



# **About the Department of Environmental Studies**

Department of Environmental Studies is a young and dynamic department, which was established in 2014 on the orders of the Supreme Court and the UGC to teach an Ability Enhancement Compulsory Course (AECC) to all the new Undergraduate entrants to the college.

The addition of Environmental Science as a mandatory subject to the curriculum of Humanities and Commerce is a step in the right direction, despite all the challenges.

(Faculty Details)

Name	Designation	Qualification	Area of Specialization	Teaching Experience
Ms. Ifrah Rehman	Assistant Professor (ad-hoc)	<ul> <li>M.A. Environmental Studies, Department of Environmental Studies, University of Delhi</li> </ul>	Urban Ecology	5+ years
		<ul> <li>B.Sc. Hons Zoology, Ramjas College, University of Delhi</li> </ul>		
Dr Deepak Rawat	Assistant Professor (ad-hoc)	<ul> <li>Ph.D., Department of Environmental Studies, University of Delhi</li> </ul>	Environmental Microbiology	6 months
		<ul> <li>M.Sc. Environmental Studies, Department of Environmental Studies, University of Delhi</li> </ul>		
		<ul> <li>B.Sc. Chemistry (Hons.), Kirori Mal College, University of Delhi</li> </ul>		







(Faculty Awards/Recognition)

Name	Achievements, Awards and Certifications	
Ms. Ifrah Rehman	<ul> <li>Awarded the Certificate of Appreciation in the India Online Convention and Competition organized by ENACTUS in August, 2020.</li> </ul>	
	<ul> <li>National Eligibility Test (NET) (January 2017) for Assistant Professorship in Environmental Sciences conducted by Ministry of Human Resource Development, Government of India.</li> </ul>	
Dr Deepak	<ul> <li>Awarded Doctor of Philosophy (Ph.D.) degree at University of Del in February, 2021.</li> </ul>	
Rawat	<ul> <li>Visiting Researcher (June-September 2018) at the Department of Biochemical Engineering, University College London, UK.</li> </ul>	
	<ul> <li>Newton-Bhabha Ph.D. Placement Award supported by the British Council (India and UK), Newton Fund (UK) and the Department of Biotechnology (India) for the year 2017-18.</li> </ul>	
	<ul> <li>UGC-Junior Research Fellowship (JRF) (December 2013) in Environmental Sciences funded by Ministry of Human Resource Development, Government of India.</li> </ul>	
	<ul> <li>National Eligibility Test (NET) (December 2013) for Assistant Professorship in Environmental Sciences conducted by Ministry of Human Resource Development, Government of India.</li> </ul>	
	<ul> <li>First prize in oral presentation in National Conference (February 2019) on "Emerging Challenges of Environmental Health, Society and Policies", at Rajdhani College, University of Delhi.</li> </ul>	



(Courses Taught)

Streams	Semester	Courses
Arts	I	B.A. Hons. English B.A. Hons. History B.A. Hons. Political Science
	II	B.A. Hons. Philosophy B.A. Hons. Sociology B.A. Hons. Economics B.A. Hons. Hindi B.A. Hons. Sanskrit B.A. Programme
Commerce	I	B.Com. Hons. B.Com. Programme
Science	II	B.Sc. Hons. Mathematics

- The two Assistant Professors of the department of Environmental studies work in close harmony to cater to the students of the different departments and courses.
- The department focuses on the multidisciplinary aspect of the subject and aims to inculcate the concept of environmental awareness and protection in the students.

