



Miranda House UNIVERSITY OF DELHI

Departmental Annual Report- 3

Departmental Activities: Curriculum and Beyond

Department: Botany

Academic Year: 2020-2021 (1st July 2020 to 30th June 2021)

Part A.1

Students undertaking project work/field work/internship as part of experiential learning component of course work

No field visit could be undertaken in 2020-2021 due to the pandemic. Only one Virtual Visit was undertaken.

Virtual Visit to Yakult Danone India Pvt. Ltd. Plant

Permission for a Virtual Visit





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Confirmation of the Virtual Visit

Confirmation for Virtual visit to Yakult Danone India on Apr 19, 2021 at 12:00 PM. [Expand](#) [Block](#)

Aadish - aadish@yakult.co.in
to Rajeshwari, me, Ajay, Tuskar

Dear Dr. Nanda,

Hope you are healthy and safe during this uncertain and unprecedented time!

In the reference to your request, we confirm your virtual visit for 19th April 2021 at 12:00 PM. Please consider this as a line of confirmation. **In case of any changes, please inform us in advance.**

Here are the details of the connectivity platform for 19th April 2021 at 12:30 PM for the trial session.

Microsoft Teams meeting
Join on your computer or mobile app
[Click here to join the meeting](#)

We look forward to receiving your acknowledgment receipt. For further information, feel free to contact us.

Contact Person:	Mr. Aadish	Mr. Ajay	Mr. Tuskar Kumar
Contact Number:	(+91) - 9416199757	(+91) - 9467183995	(+91) - 9996929280

Warm Regards
Aadish
(Executive - PR Dept.)
[Yakult Danone India Pvt. Ltd.](#)

On Mon, Apr 5, 2021 at 4:57 PM Aadish <aadish@yakult.co.in> wrote:

Dear Dr. Nanda,

Greetings from Yakult!

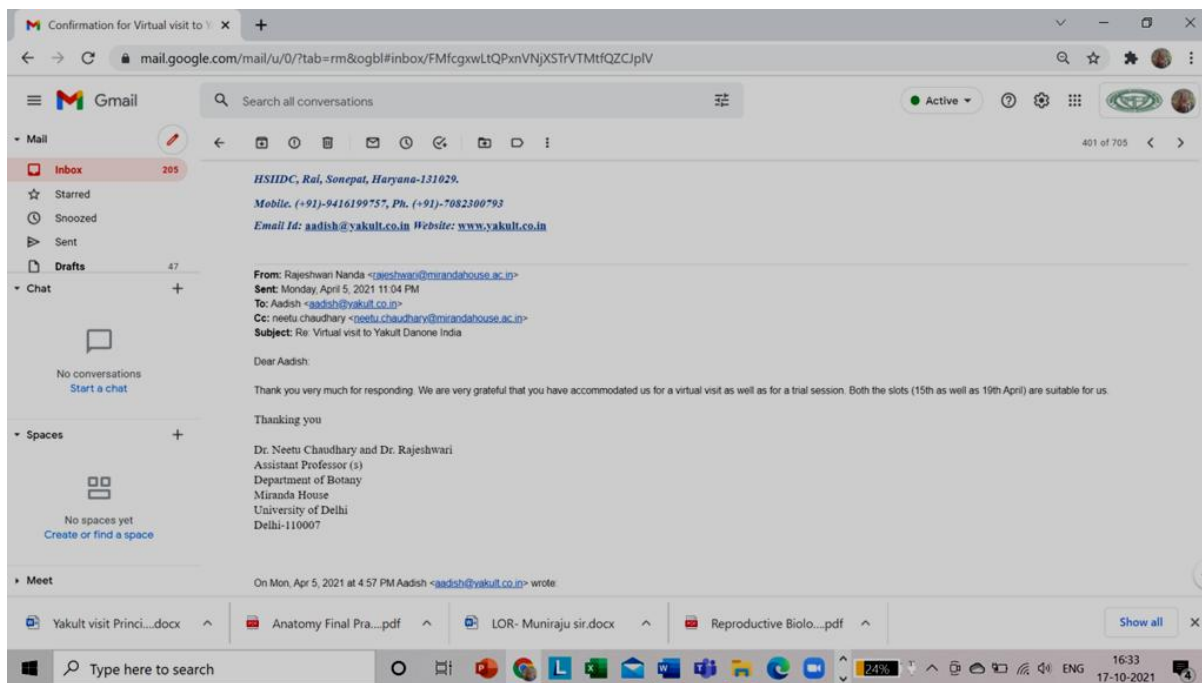
We can schedule your virtual visit for 19th April 2021 at 12:00 PM. We are fine to conduct it on Microsoft Teams and prior to this session, we would like to do a brief trial to check the technical aspects. As per our convenience 15th April 2021 at 12:30 PM can be a suitable schedule for the trial session.

