



**Science Festival
and
National Workshop
on**

Environment and Society: Inter-linkages & Co-existence



27-29 FEBRUARY 2020

Organized by

**Hindu College
University of Delhi
&**

Save The Environment

**(A Society for Research awareness & Social Development)
Kolkata, West Bengal**



Science Festival & National Workshop
on
Environment and Society: Inter-linkages & Co-existence

The earth is what we all have in common

-Wendell Berry

About Hindu College



HINDU COLLEGE started with a humble beginning in 1899 with a pre-eminent aim to provide modern and nationalist education to the youth of the Country. Since then it has seen enviable growth over the years. After receiving A+ grade in NAAC accreditation, the College has been recently awarded 2nd rank in All India “National Institutional Ranking Framework (NIRF)” 2019. Currently, it is not only one of the most distinguished co-educational institutions of our country but is also the College of first choice in Delhi.

Hindu College continues to be an agency of change. It promotes an all-round development of the students by inclusion of such values as scientific temper and respect for each other’s culture as a way of life; by promoting the importance of knowledge, and making students visionaries to excel in any profession; and by providing students the widest opportunities to develop their potential to the fullest. Education at Hindu College is aimed at evolving the individual – encouraged through participation in many kinds of co-curricular activities. Most of all, the College aims to produce responsible citizens of the Country.

With the academic expanse of college spanning over all three streams of Humanities, Commerce and Science offering 19 courses, there are more than 30 extra-curricular societies that add to the vibrant environment of the Institution. It aims to deliver a perfect platform for academics, management, sports, ethics and politics. To meet the demand of increasing student strength the College has added to its infrastructural facilities, a New Academic Block and a Girls hostel in addition to an existing boys hostel. To promote research at the undergraduate level, the College is soon coming up with a state of the art research centre in its campus.



DETAILS OF THE SCIENCE DEPARTMENT

Department of Botany

The Department of Botany has since its inception grown in stature and standard. The faculty members are well qualified, who besides teaching, have also been pursuing research. The teachers have published over 110 research papers in journals of national and international repute. They have, in addition, authored/edited a number of books/course materials for CBSE and NCERT. The faculty members of the Department have conducted a number of research projects sponsored by UGC, DST and Delhi University. This has led to better infrastructure and facilities for the students. The students seeking admission to B.Sc. (Hons.) course in Botany come from diverse backgrounds from various places within and outside India. The Department provides them a comfortable environment for their learning and overall grooming for future careers. Students of the Department are actively involved in research at the undergraduate level under various Innovation Research Projects sponsored by the University of Delhi. They also participate in Summer Internship Programmes in renowned labs such as National Institute of Immunology, Delhi and Indian Institute of Science, Bangalore.

The Alumni have distinguished themselves as teachers, scientists in Academic and Research Organizations, Government and Corporate sectors. The Department has a Botanical Society-'Sanjeevani' which organizes Lectures by eminent botanists to keep the students abreast with the latest information in the field of plant sciences. The endeavour is to inculcate interest, curiosity and broaden their minds for a better understanding of the subject at the undergraduate level, prepare them for higher learning in specialized areas and provide an insight into the future career options. The society organizes visits to Research Institutes to provide theoretical knowledge as well as hands-on training to the students in the research labs. The society also organizes field excursions to educate students about the natural habitats of diverse plant groups. Besides educating the students about various plants, it also provides an opportunity for better interaction among students and the faculty members, thereby creating a conducive environment for more effective teaching-learning process. During the annual festival 'Inflorescence', various inter- and intra-college events are organized to widen the horizons of their knowledge and also encourage them to improve their creative talent and skills.