(Faculty involvement in various Committees)

Name	Committees	
Ms. Ifrah Rehman	Co-Convener	ETIHAD: The MUN Society of JDMC
	Member	ENACTUS JDMC AVANI: The Environment Club of JDMC Canteen Committee Discipline Committee Green Audit Committee Academic Audit Committee
	Representative	Annual Report Committee Website Committee
Dr Deepak Rawat	Member	AVANI: The Environment Club of JDMC Green Audit Committee Academic Audit Committee Timetable Committee Website Committee







### Pedagogy

# (Teaching-Learning Methods)

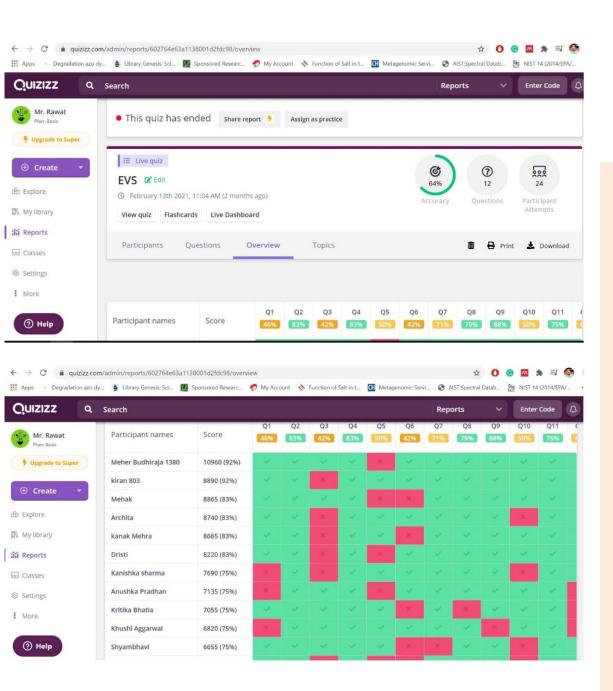
We teach the curriculum as framed and prescribed by the University of Delhi using the following teaching learning methods:

#### **Conventional classroom-based methods**

- Chalk and board method
- ICT use of presentations and videos to enhance the learning experience
- Remedial classes for one-on-one interaction with the students who need additional academic support

#### Innovative learner-centric methods

- Field-based learning: Mandatory field trips to enhance learning of immediate environment (not performed due to Covid)
- Quizzes
- Group Discussions
- Innovative IA Practices

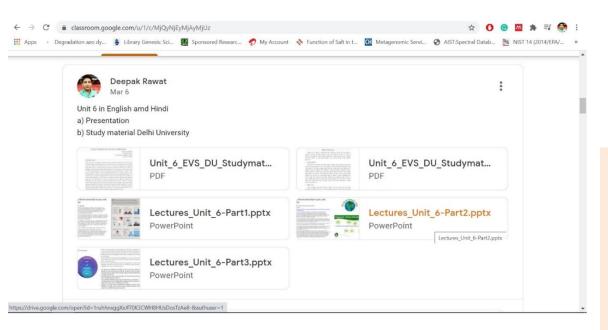


### **Pedagogy**

(Teaching-Learning Methods)

### Real time assessment of students progression level

- The EVS department is using real-time ICT assessment tools like quizizz (<a href="https://quizizz.com/admin">https://quizizz.com/admin</a>) to assess the learners awareness and progression level.
- The assessment is based on the live learner-centric MCQ based quiz sessions where students take part as individuals or as team.
- Such assessments also promote teamwork and healthy competition among students.



### पारिस्थितिकी तंत्र का कार्य- बायोगेकेमिकल चक्र

#### Refer 'Environment'- Book by Peter Raven

Biogeochemical cycle, any of the natural pathways by which essential elements of living matter are circulated.

Refer 'Environment' - Book by Peter Raven

बायोगैकेमिकल चक्र, प्राकृतिक मार्गों में से कोई भी जिसके द्वारा जीवित पदार्थ के आवश्यक तत्व परिचालित होते हैं।

- · Two Types:
  - Atmospheric/ वायुमंडलीय
    - Water Cycle/ जल चक्र
    - Carbon Cycle/ कार्बन चक्र
    - · Oxygen Cycle/ ऑक्सीजन चक्र
  - Edaphic/मदीय कारक