Kindly acknowledge your suitability for both slots. Accordingly, we'll confirm your virtual visit.

Warm Regards
Aadish
(Executive - PR Dept.)
[Yakult Danone India Pvt. Ltd.](#)
Plot no. 402-405 & 410-413, Food Park,
HSIIDC, Rai, Sonapat, Haryana-131029.
Mobile: (+91)-9416199757, Ph. (+91)-7982360793
Email Id: aadish@yakult.co.in Website: www.yakult.co.in



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Report on the Virtual Visit

S. No.	Paper: Industrial & Environmental Microbiology	
1	<p>Place of visit: Virtual visit to Yakult Danone India Pvt. Ltd., Food Park, HSIIDC, Rai, Sonapat, Haryana</p> <p>Date: 19th April 2021</p> <p>Programme: B.Sc. (H) Botany III Year</p> <p>Course: Industrial & Environmental Microbiology</p> <p>No. of students: 28</p> <p>Accompanying teachers: Dr Rashmi Shakya, Dr. Neetu Chaudhary and Dr. Rajeshwari</p> <p>Objectives achieved</p> <ol style="list-style-type: none"> 1. Virtual field visit as per syllabus 2. Gave the students an overview of 	 <p>Yakult Danone Factory located at Sonapat</p>  <p>Factory Operations Yakult Quality Control Now our Yakult is quality checked. Now it is time for moving to further operations.</p>



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	<p>manufacture of Yakult Probiotic Drink.</p> <p>Duration of the visit: One day</p> <p>This field visit is a part of the curriculum, and CIE of practical paper.</p>	 <p>The image shows a display area for Yakult products. At the top, it says 'Factory Operations' and 'Yakult'. Below that, it says 'Show case area' and 'Yakult'. The display features several Yakult bottles and boxes. A caption at the bottom reads: 'A Japanese scientist who isolated and cultured it. Later, he used this strain to make Yakult.'</p>
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Names of students of B.Sc. (H) Botany III Year

S. No.	Roll No.	Name
1	346	Aarohi Rawat
2	29	Akshita Solanki
3	1224	Ashmita
4	264	Bharti Singh
5	1369	Choo Choo Gulshan Fatima
6	643	Diksha Patel
7	384	DivyaJaitak
8	872	Jyoti
9	1267	Jyotsana
10	18	Kriti Choudhary
11	258	Laiba Fatima
12	197	Madavi Sarika
13	871	Mamta
14	971	Meghana Mariam Mathew
15	642	Muskaan Johnson
16	405	Namindla Bhargavi
17	510	Neeraj Kumari
18	954	Pallavi Sharma
19	1535	Parul
20	1428	Pooja
21	302	Pragya Jha
22	1513	Rakhi
23	1422	Saifali Dhyani
24	837	Shweta Rana
25	20	Swati Nayak
26	565	Tamanna Yadav
27	190	Vankudothu Swathi



