September 27-28 2019: Fourth Lecture Workshop on Trans-disciplinary Areas of Research and Teaching by Shanti Swarup Bhatnagar Awardees was jointly organized with National Academy of Sciences India, Allahabad –Delhi Chapter, IEEE Electron Device Society (EDS) - Delhi Chapter, IEEE Delhi Section under the aegis of DBT Star College Program during September 27-28, 2019. On September 27, 2019 the first talk on Mathematical modeling as a transdisciplinary framework and its applications to neuroscience was delivered by Professor Karmeshu, FNASc and Shanti Swarup Bhatnagar Awardee - Mathematical Sciences 1993; Distinguished Prof., Deptt. of Computer Science and Engineering, School of Engg., Shiv Nadar University. Second talk was on Origin and Early Evolution of the Solar System by Dr Jitendra Nath Goswami, FNA, FNASc, FTWAS, FASc and Shanti Swarup Bhatnagar Awardee - Earth, Atmosphere, Ocean & Planetary Sc. 1994, Physical Research Laboratory, Navrangpura, Ahmedabad, Gujrat. The third speaker was Professor Surendra Prasad, FNA, FNAE, FNASc, FASc and Shanti Swarup Bhatnagar Awardee - Engineering Sciences 1988; Emeritus Professor, Department of Electrical Engineering, IIT Delhi. Professor Ajoy Ghatak, FNASc & Shanti Swarup Bhatnagar Awardee - Physical Sc. 1979; Formerly with Department of Physics, IIT Delhi deliverd his talk on Evolution of Quantum Theory & Entanglement. The last talk on Photonics Revolution was delivered by Prof. Anurag Sharma, FNASc, FNA, FNAE, FASc, FOSA & Shanti Swarup Bhatnagar Awardee – Engg. Sc.1998; Department of Physics, IIT Delhi. On September 28, 2019, Dr. G. Narahari Sastry, FNASc, FASc & Shanti Swarup Bhatnagar Awardee - Chemical Sciences 2011; Director, CSIR-North East Institute of Science and Technology, Jorhat delivered his talk on Chemistry for a Better Tomorrow. The next talk on Sendai Virus Recruits Cellular Villin to Remodel Actin Cytoskeleton During Fusion with Hepatocytes: Implications in Liver Gene Therapy was delivered by Professor D. P. Sarkar, FNASc, FNA, FASc & Shanti Swarup Bhatnagar Awardee - Biological Sc. 1998; Department of Biochemistry, Univ. of Delhi South Campus. The third talk was on Unreal Molecules Doing Real Things in Unreal Times delivered by Professor Balasubramanian Sundaram, FASc & Shanti Swarup Bhatnagar Awardee - Chem. Sc. 2011; Chemistry and Physics of Materials Unit, Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), Jakkur, Bangalore. The fourth talk on Current Status of Malaria Vaccine Development was delivered by Professor Deepak Gaur, FNA & Shanti Swarup Bhatnagar Awardee – Medical Sc. 2017; Laboratory of Malaria & Vaccine Research, School of Biotechnology (SBT), JNU, New Delhi. The last talk on New answers to old questions regarding long-standing questions about DNA synthesis by DNA polymerases was delivered by Professor Deepak Thankappan Nair, Shanti Swarup Bhatnagar Awardee - Biological Sc. 2017; Regional Centre for Biotechnology, Faridabad. Over 400 students and faculty members from 20 different institutions i.e. Colleges of University of Delhi - Acharya Narendra Dev College, Bhaskaracharya College of Applied Science, Deen Dayal Upadhyaya College, Gargi College, Kalindi College, Rajdhani College, Ramjas College, Shaheed Rajguru College of Applied Sciences for Women, Lady Shri Ram College For Women, Shivaji College, Maitreyi College, Hansraj College; Guru Gobind Singh Indraprastha University, New Delhi; Indira Gandhi Delhi Technological University, New Delhi; Jamia Millia Islamia University, New Delhi; Jaypee Institute of Information Technology, Noida; S. G. T. College; School of Basic Sciences and Research, Sharda University, University School of Basic and Applied Sciences (USBAS), Guru Gobind Singh Indraprastha University and VMMC & S. J. Hospital attended the workshop.



Professor Karmeshu, FNASc and Shanti Swarup Bhatnagar Awardee - Mathematical Sciences 1993 receiving souvenir from Dr.

Mamta Amol Wagh and Dr. Poonam Garg



Dr Jitendra Nath Goswami, FNA, FNASc, FTWAS, FASc and Shanti Swarup Bhatnagar Awardee - Earth, Atmosphere, Ocean & Planetary Sc. 1994 receiving souvenier from Dr. Deepak Jain, Associate Professor in Physics of the college



Professor Surendra Prasad, FNA, FNAE, FNASc, FASc and Shanti Swarup Bhatnagar Awardee - Engineering Sciences 1988 receiving souvenier from Dr. Manoj Saxena, Convener-Workshop and Dr. Poonam Kasturi, Co-Convener Workshop



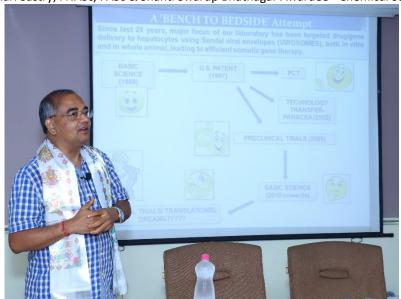
Professor Ajoy Ghatak, FNASc & Shanti Swarup Bhatnagar Awardee - Physical Sc. 1979 receiving souvenier from Dr. P. K. Bedi, Associate Professor in Physics of the college