4:35 / 43:39

- Nitrogen Cycle/ नाइट्रोजन चक्र
- Sulphur Cycle/ सल्फर चक्र
- Phosphorous Cycle/ फॉस्फोरस चक्र

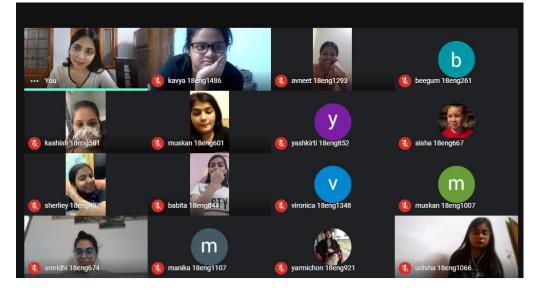


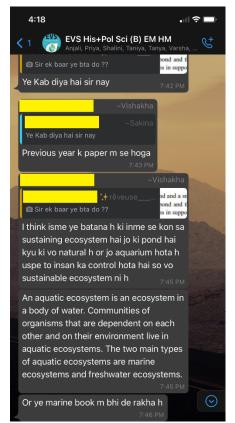


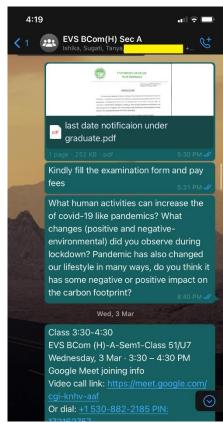
(Teaching-Learning Methods)

### Online repository for study material for enhanced learning

- The EVS department is using ICT tools like google classroom
  (https://classroom.google.com/) to share resource materials with students as well as to conduct internal assessment examinations.
- The platform is being used to share resource material (in English and Hindi) like class presentation, study materials, and to conduct/collect assignments.
- The google classroom also provide students a platform to interact with teachers.
- The use of presentations and audiovisual material to enhance learning.







### **Pedagogy**

(Teaching-Learning Methods)

**Remedial classes** for one-on-one interaction with the students who need additional academic support. Classes were taken on the following topics:

- How to interpret and translate questions for better understanding (especially Hindi medium students).
- How to read questions correctly, to understand what exactly has been asked.
- Some tips on OBE exam pattern and not lose marks due to lack of originality.
- Some tips on framing the answers properly.

**Group discussions** with students for enhanced learning and doubt clarifications. Google meet platform was used effectively by faculties to mimic classroom based learning.

**Use of messaging platforms** to take questions from students, give questions for discussion, and covid sensitization.

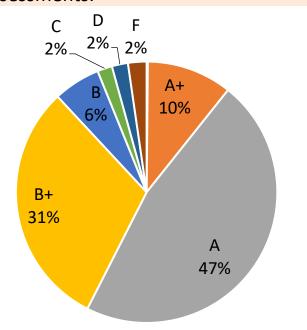
### **Result of the EVS Department**

(May – June, 2020)

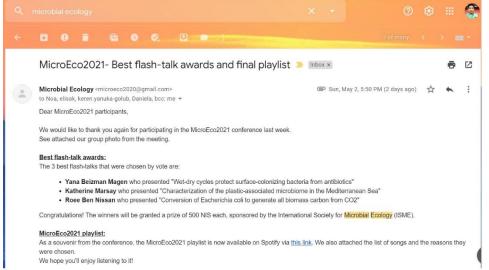
Grade/ Grade Point	B.A. (Prog)	B.A. (Hons.) Economics	B.A. (Hons.) Hindi	B.A. (Hons.) Sociology	B.Sc. (Hons.) Mathematics	B.A. (Hons.) Philosophy	B.A. (Hons.) Sanskrit	Total (654)
O/ 10	-	ı	ı	ı	1	ı	ı	1
A+/9	13	13	1	3	31	8	1	69
A/8	169	17	30	28	41	14	7	306
B+ / 7	114	8	40	14	8	2	14	200
B / 6	21	2	1	3	1	3	7	38
C/5	7	1	1	1	-	1	1	12
D /4	10	-		1	-	1	1	13
F/0	11	-	1	1	1	1	-	15

#### **Analysis**

- Out of 654 students, 1 student received O grade, 69 students received A+ grade (10%), and 306 received A grade (47%).
- **88% of the students** received 1<sup>st</sup> division marks as compared to 70% in the last semester.
- The increase in good grades can be attributed to practices such as: maintaining resource material repository, remedial classes, regular assessment of learning, preparing students for final exams by focusing on internal assessments.