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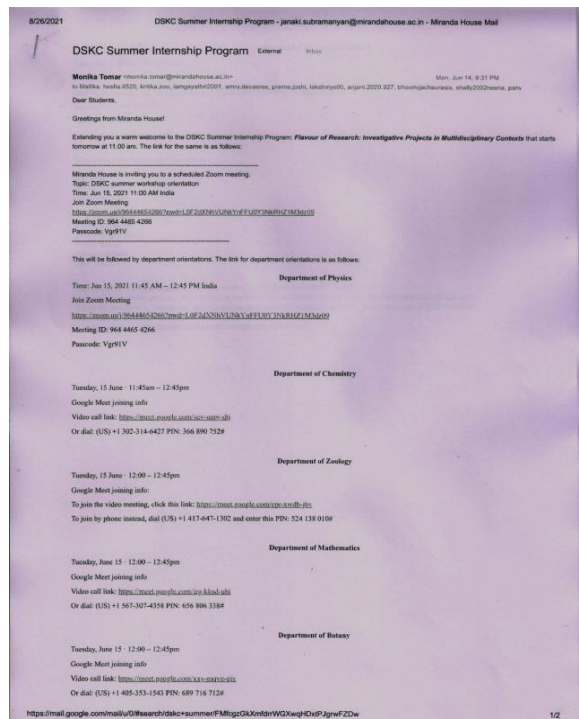
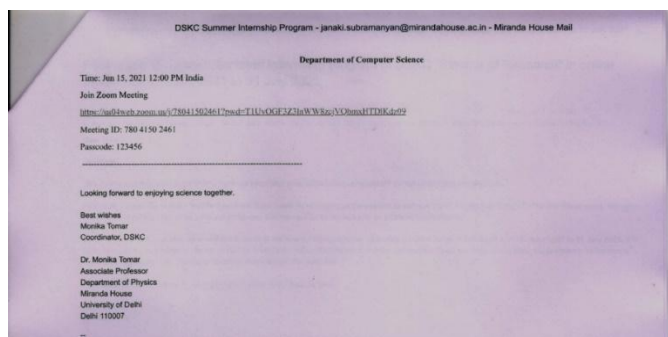
28	992	Yumnam Sonata Devi
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Meeta Chaudhary

Part A.2

Students undertaking project work/field work/internship (beyond the requirements of coursework)

Email informing about the Online Orientation for DSKC Summer Program *Flavor of Research: Investigative Projects in Multidisciplinary Context* at Miranda House on 15 June 2021.



Programme name	Programme Code	Name of the students
	DSKC Summer Internships 2021	
B.Sc. (H) Botany II Year, SGTB Khalsa College	Project 1 Project title: Programmed Cell Death In Plants	1. Ekamveer Kaur 2. Manpreet Kaur 3. Manpreet Kaur
B.Sc. (H) Botany I Year,		4. Shailza Bhati



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<p>Miranda House</p> <p>(Mentors Dr. Janaki Subramanyan and Dr. Neetu Chaudhary)</p>		
<p>B.Sc. (H) Botany I Year, Miranda House</p> <p>(Mentors Dr. Janaki Subramanyan and Dr. Neetu Chaudhary)</p>	<p>Project 2</p> <p>Project title: Rubisco And PEP Carboxylase</p>	<ol style="list-style-type: none"> 1. Bhavna 2. Nitu Kumari
<p>B.Sc. (H) Botany III Year, Miranda House</p> <p>B.Sc. (H) Botany II Year, Miranda House</p> <p>B.Sc. (H) Botany I Year, Miranda House</p> <p>B.Sc. Life Science I Year, Miranda House</p> <p>B.Sc. Life Science II Year, SGTB Khalsa College</p> <p>(Mentors: Dr. Saloni Bahri and Dr. Somdutta Sinha Roy)</p>	<p>Project 3</p> <p>Project title: Phytochemicals Of Family Poaceae And Their Biological Function</p>	<ol style="list-style-type: none"> 1. Ashmita 2. Binisha Shrestha 3. Tanzeela Nazir 4. Prateeksha Asati 5. Garima Rao 6. Niharika Jakhar 7. Jaspreet Kaur
<p>B.Sc. (H) Botany II Year, Miranda House</p> <p>B.Sc. (H) Botany I Year, Miranda House</p> <p>B.Sc. (H) Botany II Year, Hindu College</p>	<p>Project 4</p> <p>Project title: Secondary Metabolites In Some Gymnosperm Species</p>	<ol style="list-style-type: none"> 1. Chahat Kaushal 2. Deepti 3. Laimayum Isani Devi 4. Smriti Rathee 5. Sapana Maurya 6. Suruchi Yadav 7. Sandhya Kumari 8. Manasvi Chaturvedi



