



# IDP-NAHEP Pantnagar Updates

G. B. Pant University of Agriculture & Technology  
Pantnagar 263145, Uttarakhand

No. 9  
June 2020

## Message of IDP Leader, GBPUAT, Pantnagar Enhancing Alumni Connects for Enriching Experience and Expertise through IDP

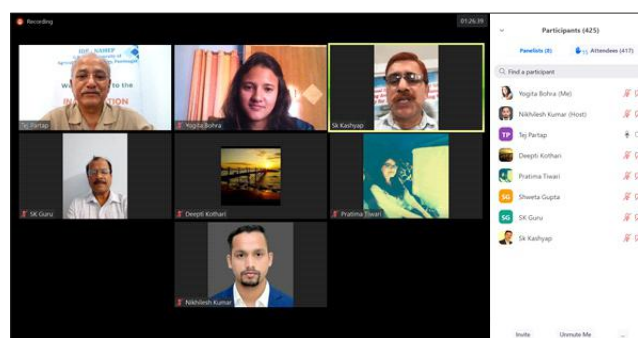
Pantnagar is known for improved seeds and excellent students. The Pantnagar alumni have contributed immensely in various spheres of academia, industry, social development, and politics all across the globe due to the rigorous upbringing in Pantnagar culture of excellence and discipline. The University has always strived to maintain and strengthen its alumni relations through the alumni bodies working in the campus, however, to further make targeted efforts towards streamlining the alumni strength in University interest, the IDP-NAHEP team at the University has been making concerted efforts to connect with alumni all across the world. Their regular initiatives of linking the alumni for their various activities such as skill based workshops, entrepreneurial mentoring, guest lectures, industry exposure sessions, etc. is indeed praiseworthy. Moreover, their plans of establishing learning centres and advance technology units with the help of alumni is also another appreciable initiative. Similarly, a focussed effort is in progress to establish alumni network nodes across the globe for which illustrious alumni have come forward to support and help the venture. Other intense networking plans are also underway, and I am hopeful that this entire exercise of reaching out to our alumni will help create enriching learning experience for our students in generating industry required expertise. The University wishes to maintain a symbiotic relationship with its alumni wherein even the alumni benefit through the skilled graduates of the University, research developments of the scientists, and the farming inventions and innovations.



  
(Tej Partap)

## Dr. Tej Partap Addressed Nationwide Scholars and Scientists on Prospects of Himalayan Agriculture

The opportunities and challenges associated with hill agriculture are numerous and Dr. Tej Partap, hon'ble Vice-Chancellor, GBPUAT, Pantnagar is one of the renowned stalwarts of hill agriculture. The IDP Pantnagar team organized a national webinar on May 2, 2020 where Dr. Tej Partap deliberated on *Himalayan Agriculture in India, Scope and Prospects*. He initiated with describing the topography of the Himalayas, followed by the agro-ecosystems in which the Himalayan region is divided. He then talked about the major issues surrounding hill agriculture such as the ghost villages, Jhoom lands, shrinkage of land



resources, along with the role of education in creating future mountain farmers. He also highlighted the

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## Online Training for Agri-Graduates on Technology Transfer through Participatory Learning

Technology transfer using participatory model has been used extensively for sustaining livelihood in an agrarian economy like India. Therefore, it has become utmost essential for graduates to get exposure to the concept of evolving themselves as smart workers of the 21<sup>st</sup> century. With this idea, a guest lecture was organized under the umbrella of IDP-NAHEP, Pantnagar on *Skilling Graduates in Technology Transfer through Participatory Learning* on May 12, 2020. Dr. Bikash Das, who is presently serving as Principal Scientist at ICAR Research Complex for Eastern Region Research Centre, Ranchi led the online session with participation of selected extension and communication students from across the country. Dr. Das shared his success story of more than two decades of working with the tribal farmers of Jharkhand state in participatory mode. He elaborated on how his team with the help of participatory approaches brought many technological interventions in Jharkhand for transforming the lives of tribal people. Dr. Das explained that he had tried to promote many of the flagship technologies by putting 19 years of his experience. He added that multitier cropping system, trench making, alley cropping, ultra-high density orcharding in guava, fruit bagging in mango, and various orchard establishment essentialities like fencing, pit size, wind protection, quality planting material, irrigation, canopy management are some of the common technologies that have been successfully