Department of Chemistry

The Department of Chemistry has been one of the most prestigious and well known Departments across the University. It has the distinction of having some very eminent teaching faculty who have been well known authors. With a dedicated team of fifteen strong academicians, the Department proudly takes the credit of producing University toppers consistently in the undergraduate programme. The students of the Department are able to get admission in some of the best Post-graduate, research based Science and Engineering courses in India and abroad. To name a few mention should be made of institutions like TIFR, IISc, IITs, TERI etc. Apart from classroom teaching, several of the faculty members are actively involved in research projects and publishing books.

The department has three well-equipped laboratories along with an instrumentation laboratory that houses modern instruments, such as U.V.-Visible Spectrophotometer, Flame Photometers, Potentiometers, pH meters and colorimeters etc.,

The Department boasts of a vibrant co-scholastic society, 'TATVA', where the students and teachers interact beyond classroom and course curricula, to express themselves freely. The society organises seminars, workshops and popular lectures on regular basis to enrich and update its members with the latest developments across the globe. One of the most attractive events organized by the society is the Inter-College festival 'CATALYSIS' which also witnesses the release of the annual magazine 'SUBSTANCE'.

The department also has the responsibility for running the course of B.Sc. Prog. (Chemistry). Its dynamic society 'TURRIS' organizes its annual festival 'URJOTSAV' which marks the release of its annual magazine 'ESSENCE'.



Department of Physics

The Department of Physics is one of the oldest Departments of Hindu College. It has made significant contribution to the growth and the development of the College as an Institution. The Department has always emphasized adherence to high ethical values within the academic community of students and teachers. The Teacher-Student relationship has seen a paradigm shift over the years. With a committed and a highly accomplished faculty, vibrant environment for innovations and excellent performance record of the students, the Department attracts the brightest of students from 10+2 stream.

The Department faculty members, with specializations in different areas of Physics, place great emphasis on teaching as well as research work. The Department has two well-maintained laboratories which are being upgraded every year with latest equipment. It has a computer laboratory equipped with latest facilities. In addition, the Department has research labs in which the students can carry out their project work, play around with the concepts of Physics, give shape to their innovative ideas and exhibit their creative skills. Classrooms and Labs of the Department are equipped with projectors for efficient and hi-tech teaching. The Department has highly qualified and dedicated faculty, some of whom are working on different research projects and are also engaging students in research work. The faculty members have research papers and well written articles, in renowned journals, to their credit. They have been contributing immensely to the corporate life of the College. Many of them are actively involved in the Administrative work of the Institution.

In addition to the teaching of B.Sc. (Hons.) Physics course, the Department has the responsibility of running the B.Sc. Physical Science (Electronics) and B.Sc. Physical Science (Chemistry) course.

With a history of many decades of academic pursuits alone, it was realized, that the creative energy of the students also needed to be channelized. This laid foundations for the department festival "QUARKS", beginning with the release of its magazine-QUARKS. This has become a regular feature now and The Physics society "EUREKA" organizes its annual festival every Year. Among the various events of the festival that include paper reading, quizzing, debating, poster presentation etc., the lecture series and panel discussions by eminent physicists, remain the major highlight. 'ACME', the Physical Science society, under the guidance of the Teachers-In Charge of Physics and Chemistry departments, organizes its annual festival 'MOMENTA'.

The students of the department have consistently performed well in the University examinations by securing top positions. They have been getting admission, for higher education, in top most universities/Institutions like IITs, Indian Institute of Science Bangalore, TIFR etc., in India and universities abroad. Our students have also carved their niche in various professional areas – Civil Services, Defence Services, management, R & D's etc.



Department of Zoology

The Department of Zoology of the College is one of the coveted departments for pursuing further studies in the field of animal sciences by the Biology students qualifying their Board examinations, every year and is in fact, the institution of their first choice. The Department, therefore, attracts some of the best talent from the +2 stream every year. The Department of Zoology has an accomplished faculty having specialized in diverse research disciplines namely, Cell Biology, Entomology, Fish Biology, Immunology, Neuro-endocrinology, etc. The Department is also involved in active research with 'UGC Major Research Project' and 'DST Young Scientist Start-up Project' awarded to one of the faculty members, Dr. Soma M. Ghorai. Some of the faculty members are also engaged in guiding and supervising the research work of Ph.D. students, as well. The University of Delhi awarded two Innovation projects to 3 of the faculty members jointly with some members of the Department of Chemistry, in the year 2015.

