7.2 Best Practices
Describe at least two institutional best practices
Upload details of two best practices successfully implemented by the institution as per NAAC format in your institution website, provide the link

1. Title of the Practice: Mission Green

2. Objectives of the Practice

- To inculcate environmental values and consciousness amongst students, staff and society around through various innovative methods.

- To ensure the protection of environment through green energy initiatives and effective waste management measures.

3. The Context

The environment has gone drastic change due to factors like pollution, over usage of plastic and mismanagement of natural resources. In order to control the devastating environmental changes; there is need of regulating conscious efforts through educational organizations. The cause of public awareness regarding environmental issues is served through the numerous green initiatives and practices taken in the institute.

The challenge lies in changing the attitude of the use-and-throw culture; by inculcating the tradition of recycling. On various grounds such as recycling of paper, e-waste and other resources should be promoted. Conservation of energy is another important task to save environment.

4. The Practice

The institute takes numerous Green Practices for developing environmental awareness and for carrying ahead eco-friendly programmes. Some of the highlights of Green Practices programme in 2019-20 are as follow:

MOU Signed with Environment Consultant Mrs. Rashmi Joshi: The second day of induction of B.E. first year students were dedicated to eco activities. The institute signed MOU with environment consultant Mrs. Rashmi Joshi who guided the students towards a right understanding for environment and their role as an engineer. On the same day, tree saplings were planted by B.E. first year students.

Sharpen the Edge - Oral Presentation (Paryavaran-Environmental Science): Sharpen the edge is a unique platform to provide an opportunity to explore the hidden scientific and technical

aptitude of first year engineering students. In this event, students present their vision and innovative ideas on the topics of basic sciences. Keeping this concept in views, students presented their idea on various topics of environmental science like organic farming, reforestation, pollution prevention, green politics for the creation of ecological sustainable society and environmental remediation.

Online National Level Quiz on Environmental Science: During the pandemic, Eco Club organized an online national level quiz of Environmental Science. The quiz was conducted for seven days. In which 2021 participants took part from all over India and received certificate of participation.

Covidity 2020 - National Level Online Poster Making Competition - The Engineer's Way: The department of Humanities and Applied Sciences in association with Eco - Club and Institute Innovation Cell of K. C. College of Engineering and Management Studies and Research organized a poster making competition by the application of AutoCAD on the topics related to COVID-19. The posters gave message regarding care, precautions to be taken, inspire to fight corona, creative slogans etc. This competition was conducted from 25 to 30 May, 2020. In which 75 participants received certificates.

Webinar on "Air Pollution, Global Warming, Climate Change, Society and Sustainability" (World Environment Day): On the occasion of World Environment Day, the Eco Club in association with the Department of Humanities and Applied Sciences organized a webinar on
 Air Pollution, Global Warming, Climate Change, Society and Sustainability on 05 June, 2020. The session was taken by Mr. Abhijit Pathak Scientist in Central Pollution Control Board, Delhi (Statutory Organization under the Ministry of Environment, Forest and Climate Change). In his lecture, Mr. Abhijit discussed about Air Pollution, Global Warming, Climate Change, Society and Sustainability. The session was very informative and interactive. In this event, 179 participants received certificates of participation.

5. Evidence of Success

- MOU signed with environment consultant Mrs. Rashmi Joshi on 08 August 2019 and eco awareness session was conducted by her in FE induction 2019-20.
- Saplings were potted by BE first year students during induction 2019-20.
- Various topics on environmental issues were explained and presented by first year students in Sharpen the Edge 2020.
- Online national level quiz on environmental science was conducted from 21st May to 27th May 2020.
- Covidity 2020 - National Level Online Poster Making Competition - The Engineer's Way, a competition was conducted from 25th to 30th May 2020 with participation of 75 students.
- On World Environment Day, Webinar on "Air Pollution, Global Warming, Climate Change, Society and Sustainability" (World Environment Day) was conducted on 05th June 2020.

- The institute won **"Green Campus Award"** from Synergy in January 2019.
- The **E-Waste Collection Drive** was organized with collaboration of E-Incarnation Recycling Private Limited on 18 May 2019. There was collection of 1450.5 Kg of e-waste from different departments of the institute.
- **Waste Paper Collection Drive** conducted on 24 April 2019.
- **No Vehicles Day** was celebrated on 28 February 2019.
- The institute organized "**Cleanliness Awareness Program"** with collaboration of Thane Municipal Corporation, Thane on 29 January 2019.
- The **"Green Audit"** was conducted by Quality Certification Services from 03 January 2019 to 04 January 2019.
- Various measures have been taken by the institute for energy conservation like replacement of conventional florescent tube lights with LED tube lights, CFL bulbs with LED bulbs in 2018-19.
- The institute has enrolled on green army initiative of Maharashtra government. http://greenarmy.mahaforest.gov.in/index.php?option=orgreport&lang=Mar.
- Plastic collection drive was organized from11 June to 15 June 2018.
- E-waste Collection drive - There was collection of 400 kg of e-waste from different departments of the institute on the occasion of World Environment Day.
- Celebrations at Pimpri with a plantation drive on the World Environment Day, 5 June 2018 plantation of 100 saplings of different kinds of flora in the village.
- Organization of a seminar on "Domestic Waste Management and Terrace Gardening of vegetables" on 16 March 2018 by Eco club.
- Installation of Solar Panel System on 9 March 2018.
- Organization of Cleanliness and Plantation drive at Pimpri village on 8 March 2018.
- Waste paper collection drive was conducted on 01 March 2018.
- Inauguration of Composting Pit in the institute premises on 28 December 2017. The institute has initiated the practice of "Waste Management" with the tag line "EXCEL THE GREENER WAY".
- Green and Clean KC activity on 18 November 2017.
- Campaign on Global Warming on 22 February 2017.
- Swachh Bharat Abhiyan on 10 November 2016.
- Initiative to give smart look to garden of KCCEMSR – Beauty in Creativity on 18 October 2014.