Prof. Anurag Sharma, FNASc, FNA, FNAE, FASc, FOSA & Shanti Swarup Bhatnagar Awardee – Engg. Sc.1998 receiving souvenier from Dr. Geetika Jain Saxena, Associate Professor in Electronics, Maharaja Agrasen College



Dr. G. Narahari Sastry, FNASc, FASc & Shanti Swarup Bhatnagar Awardee - Chemical Sciences 2011



Professor D. P. Sarkar, FNASc, FNA, FASc & Shanti Swarup Bhatnagar Awardee – Biological Sc. 1998



Professor Balasubramanian Sundaram, FASc & Shanti Swarup Bhatnagar Awardee - Chem. Sc. 2011



From L-R - Professor Deepak Thankappan Nair, Shanti Swarup Bhatnagar Awardee - Biological Sc. 2017 being felicitated by Dr. Priya Goel and Professor Deepak Gaur, FNA & Shanti Swarup Bhatnagar Awardee – Medical Sc. 2017 being presented a souvenier by Dr. Sudhir Verma of the College



**Group Photograph** 

## Report of Science Foundation of the College for the Year 2019-2020

October 10-11, 2019: 80 students of Class XI and 80 students of Class XII attended the school outreach program organized by Department of Electronics and Zoology apart from Visit to Zoological Museum to observe specimen of different phyla. Students carried out following experiments 1) Determination of human blood group, 2) Estimation of hemoglobin content in human blood using Sahli's haemoglobinometer, 3) Demonstration of Differential Leucocyte Count (DLC) in human blood., 4) Designing half/full wave rectifier with capacitor filter, 5) Designing digital logic gates using diode, transistors, light emitting diode and resistors.



## **Science Foundation**

Deen Dayal Upadhyaya College (University of Delhi)

(Under the aegis of DBT Star College Program)

**National Academy of Sciences India NASI-Delhi Chapter** 

October 10-11, 2019

Jointly Organized

**Outreach and Enrichment Program for Class XI and XII Students** 

Bal Bharati Public School, Sector 12, Dwarka





Bal Bharati PUBLIC SCHOOL

**February 26-27, 2020:** National Science Day (NSD) is celebrated every year on 28 February to commemorate the announcement of discovery of the 'Raman Effect'. Government of India designated 28 February as National Science Day (NSD) in 1986. On this occasion, theme-based science communication activities are carried out all over the country. The theme of NSD-2020 is ""Women in Science". Deen Dayal Upadhyaya College, University of Delhi has organized Women in Science Workshops in 2014 and 2017 respectively and this year the workshop was conducted during Feb 26-27, 2020 to address various career options for women in the field of science and is intended to showcase the work done by women scientists to an audience of both genders. The workshop was organized under the aegis of DBT Star College Program and supported by National Academy of Sciences India (NASI) Delhi Chapter and IEEE Electron Device Society (EDS) Delhi Chapter.

On Feb 26, 2020, four parallel sessions were organized covering Biological Sciences, Physics, Chemistry, and Computer Science & Electronics. In Technical Session on Biology, Dr. Somdatta Sinha, FASc, FNASc, FNA, Adjunct Professor, Indian Institute of Science Education and Research (IISER) Kolkata, West Bengal delivered talk on "Science at the Interface" followed by talk on "Interdisciplinary research programmes for diseases with public health implications" given by Dr Shinjini Bhatnagar, Professor & Head, Paediatric Biology Centre, Translational Health Science and Technology Institute, Faridabad, In Technical Session on Physics, first talk was delivered on "Green photonics for energy conversion and conservation" by Dr. Ritu Srivastava, Advanced Materials & Devices Metrology Division, Photonics Materials Metrology Section, CSIR-NPL, New Delhi followed by talk on "Phases of topological quantum matter" by Prof. Sumathi Rao, FASc, FNASc, Harish Chandra Research Institute, Allahabad. Professor Swagata Dasgupta, FASc, Department of Chemistry, IIT Kharagpur delivered talk on "Research with green tea polyphenols and proteins" in technical session on Chemistry. In technical session on Computer Science and Electronics, opening talk was delivered by Prof. Mridula Gupta, FIETE, SMIEEE, Head, Department of Electronic Science, University of Delhi on "Advancements in Semiconductor Device Technology: Modeling and Simulation" followed by inspiring talk on "Women in Computing" delivered by Prof. Neelima Gupta, Head, Department of Computer Science, University of Delhi.

On Feb 27, 2020, Dr.(Mrs) Meenakshi Munshi, Advisor/Scientist `G', Department of Biotechnology, Ministry of Science and Technology, Government of India inspired the students and faculty members about the various opportunities and advances in a very simplified manner which was followed by an interactive session with faculty members during visit to laboratories. In technical session on biology, Prof. R. Madhubala, FNAMS., FNASc., FASc., FNA., FTWAS, JC Bose National Fellow, School of Life Sciences, JNU, New Delhi delivered talk on "Making Sense of Arginine sensing in Leishmania and its host" followed by technical talk on "Mechanisms regulating endosome-lysosome fusion" by Dr. Mahak Sharma, Associate Professor, Department of Biological Sciences, IISER Mohali. In technical session on Physics, the first talk was delivered by Dr. Meena Mishra, Scientist-G, Solid State Physics Lab, DRDO, New Delhi followed by interactive lecture on "Plasma Turbulence: Physics and Engineering Challenges" by Professor Amita Das, FASc, Department of Physics, IIT Delhi. In all 650 students and faculty members attended the two days workshop.

