experimented by his team. Dr. Das stated that his intensive efforts evidently proved that such methodologies are vital to empower the rural population by evolving them as rural innovators and helping them explore sustainable livelihood options like nursery management, branding, labelling, sales promotion and others. Dr. S.K. Guru, Nodal Officer (Academic), IDP-NAHEP, Pantnagar coordinated the session and while concluding the session he said that being into the field of agriculture and allied sciences we need to take into consideration the scale of efforts taken by Dr. Das in participatory mode and must promote the future extension workers to follow a similar approach. A total of 85 participants got benefitted from this online training who heartily appreciated the work and experience of the expert.

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dislocation vulnerabilities that have a terrific impact over the farmers. Continuing with the talk, Dr. Partap applauded the efforts made by farming community to convert marginal lands into economically productive and ecologically sustainable lands. He mentioned about the role of PDS and MNREGA as ecological, social and economic drivers of mega change in hill agriculture. Since Dr. Partap has travelled and worked in the major hilly regions of the world including the Andean region of South America, Alps in Europe, African highlands, Asian uplands from Thailand to Philippines and Japan and every part of the eight countries of the Hindu Kush Himalayan region from Afghanistan to China to Myanmar, as his concluding remarks he shared his worldwide learning experience in context of improving the Himalayan farm economy.

He even displayed some unique photographs which were collected during his endeavours in the hill regions all across the world. The words of Dr. Partap gave an opportunity to the participant to learn about the intricacies of hill agriculture in the Himalayan region. The talk was followed by a long question answer session, as more than 400 participants were present for the webinar with their intriguing queries. The closing remarks for the session were delivered by Dr. S.K. Kashyap, PI, IDP-NAHEP (also Dean, College of Agriculture) who further informed the participants about the enormous contribution made by Dr. Tej Partap in exploring and reviving the hill agriculture in the Asian region and extended the gratitude on behalf of entire IDP Pantnagar team for sparing his valuable time for such a thoughtful webinar.

## Online Training on Linking Livestock Science with Economics in Indian Perspective

In the series of online trainings that are being regularly conducted by IDP Pantnagar team, an online training was organized for students to aware and encourage them about the possibilities of entrepreneurship in the area of poultry and livestock. Dr. Ibne Ali, a Pantnagar alumnus and a Livestock and Poultry Consultant who has been guiding numerous students about the process of initiating, maintaining and running profitable poultry and livestock business ventures, took the online training on May 2, 2020. A total of selected 65 veterinary students participated in the training programme. Dr. Ibne Ali initiated his talk by briefing the participants about the present scenario of livestock and poultry, the dominating species of animal produce in the country and the contribution of this industry in the national income. Thereafter, he educated the students from his own experiences regarding integration of livestock with economy and the manner in which supply chain of livestock products is governed in the country. Dr. Ali highlighted that professionals in this field need to understand the theories associated and their application in the field



from the mind-set of the beneficiaries. He emphatically stated that a graduation or postgraduation degree in veterinary sciences offers an opportunity for the students to enter into the field of consultancy, content creation related to animal husbandry practices, feeding and nutrition of animal, health concerns of livestock and poultry, etc.

Therefore, the focus should not be only on getting a government job rather on initiating a start-up after identifying the opportunities appropriately. Answering to the queries of the participants, Dr. Ali stated that there is a dire need of educating the farmers/animal owners in understanding the mind-set of traders lobby in reducing the profit margins during crisis situations and of providing solutions to their problems. While closing the session, Dr. Aman Kamboj, Project Scientist (Academic), IDP-NAHEP, Pantnagar stated that the session nurtured the mindset of young graduates to understand the scope of entrepreneurship in the field of veterinary and animal sciences. The participants also reflected positively, and assured that in due course of time they would be coming up with business ideas in the given field.