6. Problems Encountered and Resources Required

The institute had interest in developing Rain water harvesting project. However, due to locational reasons like proximity of the institute with the creek area and high-water table; it is not feasible to execute rainwater harvesting. There is a challenge of catchment management due to nearby creek area. This obstructs the practice of rainwater harvesting in the institute premise.

1. Title of the practice: E-Cell and Ideation Innovation Automation and Research Lab (IIARL)

2. Objectives of the practice:

- To impart relevant skills to the students with a motive to make them self-employable, thereby making them confident enough to earn with their skills alone.
- To help the students to develop business ideas who are eager to become entrepreneurs but are not sure how to go about it.
- To help both budding and would-be entrepreneurs with refining ideas and providing practical guidance.
- To undertake research activities, training entrepreneurs, identifying opportunities and pursuing them.
- To establish global leadership in all fields and develop competent human resources for providing services to society.
- To incubate students with sustainable business plan within the campus, thereby providing them with an ecosystem that would help them grow as entrepreneurs.

3. Context that required the initiation of the practice:

With the job openings for the engineering sectors plummeting, the admissions to the engineering streams are also affected adversely. A dire necessity to cater such an alarming situation was to find a solution i.e. by motivating students to become entrepreneurs and create an ecosystem that would create jobs for the future input of engineering students. With the onset of our PM's initiative of startup India, there are various schemes deployed by the government of India that can be used as an elixir for budding startups and businesses. With extending financial support by various agencies of the Government of India like the MSMEs, SDBI, NABARD and schemes like MUDRA, innovate India, Start-up India etc. has made the start-up ecosystems to bloom within the campus. Financial support and encouragement is also being provided on a larger scale by various Corporates like Mahindra Finance, TCS etc. E-Cell was started with a motive that every graduating engineer must be confident enough to be self-employed if not by industry, be able to generate enough revenue that he or she can sustain life on this planet.

4. The practice:

KCCEMSR took an initiative to set up an Entrepreneurship Cell (E-Cell) for its students with a view to motivate budding entrepreneurs to establish their own startups. The prime motive being that the students need to hone their skills to be able to sustain in the existing competitive environment and become self-employable in the first case. For the same E-Cell conducts various activities like Ked Talks, Seminars, Workshops, etc. for enhancing the skills of the students. The E-Cell is aiming at starting a full incubation center by the first half of 2019. The institute has set up a space for an incubation center under the name of IIARL, which is being tried to engender under the Atal Innovation Mission, the incubation center will provide the startups with necessary

guidance, tech-support, infrastructure, access to investors, networking and facilitating a host of other resources that may be required for the startup to survive and scale. There are some startups lined up to be incubated under IIARL.

Students have gained confidence and have started working for small firms/ companies and are getting paid, thereby have grown in confidence that they can do something on their own. The E-Cell has successfully nurtured some good entrepreneurs who are doing excellent work in their startups. Students have improved their skills by doing things practically and learning how to reverse engineer any system/ devices.

Initially few students joined in and were skeptical about what they would do in the future but with time they became clear about Entrepreneurship and started mentoring other students and hence lured more students and thereby the strength of students increased several folds within a span of 2 years.

The E-Cell team also won the second prize in the National Entrepreneurship Challenge held by IITB in 2018.

The E-Cell has received a funding of 20000/- from Entrepreneurship Development Institute of India (EDII) regarding conduction of activities / programs of Entrepreneurship Awareness Camp (EAC) under National Sciences & Technology Entrepreneurship Development Board (NSTEDB). Now we are applying for Faculty Development Program through Entrepreneurship Development Institute of India (EDII) under National Sciences & Technology Entrepreneurship Development Board (NSTEDB).

E-Cell students won the first prize at the Innovation Mela held at Atharva College of Engineering, Malad (W) in March 2019.

The IIARL has successfully incubated a business, "Hie Cabs", a start-up by a student of second year Computer Engineering. There are a few more start-ups lined up to be incubated in the near future. E-cell has successfully mentored its student members in setting up their own start-ups, like Redcliff Automation (Omkar Sharma), Trekk Community (Jayesh Behra), Apdid Solutions (Darshan Komu), Shahi Dynatech (Kirti Shahi). LL44 (Bhavya Shukla), Hie Cabs (Nandlal Chaudhary), Maverick (Anup Singh).