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(Mentors: Dr. Saloni Bahri and Dr. Somdutta Sinha Roy)		
B.Sc. (H) Botany II Year, Miranda House (Mentor: Dr. Rashmi Shakya)	Project 5 Project title: Iron Homeostasis And Its Regulation By Nitric Acid, Melatonin And Hydrogen Sulphide During Fruit Ripening	1. Kanika Bharadwaj 2. Prachi Choudhary
B.Sc. (H) Botany II Year, Miranda House (Mentor: Dr. Rashmi Shakya)	Project 6 Project title: Role Of Nitric Oxide In Plant Reproduction	1. Shreya Pandey
B.Sc. (H) Botany II Year, Miranda House (Mentor: Dr. Rashmi Shakya)	Project 7 Project title: Pollen-Stigma Interaction- Role Of Enzymes	1. Vineeta Singh
B.Sc. (H) Botany II Year, Hansraj College (Mentor: Dr. Rashmi Shakya)	Project 8 Project title: Role Of Calcium In Pollen-Stigma Interaction	1. Nandini Killa
B.Sc. (H) Botany II Year, Hansraj College (Mentor: Dr. Rashmi Shakya)	Project 9 Project title: Role Of Reactive Oxygen Species In Plant Reproduction	1. Josemon Biju
B.Sc. (H) Botany I Year, Miranda House (Mentor: Dr. Rashmi Shakya)	Project 10 Project title: A Survey Of Pollen Allergens In Asteraceae	1. Angel Malhotra 2. Bidyaluxmi Khurajam 3. Lobsang Tsekey 4. Priti Kulhari
B.Sc. Life Science I Year, Miranda House	Project 11	1. Ishita Sukhija 2. Ekta



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(Mentor: Dr. Rashmi Shakya)	Project title: Pollen-Stigma Interaction In Grasses- A Review	
B.Sc. Life Science II Year, Miranda House (Mentor: Dr. Rashmi Shakya)	Project 12 Project title: <i>Ostreococcus tauri</i> - An Emerging Model Organism For Experimental Studies In Plants	1. Anushka Dayal 2. Anisha Raj
B.Sc. Life Science II Year, SGTB Khalsa College B.Tech. Biotechnology I Year, Amity Institute of Biotechnology (Mentor: Dr. Renuka Agrawal)	Project 13 Project title: Covid-19 Vaccines: A Comparative And Systematic Review	1. Harleen Kaur Chawla 2. Ishita Pahwa
B.Sc. (H) Botany II Year, Miranda House (Mentor: Dr. Renuka Agrawal)	Project 14 Project title: Effectiveness Of Herbal And Allopathy Based Therapeutics Used Against Covid- 19: A Review Cum Cross Sectional Survey	1. Anjali Karn 2. Garima Dubey 3. Kanika Singh 4. Preeti Gupta
B.Sc. (H) Botany II Year, Miranda House B.Sc. Life Science II Year, Miranda House (Mentor: Dr. Renuka Agrawal)	Project 15 Project title: Hidden Pandemic: Post Covid Complications	1. Aayushi Sahay 2. Gitanjali Sharma 3. Kirti Singh 4. Doddi Venkata Apoorva
B.Sc. Life Science I Year, Miranda House (Mentor: Dr. Renuka Agrawal)	Project 16 Project title: A Comprehensive Review Cum Survey On Sars- Cov-2, Its Origin, Evolution And Spread	1. Neha Gantayat 2. Bhavya Matta



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COURSE BASED PROJECT (Experiential Learning)					
Program name	Program code	Name of the Course that include experiential learning through project work/field work/internship	Course code	Year of offering	Name of the student studied course on experiential learning through project work/field work/internship
B.Sc. (Honours) Botany II Year, Semester III	556	Intellectual Property Rights (SEC) Duration: One Semester Projects done individually by students. This project is a part of the IPR practical paper, and it is a part of the question paper. All students successfully completed the project.	UPC- 32163302	2020	44 Students
B.Sc. (Honours) Botany II Year, Semester IV	556	Biofertilizers (SEC) Duration: One Semester Project: Online Review on i) Organic Farming and Society ii) Impact of Biofertilizers in Agriculture iii) Bio-compost and its Significance This project is a part of the Biofertilizers practical paper, and it is a part of the question paper. All students successfully completed the project assigned.	UPC- 32163403	2021	44 Students
B.Sc. (Honours) Botany III Year, Semester V	556	Biostatistics (DSE-2)	UPC- 32167502	2020	28 Students



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		<p>Duration: One Semester</p> <p>Project: Analysis of 100 data points collected from within the college and analysed and interpreted using various biostatistical tools.</p> <p>Projects done individually by students.</p> <p>Compulsory project work as part of practical CIE.</p> <p>All students successfully completed the project.</p>			
B.Sc. Life Science III Year, Semester VI	583	<p>Intellectual Property Rights (SEC-4)</p> <p>Duration: One Semester</p> <p>Projects done individually by students.</p> <p>This project is a part of the IPR practical paper, and it is a part of the question paper.</p> <p>All students successfully completed the project.</p>	UPC-42163601	2021	31 Students