## Guest Lecture Organized on Advanced Applications of Biomedical Engineering in Livestock Management

Dedicated to the career enrichment of the students by providing them interdisciplinary learning experiences, the academic team of IDP-NAHEP, Pantnagar organized a guest lecture on the topic *Advances in Biomedical Engineering and Its Application in Livestock Health and Management* on May 21, 2020. The expert for the session was Professor Naresh Rakha, Senior Scientific Officer at Indian Institute of Technology (IIT) Ropar, Punjab. The expert engaged with the participants using interactive pedagogical tools and discussed about the path-breaking technological innovations in the field of veterinary sciences such as image labelling, super hologram, metabolic disease detection applications, precision livestock farming, and cultured meat. He also highlighted that how the introduction of minor modification of medical devices can lead to optimization of the livestock health care. The session



enlightened the participants on career opportunities in advanced technology development through creating alignment between the discipline of information technology, biomedical engineering, and medical with veterinary as well as agriculture and allied disciplines. After the interactive discussion, the participants

raised their specific queries regarding the utility of biotechnological advances in agriculture and veterinary sciences especially with reference to hill farmers, the cost-benefit ratio in utilizing technology based farming and poultry techniques, etc. The queries were aptly responded by the expert using several success cases. The session was

coordinated by Dr. Sanjay Kumar Sharma, Project Scientist, Industry Collaboration Team and Dr. Aman Kamboj, Project Scientist (Academic) of IDP-NAHEP, Pantnagar and was attended by a total of 135 participants.



## IDP PANTNAGAR HOSTS A SERIES OF TRAININGS ON PROSPECTS OF TECHNOLOGY LED AGRICULTURE

### Award Winning IT Expert Mr. Bohitesh Mishra Discoursed on Data Science and Analytics Case Studies

The role of data analytics has gradually emerged as a potential tool for enhancing outputs and outcomes in all possible domains where data (information) is available. To upskill the students with varied aspects of technological advancement, IDP-NAHEP Pantnagar has been organizing various workshops and trainings. Continuing with the efforts, a webinar was organized on May 26, 2020 where Mr. Bohitesh Misra, Chief Operating Officer (COO) and Chief Technical Officer (CTO), Xiphias XPay Life Software Technologies guided the students. Mr. Misra is an alumnus of Pantnagar and has been bestowed with various national honours such as IT NEXT 100 Future CIO, Star CIO of the Year 2019, Smart Innovator Award 2019, Eminent CIOs of India 2019, etc. for his exemplary contribution in the field of information technology and data science. With his vast experience of more than 25 years in the corporate world, he made the participants understand the basics of data science (data mining, big data, types of data, domains, and applications of data mining and machine learning approaches) in a simplified manner. He then discussed about the techniques of data classification, clustering, association and correlation analysis, outlier analysis and regression algorithms, and how these techniques can be used in forming various kinds of information from raw datasets along with their applications in data



mining. Further, he briefed about the integration of business, information technology, and data science skills needed to be a successful data scientist. He shared his analysis made from the case studies while working with different organizations and provided an insight on how data processing can help in taking managerial level decisions to increase revenue. Summarizing, he described about the present and future scope of data science and analytics and gave a mantra to the participants, i.e. “gather whatever data you can, whenever and where ever” because gathered data is useful for a specific purpose and can be used for upcoming causes. Dr. S.K. Kashyap, PI, IDP-NAHEP, Pantnagar provided the concluding remarks and said that Pantnagar is proud of its alumni and hopes to provide as well as receive support from them for greater cause of student development.

### CEO Rannlab Technologies Deliberated on Artificial Intelligence Applications in Agriculture

The field of agricultural informatics is emerging as a prominent growth area due to its observable outcomes for the farming community and the agriculture industry. The Agri Informatics component of IDP Pantnagar has also been striving to equip the students with requisite information and skills in this domain. Thus, a three days online training was organized from May 22-24, 2020 for undergraduate students of agricultural universities of the country. Mr. Umesh Kushwah, Founder and Chief Executive Officer of Rannlab Technologies, Noida was invited as the expert trainer. The agenda of the training programme was to enhance the knowledge of the participants

towards the utility of artificial intelligence tools in the field of agriculture. The three days of the training programme were focused towards the basics of artificial intelligence and machine learning, monitoring crop health, image processing techniques, and forecasting case studies. Mr. Kushwah clearly explained the difference between artificial intelligence, machine learning, and deep learning, following it up with the concepts of data analysis, vision analysis, robotics and their implementation in agriculture. He focused on seasonal forecasting models to improve agricultural accuracy and

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## Chief Science Officer AgEYE Technologies Discussed About Agriculture 4.0 Advancements