### **Faculty Participation**

(Workshops/Meetings/FDPs)

- Faculty Development Programme (FDP) on "Student-Centric Pedagogic Methods" held between January 27th, 2021 – February 2nd, 2021) organized by Janki Devi Memorial College, University of Delhi in collaboration with Mahatma Hansraj Faculty Development Centre, Hansraj College, University of Delhi.
- Israel's Microbial Ecology Meeting on "Microbes Driving Ecosystem functioning: From Interactions To Global Environmental Challenges" between April 26-28, 2021 organized by Weizmann Institute of Science, Rehovot, Israel.





#### **National Seminar**

(Webinar)



#### Environment and Urban Ecosystem: From Individual to Ecological

30th September 2020

#### Vivekananda College

University of Delhi NAAC Accredited "A" Grade

#### Certificate of Participation

This is to certify that

Ifrah Rehman

Assistant Professor

Janki Devi Memorial College, University of Delhi

Successfully participated in the national seminar (webinar)

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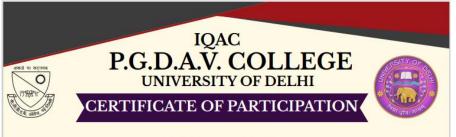
Convener Dr. Seema Sharma Dept. of Environment Vivekananda College thing ormanajo

Patron
Dr. Hina Nandrajog
Officiating Principal
Vivekananda College

### **Faculty Participation**

(Workshops/Meetings/FDPs)

- Participated in the power seminar webinar on the theme "Survival or happiness" conducted by ICT Academy on 15th January, 2021.
- National Seminar on "Environment and urban ecosystem: From individual to ecological" conducted by Vivekananda College, University of Delhi on 30th September, 2020
- Participated in UGC stride virtual 10 days
   FDP on "Mitigating climate change"
   organized by the Central University of Tamil
   Nadu from 26th April to 6th May, 2021.



#### This is to certify that

Ms. Ifrah Rehman of Janki Devi Memorial College

has successfully completed Webinar Series (Basic) on "Transforming Teaching Learning Process using ICT Tools" organized by IQAC, PGDAV College, University of Delhi, from 23rd July to 25th July 2020.

Dr. Shuchi Pahuja Convener Mr. K.K. Srivastava
Director
IOAC

Dr. Mukesh Aggarwal Patron and Principal

This is a computer generated certificate. No Signature is required.



## Faculty Participation

(Workshops/Meetings/FDPs)

- Attended FDP on "Transforming teaching learning process using ICT tools" organized by IQAC, PGDAV College, University of Delhi from 23rd to 25th July, 2020.
- Recognized for dedication to investing in students who take entrepreneurial action for others and shared commitment to business innovation that creates social impact in the "India online convention and competition" organized by ENACTUS globally between 1st to 8th August, 2020





# Ongoing Students' Research Projects and Internships

(Students' Achievements)

#### **Projects**

 Research project on "Awareness on environmental and health hazards of sanitary napkins and factors that impact college students' choice of menstrual products" under the guidance of Ms. Ifrah Rehman is ongoing.

#### **Students' Achievements**

- Vidhi Mittal, a III year student working as a Social Media Coordinator in VRIKSHIT FOUNDATION until March 2021.
- Aishwarya Shrivastava, a II year student working as a Project Manager in the NGO Kind Beings since the past year. She is the Project Manager of Project World's Makeover which works to aware people about the effects of plastic, harmful gases and pollution.