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Academic Year	2020-2021
Program name	B.Sc. (H) Botany
Program Code	556
Name of the Paper that include experiential learning through project work	Intellectual Property Rights (SEC)
Unique Paper Code	32163302
Year	II year
Semester	III
Total no. of students	44

Project Completed

Individual projects had to be done as part of the practical curriculum for the paper Intellectual Property Rights. Students had made e-diary based on IPR syllabus. They had presented their project's reports in the form of Power Point Presentation. It was evaluated on the basis of contents and Subject knowledge related to the e-diary. The subject of projects was opted by student itself and they have collected data from available sources of society and market. They had to click the pictures of the products themselves. Google photos of the products were not allowed. They had discussed their data under the headings of Patent, Copyright, Designing, Manufacturing, Production, Trademark, GI tag etc.

E Gutanjali

Deepali

S. No.	Roll No.	Name
1	1131	Aayush Sahay
2	1141	Amit Kumar
3	1254	Anjali Kaur
4	1329	Anjali Pandey
5	1475	Anshika Chopra
6	943	Ashya Thakur
7	1433	Ayushi Yadav
8	779	Bharati Srivastava
9	1488	Shruti Shrivastava
10	1671	Chaitan Kachhal
11	1721	Divyanshu
12	1736	Garima Dahiya
13	1502	Geetika Sharma
14	1539	Jyotika Datta
15	1495	Kanika Bhardwaj
16	1789	Kanika Singh
17	1546	Kirti Singh
18	1197	Komal Yadav
19	1440	Lakshayam Israni Devi
20	133	M. Shree
21	1640	Mahika Sood
22	1529	Mehak Tyagi
23	1649	Neha Srivastava
24	1201	Prachi Choudhary
25	1301	Prachi
26	1533	Prachi Gupta
27	1281	Prerna Yadav
28	1340	Prerana Moirangthem
29	1205	Rushika Khan
30	1380	Sahana Mittal N K
31	1363	Sakshi
32	146	Shagun Singh
33	1402	Shweta Yadav
34	60	Shweta Agarwal
35	1447	Shweta Pandey
36	1308	Shweta Singh
37	1472	Siddhant Bano
38	1422	Smiti Bhatia
39	1388	Soumya Pal
40	1376	Soumya Rani
41	1469	Suzaina Nazki
42	60	Swastika Prasad
43	1574	Ujjwal Mishra
44	1517	Urvi Singh



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Academic Year	2020-2021
Program name	B.Sc. (H) Botany
Program Code	556
Name of the Paper that include experiential learning through project work	Biofertilizers (SEC)
Unique Paper Code	32163403
Year	II Year
Semester	IV
Total no. of students	44

Projects completed

Academic Year	2020-21
Paper Name	Bio-fertilizer
Unique Paper Code	32163403, SEC
Course	B.Sc. (H) Botany
Course Code	556
Year	2 Year
Semester	IV semester
Total no. of students	44

Projects completed

Curriculum based online review

1. Organic Farming and Society
2. Impact of Biofertilizers in agriculture
3. Bio-compost and its Significance

Teacher's Signature:

Q. Gupta

E. Gutierrez

B.Sc. (H) Botany II Year (Semester IV) (2020-21)

S. No.	Roll No.	Name
1	1238	Aayushi Sahay
2	1387	Aashi Bhat
3	1454	Anjali Karm
4	1304	Anjali Pandey
5	1475	Anushka Chopra
6	441	Arushi Thakur
7	1458	Ayushi Yadav
8	275	Bhavitha Srivastava
9	1408	Bhavitha Srivastava
10	1871	Chakrabarti Koushal
11	1294	Dangal
12	1536	Dhanya Dabey
13	1302	Diptanshu Sharma
14	1539	Jyotika Tabeja
15	1495	Kanika Bhardwaj
16	1799	Kanika Singh
17	2386	Kirti Singh
18	1397	Komal Yadav
19	2440	Lakshayam Nare Devi
20	138	M Shanti
21	1640	Makula Sanyal
22	1576	Makulika Tripathi
23	1640	Maha Sehrawal
24	1201	Prachi Choudhary
25	1330	Pragati
26	1559	Preeti Gupta
27	1280	Preeti Yadav
28	1560	Prityanka Mohanaghoth
29	1268	Rushika Khan
30	1486	Sahana Hassan N K
31	1063	Sahani
32	2661	Shagun Singh
33	1482	Shweta Yadav
34	61	Shruti Agarwal
35	1447	Shruti Pandey
36	1308	Shweta Singh
37	1473	Siddhi Bani
38	1432	Smita Rathore
39	1688	Somani Palini
40	1276	Srishti Kaur
41	1404	Tarunika Mehta
42	91	Theertha Pradeep
43	1574	Utsav Mishra
44	1513	Viveka Singh