The informal attitude of the faculty and laboratory staff of the Department provides an easy and interactive atmosphere conducive for learning and personality development. No learning can be complete only within the four walls of the classroom. The Zoology Department has a vibrant society aptly named 'GENESIS', which conducts a number of extra-curricular activities throughout the year with the aim of nurturing the budding scientists with their all-round personality development. 'Genesis' offers the students a chance for self-expression and self-assertion and helps them imbibe good social and moral values. As the planning and execution of the various activities of the society are carried out by the students themselves, this inculcates in them a sense of responsibility and brings to the fore dormant leadership qualities which are so sorely needed in today's competitive world to get that extra edge to stand out amongst the crowd. Our students have brought us laurels, and each year, we have been getting the top ranks in the University. The alumni have been able to carve out a niche for themselves in their chosen areas of specialization.



About the Science Festival and Workshop

During the last two decades, anthropogenic pressures on environment (water, air and soil) have increased at a much greater pace. Humans influence the natural environmental conditions in many ways. For instance, discharge of untreated wastewater into river environment is affecting its water quality as well as aquatic, flora and fauna. Similarly, vehicular exhaust is making air environment poisonous. Also, increasing use of fertilizers and pesticides for crop production are affecting the soil environment. Further, their runoff from agricultural fields is polluting water sources. Poor quality of water, air and soil in turn have adverse effect on human health.

There is a dire need to understand the mutual relationship between environment and society. Research and teaching in this area emphasize that the human relationship to the environment can be biological, economic, political, physical, cultural, chemical, or social. Also, there is a need to ensure that all national infrastructural works and resource (especially water) development ambitions should be undertaken in environmentally sustainable manner so that both can co-exist.

To understand this accord between environment and society in a better way the Departments of Botany, Chemistry, Environment, Physics & Zoology at Hindu College have come together for the first time to celebrate Science in their own way through this platform of Science Festival and National Workshop that covers one of the most pertinent issues of the contemporary world– Environment and Society.

The Science Festival and the Workshop-ESIC 2020 aim to bring together researchers, educators, eminent scientists and various segments of industries to initiate conversations on deep rooted environmental issues, exchange knowledge and ideas to ponder upon the prospective and sustainable approaches to solving environmental problems on the local, national, and global scale. Prompt keynote lectures, oral talks and poster presentations along with a host of other events will be organized to this effect through this three day national forum.

Objectives

- Understand the environmental regulations in India and progress with their implementation
- Explore the nature of inter-linkages between environment and society
- Assess whether the environmental goals and societal resource development needs can co- exist
- Promoting the potentials of cleaner research practices for sustainable development

Thematic tracks

**Waste water
treatment and
disposal**

**Bioprocessing for
water treatment**

**Nanotechnology for
water treatment**

**Emission control
measures for air
quality**

**Strategies for
human exposure
reduction**

**Remediation of soil
pollution**

**Emerging
contaminants in
water**

**Toxic metal
contamination in
ground water**

**Marine
environment**

Special Attraction of Science Workshop will include:

➤ **Ab initio molecular modelling of environmental friendly organic based materials**

The workshop will be conducted by **Dr. Shyam Kishor** in collaboration with Neotel Systems & Services (Indian Distributor of Wavefunction inc, USA).