Project Name and Description	Participants	Course
Prithvi - Website to empower pottery makers and to prevent food wastage by making clay refrigerator	Khushi Jaluka, Manya Gugnani, Deepanshi, Sneha Rastogi	BCom (P) Section B
Sahara - Platform to provide support to older people	Bhagya Gupta	BCom (P) Section B
Reusing plastic for environmental safety	Ishika Chaudhary	BCom (P) Section B
Roller system for road safety	Bhawana	Bcom (P) Section B
DiPro - Online career counselling portal for senior secondary school students	Anushka Pradhan, Kirandeep Kaur	BCom (H) Section B
Education for change - Certification system to ensure environmental ethics in students	Taniya	BA Political Science (H) Section B
Turning plastic into Boon - Repurposing plastic and integrating ragpickers into a circular economy model	Retika Sharma	BA Political Science (H) Section B
For a change - Low-cost protein availability for poor people	Priya, Ridhi Gupta	BA Political Science (H) Section B

# Students' Participation in International Competitions

(Students' Achievements)

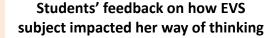
- Eight student-led projects were submitted by first-year students in the 'U21 RISE Awards 2020' on January 23rd, 2021, representing Delhi University, a member of Universitas21 global organization. The projects were supervised by Dr. Deepak Rawat. The projects are under screening stage.
- One student also participated in 8onefoundations F.A.I.R. project on socio-economic sustainability. The project was supervised by Dr. Deepak Rawat.

### **Students' Responses**

(Feedback and COVID sensitization)

- Amidst this pandemic, the department also encourages students to participate in environment conservation (from home) to tackle COVID (video embedded- Top autoplay on next click).
- The Department believes in getting feedback from the students. We believe in learner-centric approach and ensure that students are the center of the course. The department tries to ensure that classroom learning translates into action and is reflected in their thinking and lifestyle (video embedded- Bottom autoplay on next click).







# Working hand-in-hand with AVANI — the Eco Club of JDMC

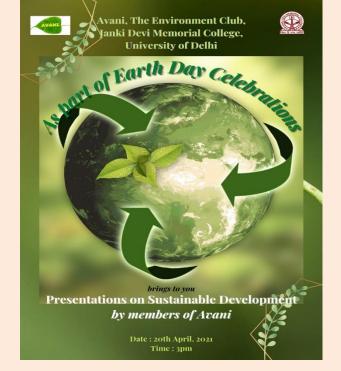
- The Department actively participates in AVANI meetings to plan different programmes.
- The faculty members of the department conducts Green Audit, a detailed environment self-assessment report of the various profiles of the college like water, energy consumption, vegetation, solid waste and a ground study of the sustainable activities of the college. The green audit strengthens the role of the college in environmental conservation and to attain sustainability.
- The department also facilitates in organizing 'Create from waste- February 2021' festival in Annual college festival Symphony. The event aims at recycling and to practice the idea of environmental conservation.





# Working hand-in-hand with AVANI – the Eco Club of JDMC

- The faculty of the Department actively
   participates in student seminars in different
   events. The event Earth Day celebrations (April,
   2021) was judged by Dr Deepak Rawat. Such
   seminars play important in imparting critical
   thinking skills, acquiring values, empowering
   students, and developing skills for sustainable
   future.
- The faculty of the department also help in organizing annual college debate event 'Green Matters, March 2021). The intercollege debate was held on the topic 'The only way to prevent environmental disasters and reverse climate change is to return to traditional knowledge systems and be individually responsible'. The event gives opportunity to the college students to indulge in healthy competition.