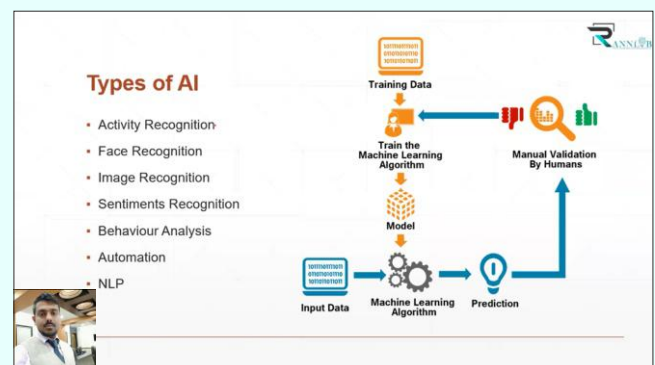
The Industry 4.0 has given the pace for evolution of Agriculture 4.0. The digitally smart agricultural processes, systems, and technologies are now emerging and gaining acceptance from the agricultural stakeholders. In order to generate rich insights for the student community regarding Agriculture 4.0, a webinar was organized on May 29, 2020. The expert of the event was Dr. Shivangi Arvind, Chief Science Officer, AgEYE Technologies, Bengaluru. Her organization works to create agriculture solutions using computing and automation technologies through which sustainable food supply chain could be ensured and farming emerges as a profitable venture. Dr. Arvind exemplified the concept of Agriculture 4.0 and digital farming, highlighting the idea of artificial intelligence, internet of things, cloud computing, machine learning and other digital technologies in collaboration with each other. She described how amalgamation of different technologies can provide farm solutions related to crop production, storage, distribution, money management, etc. Since she has been working with various global agritech organizations, she showcased the technologies which are being experimented and worked upon in business



organizations, research institutes and universities in USA, Netherlands and Israel. She also discussed the need and scope of digital farming in the Indian context and the skills required to be market ready. Towards the end, she listed various technology based emerging career avenues for agriculture graduates in the corporate sector as well as in entrepreneurship with reference to the policy and programme framework of the government. Closing the session, Dr. S.K. Guru, Nodal Officer (Academic), IDP-NAHEP, Pantnagar expressed gratitude to the expert for guiding the participants about agricultural advancements and motivating them to learn more about digitalization in agriculture.

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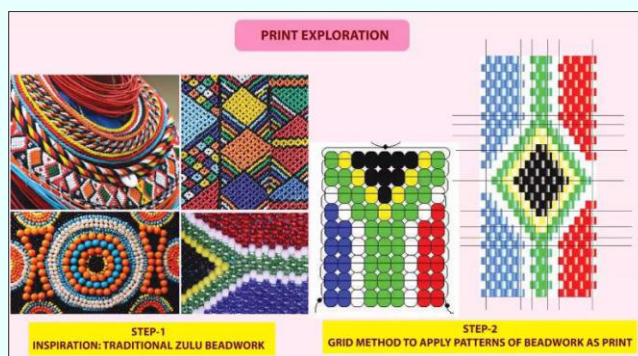
productivity. The participants could comprehend that how forecasting models can predict upcoming weather patterns to assist the decisions of farmers, how image processing can result in precise agriculture with the availability of higher quality measurements coupled with modern algorithms and an increased possibility to fuse multiple sources of information from satellite imagery and sensors positioned in fields, how agricultural bots, soil and crop monitoring, and predictive analytics can result in better farm income. The basics of Python programming language were also explained by the expert, which is an important language used for generating computing algorithms. The three days extensive training received praise from the participants. It was an opportune occasion to learn directly from a practitioner of the AI domain. The valedictory session of the training programme witnessed the presence of Dr. A.S. Nain, Coordinator, Agri Informatics, IDP-NAHEP, Pantnagar (also Director Research). He stated that “farmers are increasingly



using sensors and soil sampling to gather data and this data is stored on farm management systems that allow for better processing and analysis and thus the availability of this data and other related data is paving a way to deploy artificial intelligence techniques in agriculture”. The vote of thanks was given by Dr. Rajeev Ranjan, Project Scientist, Agri Informatics, IDP-NAHEP, Pantnagar who wholeheartedly applauded the effort of the expert and the participants.