The molecular activities during the workshop will be performed using **ODYSSEY (SPARTAN) software developed by Dr. Jurgen Schnitker, Vice President, Science Education, Wavefunction Inc, CA 92612, USA.**

- **Increase life of E-Waste of Desktops / Laptops by atleast 10 years using Linux Operating System**
- **Air, Water and Soil quality analysis**
- **All physiological health test and Introduction to popular techniques and hands on experience**

Other Exciting Events



Programme Schedule

Day 1: Sessions' Details

Session-I	Inaugural Session		Venue
	8:30-9:00	Registration	Seminar room
	9:00-09:30	Inauguration Dr. Harsh Vardhan, Sh. Sant Sanganeria, Dr. Alok Dhawan, Dr. Ricky Kej	Auditorium
	9:30-10:15	Keynote address Dr. Harsh Vardhan Minister of Health and Family Welfare, Science and Technology and Earth Sciences, Government of India	Auditorium
	10:15-10:30	High Tea	Staff lounge
	10:30-11:15	Invited Talk-1 Dr. Alok Dhawan Director, Indian Institute of Toxicology Research Lucknow	Auditorium
	11:15-12:00	Invited Talk-2 Dr. Ricky Kej Music Composer, Grammy Awardee, UNESCO Global Ambassador for kindness	Auditorium
Session-II	Student Activities		
	12:00-01:00	Paper Presentation	Seminar room
		Poster Presentation	Staff lounge
	01:00-01:30	Lunch Break	Staff lounge
	01:30-04:00	Slogan and Poster designing	Zoology labs
		Just a Minute (JAM)	Conference Room
		Quiz prelims	Seminar room

Day 2: Sessions' Details

Session-III	Invited Talks		Venue
	9:30-10:15	Invited Talk-3 Dr. S.K. Sopory Ex-Vice-Chancellor, Jawaharlal Nehru University, New Delhi	Seminar room
	10:15-11:00	Invited Talk-4 Dr. Vandana Shiva	Seminar room
	11:00-11:15	Tea Break	Staff lounge
	11:15-12:00	Invited Talk-5 Prof. Dinesh Mohan School of Environmental Sciences, JNU, New Delhi	Seminar room
Session-IV	Student Activities		
	12:00-01:00	Debate	Conference Room
		Essay writing	Zoology Lawns
	01:00-01:30	Lunch Break	Staff lounge
	01:30-04:00	Quiz finals	Seminar Room
		Screening of films on environmental issues	Auditorium

Day 3: Sessions' Details

Session-V	Invited Talks		Venue
	9:30-10:15	Invited Talk-6 Dr. Rajkumar Joshi Scientist E, Department of Science and Technology	Seminar room
	10:15-11:00	Invited Talk-7 Sh. J. N. Swain IAS, Managing Director Solar Energy Corporation of India	Seminar room
	11:3-11:15	Tea Break	Staff Lounge
	11:15-12:00	Invited Talk-8 Prof. A.K. Attri School of Environmental Sciences, JNU, New Delhi	Seminar room
Session-VI	Student Activities		
	12:00-01:00	Workshops	Labs in New academic block
	01:00-01:30	Lunch Break	Staff lounge
	01:30-03:00	Workshops	Labs in New academic block
	3:00-4:00	Valedictory	Auditorium

Proposed Budget

Items	Expenditure (Rs)
Pre Conference printing	75,000
TA & Honorarium for Resource Person	80,000
Local Hospitality	3,00,000
Prize Money	50,000
Mementos	50,000
Workshop Kit	70,000
Stationary	40,000
ICT Assistance	60,000
Total Expenditure	7,25,000

Target Audience:

Around 1400 undergraduate students and 60 faculty members with a few postgraduate students and research scholars.

Bank Details for transfer of funds:

Name of Account : BOYSFUND ACCOUNT
Account Number : 10851301266
Bank Name : SBI Hindu College
IFSC Code : SBIN0010433

Co-Chairs

Dr. Anju Srivastava
Principal, Hindu College
University of Delhi

Dr. Kshipra Misra
President,
Save the Environment
Former Additional Director,
DIPAS, DRDO

Convenor

Dr. Reena Jain
Vice Principal, Hindu College
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