5. Evidence of Success:

Evidence of success (2019-20):

RESPAWN - gaming event

RESPAWN was organized by Ecell from 31st January to 2 February,2020 with the motive to entertain students with gaming and help them understand how games are developed and how gaming evolution is going from old to latest generation. CS GO, Dota 2, CS 1.6, PUBGM, CODM were the major games included in the event. Special PCs with high specs were rented for better gaming experience. Retromania, a dedicated section for old-school gamers, decorated beautifully with different lights was set up with retro games. Students from various colleges and

game-zones showed their enthusiastic spirit by participating in this event. This event was a major hit which received a whopping response from the participants, as the attendance marked was around 400.

Evidence of Success (2018-19):

Sr. No.	Work	Company/Funding Agency	Funded Amount
1	Panic Button	I4Things	13000/-
2	Safety Bangle	MAVIM	12000/-
3	Light based switch	JGroup Robotics	Components provided
4	Touch Switch	I4things	25000/-

Evidence of Success (2018-19):

Sr. No.	Project	E-Cell	Funding Agency	Amount Funded
1	E-Cell Automation Version 2	E-Cell (Ongoing)	KCCEMSR	3000/-
2	RFID-based Attendance logging system	E-Cell (Ongoing)	KCCEMSR	4000/-
3	Internal Routing System (Android Based)	E-Cell (Ongoing)	KCCEMSR	-
4	Wi-Fi Speakers	E-Cell (Ongoing)	KCCEMSR	2500/-
5	Inbuilt VPN based Router(Networking + Python)	E-Cell (Ongoing)	KCCEMSR	-
6	Mood Lighting	E-Cell (Ongoing)	KCCEMSR	850/-

Sr. No.	Work	Company/Funding Agency	Funded Amount
1	Repairing PCR machine, Microbiology Dept.	Lokmanya Tilak Municipal Medical College and General Hospital, Sion, Mumbai	-
2	WebsiteDevelopment	Associate Consultants, Thane	12000/-

3	Data logger for Remote Monitoring of Solar Power Generation (Website)	Seven Green Solar Systems Pvt. Ltd., Bandra(E), Mumbai	40000/-
4	Website Development of Quickhomeo	PQRS Homoeopathy & Health Care Services LLP, Kandivili (E), Mumbai	50000/-
5	Development of Inquisitive Mag Adroid App	Inquisitive Mag	--
6	Interval Timer/ Alarm Systems	LYM Technologies	500/-
7	Microbiology App	Lokmanya Tilak Municipal Medical College and General Hospital, Sion, Mumbai(ongoing)	----
8	Smart Stall	Samwick/Effena solutions	25000/-

Sr. No.	Project	E-Cell	Funding Agency	Amount Funded
1	IOT Based Smart Living	National Entrepreneurship Challenge (NEC), Aakar IIT Bombay	KCCEMSR	--
3	Touch Switch	E-Cell	KCCEMSR	2580/-
4	Smoke Detector	E-Cell	KCCEMSR	2029/-
5	PIR Sensor	E-Cell	KCCEMSR	6230/-
6	Attendance Log System	E-Cell	KCCEMSR	------
7	Farming Automation	E- Cell	KCCEMSR	-------
8	E -Cell Automation	E- Cell	KCCEMSR	-------
9	EM Door Lock	E-Cell	KCCEMSR	5611/-
10	Voice Control	E-Cell	KCCEMSR	---
11	Mood Light	E-Cell	KCCEMSR	---
12	Electromagnetic Rail gun	E-Cell (Ongoing)	KCCEMSR	700/-
13	3D Printer	E-Cell (Ongoing)	KCCEMSR	6390/-
14	Sample Tracking System	E-Cell (Ongoing)	KCCEMSR	---
15	Sai Baba Charitable Trust Website	E-Cell (Ongoing)	KCCEMSR	---
16	SWAD (Safe Water Delivery) App	E-Cell (Ongoing)	KCCEMSR	---
17	Continuous Research Equipment.	E-Cell Setup	KCCEMSR	1,18,886/-

6. Problems encountered if any and strategies adopted to overcome them:

E-cell faced a lot of obstacles in the initial stages and a few strategies were adopted in the coming years to improve them. Funding has always been the major obstacle, with others being appropriate equipment for carrying out the work and lack of time for innovation and research. At times the attitude of students towards research or innovation also becomes a hindrance in the smooth flow of the E-cell work.

Requirement for students skilled in 3D designing and printing is the need of the hour but there is a scarcity of such skilled students. Students are now being trained to fill up this lacuna.

To cater to some of the obstacles like funding, the E-cell is trying to get funds from various Govt. funding agencies

For stream lining time and managing projects students are encouraged to use soft-wares like Trello, ZOHO mail, etc.

Resources required: Funds, Lab Area, Internet, Wi-Fi router, LAN, PCs, Electronic Test & Measurement Equipment and components. 3D Printer, Laser engraver and DSO.