## Students Enriched with Key Skills and Prospects of Digital Designing

Digital Designing has been one of the fascinating avenues of work in the recent times. To further hone the skills of students in digital designing, an online workshop was organized on May 30, 2020 which was conducted by Ms. Varsha Pant, Senior Designer, Digital Research and Development Team, Tarun Tahiliani Design Studio, New Delhi. Ms. Pant is a Pantnagar alumnus and in her short stint of five years of industrial experience, she has worked with renowned designers. Initially, she acquainted the participants with fundamentals sources of design creation. Quoting examples from her projects, she stated that one often needs to take design inspiration from various primary and secondary sources such as nearby living conditions, human experiences, working space, etc. She then elaborated on how a design is developed in the fashion industry by keeping in mind the concept of research design process, seeking new dimensions of inspiration and analysing the prevailing trend of the market. Ms. Pant told that the fashion industry demands an individual to have swift hands on



skill in digital designing, professional skills of designing a portfolio/ job resume and communication skills while working on projects under some reputed banner or as a freelancer. The workshop was followed by several queries of the participants regarding digital designing software, design development, portfolio development, etc. More than 150 participants attended the workshop and generated insights on digital designing as a career avenue. Ms. Shefali Massey, Project Scientist (Academic), IDP-NAHEP, Pantnagar coordinated the workshop.

## Emerging Career Opportunities in Post Covid-19 Scenario

The current COVID-19 pandemic has raised high concerns in the economic and social spheres of most nations in the world. With respect to the graduating students in the present time, the employment opportunities have been drastically impacted. However, every cloud has a silver lining and to explore these silver linings, IDP Pantnagar team invited Prof. Naresh Rakha, Senior Scientific Officer, Indian Institute of Technology (IIT) Ropar, Punjab to address the emerging concern of employment as well as the possible opportunities in the post COVID-19 world. The online interactive session was held on May 26, 2020. The expert centered his deliberations on the career prospects in the public and private organizations, and the scope of entrepreneurship. Dr. Rakha broadly explained the process of entrepreneurship from the scratch and its potential as a career option in coming days. He stated that entrepreneurship requires young minds to brainstorm ideas based on one's USP (unique and appealing characteristic), skill sets, ability to work in teams, and to persevere through difficult situations. Dr. Rakha shared a mantra of EFGH i.e., Exploring, Funding, Grooming and Helping, and said that EFGH determines



the success of any entrepreneurial venture. He also highlighted about technology based start-ups, especially automation based as this would be the defining approach in coming times. He even emphasized on interdisciplinary prospects both in academia (research, teaching innovations) and corporate. The interactive session was coordinated by Dr. Sanjay Kumar Sharma, Project Scientist, Industry Collaboration Unit, IDP-NAHEP, Pantnagar. A total of 100 participants attended the interactive session and got insights on both conventional and non-conventional career opportunities related to their specific disciplines from the expert.

## Stress Management Workshop Conducted by Lt. Gen D.P. Vats

Stress amongst younger generation has become a very common phenomenon these days. Looking into this challenge, an online workshop was conducted by IDP-NAHEP, Pantnagar on May 31, 2020 focussing on helping participants to learn the art of stress management. The session was wheeled by Mr. D.P Vats, Retired Lt. General, Indian Army and presently serving as Member of Parliament, Rajya Sabha. Serving the nation in armed force medical wing and then, as a bureaucrat, General Vats talked about the causes of stress in everyday life along with the cause of stress through family and national crisis. He comprehensively elaborated how sports, physical

exercise, yoga and meditation, music and positive thinking can help deal effectively with stressors. Quoting the reference of Shrimad Bhagwad Geeta and teachings of Lord Buddha, General Vats stated that religious beliefs and faith also have a positive impact while reacting to stressors viz. facing the odds, fear of failure, and unwillingness to fight. Dr. Sanjay Kumar Sharma, Project Scientist, Industry Collaboration Team, IDP-NAHEP, Pantnagar coordinated the workshop. Dr. S.K. Kashyap, PI, IDP-NAHEP also stated that presence of General Vats has been a prideful moment for the University and indeed his experiential words of wisdom were helpful for all.