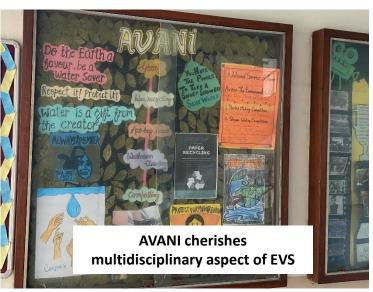
#### **Strengths**

- The Department teaches every student in the College irrespective of their specialization. This helps the Department gain a wide reach.
- The Department of EVS teaches first year students who are more willing to learn differently and think out of the box.
- AECC-EVS has an interdisciplinary approach hence the Department focuses on developing ecological thinking, empathy and inculcating value-based practices for sustainable living and economic development among the students
- Wide scope of syllabus

#### Weaknesses

- AECC-EVS is taught for only one semester. Hence, we have a very short-lived interaction with students. So, the department loses track of students by the time they graduate.
- The Department, currently, is not able to support the students in undertaking long-term studies as the College lacks the honours programme.
- The students have shown interest in pursuing Environmental Studies hence a necessity for a full-fledged Department and an honours course.
- Presently, recruited only 2 faculty members due to paucity of sanctioned post and limited resources.

### **SWOC Analysis**





#### **Opportunities**

- The College plans to organize career counseling programmes and interactive sessions seminars among different stakeholders - industry, policy makers, planners, academia, to develop holistic views about environment, hence a huge scope of growth as a department.
- The Department performs the Green audit of the college and aspires to bring reduction in carbon footprint, triggering sustainable living among the students.
- The Department also keeps a record of the solar energy installations, waste recycling, rain-water harvesting, herbal and medicinal garden etc.

#### **Challenges**

- Behavioral change cannot be achieved overnight. It requires consistent efforts and long-term monitoring of the impact of the programme. Since the course is taught for 1 semester, so it is difficult to monitor the effect of the course.
- To bring about real awareness and awakening towards conservation in one semester is thus, a grave challenge.
- A necessity of using different teaching methodologies for different Departments based on their core subject requires a great deal of expertise.
- Teaching scientific topics to Humanities and Commerce students requires effort.

### **SWOC Analysis**



# List of Innovative/Best Practices conducted by the Department

- The Department has organized a compulsory certificate courses virtually for all the students of the College on "Environmental Sensitization for the post-COVID world: A Wake-up Call" to sensitize as well as educate the students on the aftermath of a pandemic and the relationship of environmental degradation and disease outspread.
- The Department is working in collaboration with NGOs like Delhi Greens and other **Departments to design online** add-on courses to further enhance the understanding of the students regarding environmental awareness and protection.
- The Department also organized a virtual tour of the college for all the fresher students in the form of a vlog or live stream on 13th January, 2021. The virtual tour introduced 1<sup>st</sup> year students to the college campus (video embedded – autoplay on next click).
- Fostering Global Competencies among Students.
   Department encouraged students to participate in international competitions.
- Promoting the Use of Technology. Students were encouraged to use ICT tools and software for enhanced learning. Students were guided to make short films for international competitions.
- The faculty members of the department successfully conducted green audit to monitor the energy usage of the college.



JANKI DEVI MEMORIAL COLLEGE UNIVERSITY OF DELHI presents

ENVIRONMENT SENSITIZATION FOR THE POST-COVID WORLD: A WAKE-UP CALL

**Organised by the Department of Environmental Studies** 



### Proposed add-on courses by the Department

(July-August, 2021)

Course 1: Online Add-on course (30 hour) on 'Multidisciplinary Aspect of Environmental Sustainability—Towards Sustainable Fashion and Wildlife Conservation' organized by Dr Deepak Rawat and Ms Ifrah Rehman

• About the Course: The focus of this add-on course is sustainable fashion. The course is designed to challenge excessive consumerism and the resultant environmental pollution and wildlife biodiversity loss. It can be attended by students of any discipline. Students will learn the concept of sustainable fashion, socio-economic-environment impacts of the fast fashion industry, social entrepreneurship, the importance of wildlife conservation. This course deals with the multidisciplinary aspect of environmental studies and is skill and knowledge-based. It will help students to understand, analyze, and contribute to finding solutions for environmental problems arising due to unsustainable human activities.