Q. Gupta



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Academic Year	2020-2021
Program name	B.Sc. (H) Botany
Program Code	556
Name of the Paper that include experiential learning through project work	Biostatistics (DSC-2)
Unique Paper Code	32167502
Year	III year
Semester	V
Total no. of students	28

Projects completed

Individual projects had to be done as part of the practical curriculum for the paper Biostatistics. The project report had to be submitted in the the form of power-point presentations and orally presented in the class. Students are evaluated on the basis of how well they have applied different aspects of statistical analysis to the data that they have collected. Each student is expected to collect data from within the college campus (minimum 100 data points) and analyse the data for different measures of central tendencies like mean, median, mode, perform students t-test and find out correlation between two variables. They are expected to formulate their own hypothesis and then accept or reject the same based on their calculations.

Each student had collected the data individually and randomly. Their project topics ranged from a study of marks obtained v/s hours of study; number of chapattis eaten in a day v/s weight of the individual; Pocket money v/s deodorant brand used etc to laboratory based studies like salt concentration v/s plant height, nitrogen concentration v/s plant weight etc.

B.Sc. (H) Botany III Year (Semester V) 2020-21

S. No.	Roll No.	Name
1	346	Aarohi Rawat
2	29	Akshita Solanki
3	1224	Ashmita
4	264	Bharti Singh
5	1369	Choo Choo Gulshan Fatima
6	643	Diksha Patel
7	384	Dhye Jainak
8	872	Jyoti
9	1267	Jyotsana
10	18	Kirti Choudhary
11	258	Laiba Fatima
12	197	Madavi Sanika
13	871	Mamta
14	971	Meghana Mariam Mathew
15	642	Muskaan Johnson
16	405	Namindla Bhargavi
17	510	Neeraj Kumari
18	954	Pallavi Sharma
19	1535	Panul
20	1428	Pooja
21	302	Pragya Jha
22	1513	Rakhi
23	1422	Saifali Dhyani
24	837	Shweta Rana
25	20	Swati Nayak
26	585	Tamanna Yadav
27	190	Vankudothu Swathi
28	992	Yumnam Sonata Devi

Sinha Roy

Sinha Roy



Miranda House UNIVERSITY OF DELHI

Academic Year	2020-21
Paper Name	SEC 4: Intellectual Property Rights
Unique Paper Code	42163601
Course	B.Sc. Life Sciences
Programme Code	583
Year	III Year
Semester	VI
Total no. of students	31

Projects completed

Individual IPR e-diary had to be submitted as part of the practical examination for the paper Intellectual Property Rights. They made the IPR e-diary on MS PowerPoint. Students selected topics of their choice from the syllabus such as Copyright, Trademark, GI Food, GI Industry, and others. They had to click the pictures of the products themselves. Google photos of the products were not allowed. Students were evaluated based on the product selected by them and the content including number of samples and their original photographs.

B.Sc. Life Science III Year (2020-21)		
S.No.	Roll No.	Name
1	811	Aanchal
2	475	Aanchal Gupta
3	1373	Amita
4	1394	Aushika Saha
5	1242	Balvrat Kaur
6	1298	Disha Choudhary
7	279	Dya Adhikari
8	901	Garima Singh
9	1	Gurjan Goyal
10	1314	Ladna Mishra
11	1262	Madita Jain
12	1426	Mehul Chaud
13	172	Moniika Kataria
14	611	Neha
15	1226	Neha Chandra
16	162	Pragya Tiwari
17	1884	Rachana Singh
18	229	Rishi Parwar
19	1440	Rishika Gupta
20	1462	Sakshi Mehta
21	1193	Sakshi Sharma
22	791	Sakshi Yadav
23	98	Saurav Gupta
24	511	Shikha Joshi
25	1268	Shivani Kumar
26	692	Shruti Singh
27	161	Siddhanta Chatterjee
28	1173	Siddhi Deyani
29	880	Souvik Singh
30	1298	Souvik Choudhary
31	1119	Sudhanshu Welling

Teacher's Signature: 