### The Main Events of June 2020

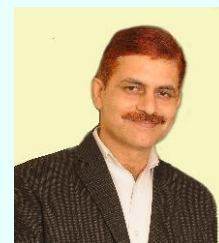
S. No.	Event	Proposed Date	Venue	Nodal Unit	Convener
1.	Guest Lecture on Small Animal Dermatologist Disease and their Zoonotic Importance	01-06-2020	Online	Academic Team	Dr. Sanjay Kumar, College of Veterinay and Animal Sciences
2.	Online Workshop on Using Open Educational Resources (OER) for Creating Courses	01-06-2020 to 02-06-2020	Online	e-Governance Team	Dr. S.K. Kashyap, College of Agriculture
3.	Live Talk on World Environment Day	05-06-2020	Online	College of Technology and Academic Team	Dr. S.K. Guru, College of Basic Sciences and Humanities
4.	Sensitization Workshop on IPR and Patent Design Specifications	12-06-2020	Online	Academic Team	Dr. S.K. Guru, College of Basic Sciences and Humanities
5.	Guest Lecture on Smart Farming, Exploring IoT in Agriculture	14-06-2020	Online	Academic Team	Dr. S.K. Guru, College of Basic Sciences and Humanities
6.	Guest Lecture on Entrepreneurial Opportunities in Agro Food Processing Sectors	17-06-2020	Online	Academic Team	Mr. Umesh Lohani, College of Technology
7.	Workshop on Critical Robotic Services for Handling Corona Pandemic	19-06-2020	Online	Agri Informatics TeamTeam	Dr. A.S. Nain, College of Agriculture
8.	Interactive Session on Qualitative Research Methodologies in Social Science	22-06-2020	Online	College of Agriculture and Academic Team	Dr. S.K. Guru, College of Basic Sciences and Humanities
9.	Webinar on Research Paper Writing Challenges	23-06-2020	Online	PG Society and Academic Team	Dr. S.K. Guru, College of Basic Sciences and Humanities
10.	Training on Precision Farming	29-06-2020 to 03-07-2020	Online	Agri Informatics Team	Dr. A.S. Nain, College of Agriculture



## Realising the Long-Cherished Dream of ICT Integration in Teaching-Learning

**Dr. S.K. Kashyap**  
**Dean, College of Agriculture/PI, IDP-NAHEP, Pantnagar**

The Educational Technology Cell of Pantnagar University has been functional since last two decades to nurture the teaching-learning community of the University in context of teaching skills, contemporary pedagogical interventions, classroom management, learner-centric approach, and other relevant and need-based issues. However, the advanced tools of educational technology, online teaching-learning, webinars, online students' seminars, online viva of research scholars etc. were not prevalent owing to lack of any urgency to switch from traditional face to face teaching-learning situations. Now, the COVID-19 global pandemic has pushed the entire world into the ocean of digitalization, and Pantnagar University has also gradually accepted the digital modes of teaching-learning and is making all possible efforts to enhance the related infrastructure and the skill sets of concerned stakeholders including faculty members, students, administrative staff, etc. The IDP Pantnagar team has been leading this digital onboarding process in the University in a structured manner to ensure a systematic transition. Hundreds of hours of training and formal and informal interaction sessions have been conducted and still the IDP team is continuously working to make this digitalization journey an enriching experience for all. I am confident that in the times to come, the University will have immense benefits from this entire digital teaching-learning system which is prosperously emerging.



### Top Scorers of IDP Golden Points Till May 2020



**Yogesh Pandey**  
ID : 50192  
College of Basic Sciences and Humanities  
Points Earned : 630



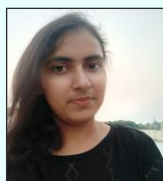
**Sumit Tiwari**  
ID : 52963  
College of Agriculture  
Points Earned : 430



**Sarthak Kothiyal**  
ID : 51662  
College of Agriculture  
Points Earned : 580



**Shaurya Dumka**  
ID : 49766  
College of Veterinary and Animal Sciences  
Points Earned : 405



**Varsha Kamboj**  
ID : 53217  
College of Home Science  
Points Earned : 530



**Rekha Bhandari**  
ID : 52961  
College of Agriculture  
Points Earned : 405



**Yanshi**  
ID : 49758  
College of Veterinary and Animal Sciences  
Points Earned : 480



**Samyak**  
ID : 53589  
College of Technology  
Points Earned : 405



**Shubham Singh**  
ID : 53734  
College of Technology  
Points Earned : 430



**Chinmay Gupta**  
ID : 49787  
College of Veterinary and Animal Sciences  
Points Earned : 400