energy Cyclotron Centre (VECC) which are major centres for high end research in nuclear physics and physics, biology *etc.* located at Kolkata. We are setting up two major facilities in Kolkata for affordable Cancer Care. Medical Cyclotron Centre will provide radio-isotopes for health care and will also provide material research facilities. Project for Radiation Medicine Research Centre, which in tandem with Chittaranjan Cancer Hospital for treatment of large number of patients, has been initiated.

We are interacting with Agricultural Universities in West Bengal, including Bidhan Chandra Krishi Vidhyalay, who have the potential to become the hub for mutation breeding technologies for crop improvement. We are also pursing various programmes with Universities and progressive farmers in West Bengal for the spread of high yield varieties of groundnut, pulses and oil seeds with reasonable success. Our Centres have studied the Arsenic problem in ground water at many places in West Bengal and also has come out with affordable solutions for water purification.

West Bengal also has the potential for becoming a hub of nuclear power.

I am sure by the time you come to my position you will see at least a ten fold rise in the application of nuclear technology and I hope at least some of you will be participating in this grand nation building activity.

Today's generation have much less interest in science, compared to earlier times. Although West Bengal was the pioneer of modern science in India, she also faces the same handicap in the development of science. There are several reasons for this, which include both lack of opportunities in this field as well as better opportunities in other fields.

Vigyan Pratibha, a national programme for mentoring of students from school to Ph.D levels is being taken up to attract better talent towards the field of science. All the scientific ministries of Government of India are part of this programme. Renewed efforts are being made by the government to have wider exposure of university students and faculty members with facilities available in the national labs.

We are drawing up a comprehensive plan involving schools, colleges and universities for pursuing this goal. I am sure, students

from all over the country, especially Eastern India who has abundant intelligence and talent will benefit from this initiative in a major way.

A new initiative is being taken for deep sea mission by Department of Life Sciences. As a part of this, two under water labs are proposed. One of them will be in Bengal.

Department of Atomic Energy is also involved directly in educational programmes. We have our Homi Bhabha National Institute, a deemed-to be-University with over 3000 students doing their studies at post graduate level. This has 11 Constituent Units, including the Saha Institute of Nuclear Physics and Variable Energy Cyclotron Centre at Kolkata. In Bhubaneswar, National Institute for Science Education and Research is involved in Undergraduate education also. With Mumbai University, we have DAE-Centre for Basic Sciences which has brought excellence in science education.

I am sure it is possible for us to collaborate in the areas covered by your University through our Board of Research in Nuclear Sciences (BRNS) initiatives. The exposure of your university to BRNS projects is minimal. There is good scope for collaboration in this area.

Our involvement in promoting excellence and science and technology education also prompts me to say that we need to improve the employability of our students emerging out of our educational system in the country. I have a suggestion to make to the educationists present here. We may introduce project work in curriculum and orient/review this with skill development programmes and enterprenuer development programmes. Government of India is encouraging both of these aspects.

Your education system is complete as it covers the

literature, social sciences and subjects like economics, political science. Students studying these subjects have probably much more responsibility than the students of science because their education is the backbone of our social system. Large percentage of the students from these disciplines come back to the education system starting from the primary, secondary to undergraduate to post graduate courses. The education in this system also opens up opportunity for going into broader areas like management, civil services, bank and financial services.

Opportunities are there everywhere. It is for the individuals to know about the opportunities and also be bold enough to get into the systems. Higher level of intelligence and awareness in this part of the country creates an excellent platform for creating opportunities for the students with this type of background.

Dear young friends,

I must remind you that, you are among a few fortunate persons who had access to educational experience from a renowned institution. Our country is bestowed with a unique knowledge and qualified professionals and it gets richer every year in this regard. Culturally, we valued and nurtured the knowledge building activity. Excellence of Indian professionals in different fields are well known in world arena. There is immense potential for India to transform itself into global R & D hub. We have the potential to become knowledge economy and also a lead country in science and technology. If India has to establish herself as a technology source or as a global R & D platform all these three elements namely basic knowledge, innovative application and social organization have to be strengthened. Your generation must make this a reality.

Dear young friends,

You will achieve many things in life. But while you do well, do not forget the bottom of the pyramid. The country is looking for inclusive growth. In my opinion you can serve the country best if you become an enterprenuer. I am advocating small and medium scale industry which can serve the nation in every possible way.

For this Institute, the Convocation marks a passage for you, from students to alumni. But, forever, you will remain apart of our system. While reaching great heights, do not forget to enjoy your life, be happy in everything you do. Best of luck for all of your future endeavours. I also take the opportunity to invite you to some of our centres spread all over the country including our campuses at Kolkata.

I once again congratulate all my young friends, their parents and the faculty members of the University and thank the management for giving me the opportunity of being with you.

Thank you and Jai Hind.