### Proposed add-on courses by the Department

(July-August, 2021)

**Course 2:** Online Add-on course (30 hour) on 'Know your City: Delhi and its Environs' organized by the Department in collaboration with the NGO **Delhi Greens** 

• **About the course:** Delhi is known to be a city-of-cities largely because many rulers of the Indian sub-continent chose Delhi to be their capital city. Two prominent, landscape features that made this possible are River Yamuna and the Delhi Ridge – the lifelines of Delhi. Today, both these lifelines are themselves in the ICU with Yamuna filled with sewage and rampant destruction of the Delhi Ridge forest. The larger number of vehicles and the declining green cover has made Delhi a gas chamber. Air pollution in Delhi has not only reached alarming proportions, it is also killing the people of Delhi. Groundwater in Delhi has also steadily declined, as has the urban biodiversity and quality of life. Waste management is in such a crisis that our waste continues to harm us even after we think we have safely discarded it. Preliminary surveys indicate lack of environmental awareness in a large percentage of Delhi's population. The hustle and bustle of city life, and the complexity of factors that make up Delhi do not let citizens become sensitized towards the city as a whole and its environmental challenges. Through this Course, students will be introduced to the urban ecology of Delhi and to the various aspects that make Delhi the greatest city of all times.





### **The Road Ahead**

- The Department aims at strengthening the interdisciplinary programme by introducing an array of activities, add-on courses and field-work
- Looking for collaborations with NGOs for conservation programs of local ecosystems.
- The Department also intends to gather data on nearby area of Karol Bagh to identify environmental challenges and offer solutions to make it sustainable, i.e., contribution to the society.
- The Department of Environmental Studies is looking to expand into a full-fledged department with its own Undergraduate Degree Course in Environmental Studies.
- The Department demonstrates and promotes a conservationist life-style and positive changes have been recorded amongst a huge chunk of students.
- The aim of the Department is to achieve a uniform behavioral change/evolution from a more exploitative way of living towards sustainability. This requires patience, time and consistent efforts in the right direction.

### **Response to Auditor**

Comments from Prof. R.S. Sharma (Audit 2019-20)	Responses
<b>General:</b> I still feel that it should be supported by some more pictures in most of the slides	More pictures are added to support the statements.
<b>General:</b> Recording of 30-60 sec from old students explaining how the course/Department made a difference in their thinking and living would be useful.	Videos of students are added to the report. Videos include feedback of students regarding how the department helped them learn the importance of environmental conservation which they adopted in their thinking and lifestyle.
<b>General:</b> Show the number of studies carried out by the students	The participation of students in different programmes/competitions has been mentioned in a tabulated manner.
<b>General:</b> The faculty-wise contribution may also be highlighted as per their achievements	The achievements of the faculty have been highlighted and their contribution in different activities has been listed.
<b>General:</b> The list of innovative practices may also include, those recommended by NAAC. I am sure all of you must have been using those already so that JDMC secures most of the marks.	A list of best practices has been included in the report.
<b>General:</b> Outreach activities should be highlighted with pictures and some documents.	Unfortunately, due to COVID, the department could not perform community outreach activity. We will perform the activity in next semesters.
<b>Results:</b> How this result is different than from previous years what were the lesson learned in the past and how it have improved	In the result analysis section, the department made comparison with the previous year results and also highlighted the reasons behind the increase in good grades.
<b>Pedagogy:</b> Please focus on the innovative strategies such as teaching by field-based methodsQuizGroup Discussion	The department has highlighted innovative strategies suggested by Prof. R.S. Sharma. Department has also included relevant images.
Best Practices: Show with some picturesEvent namesalso highlight the outcomes	Relevant pictures have been included, also the outcomes are highlighted.
<b>AVANI:</b> Show with pictures Highlights the recognitions and contributions list major outcomes	Pictures have been included and the contribution of the department is also highlighted. Major outcomes of the programmes have been included.

