



Marathwada Mitramandal's
COLLEGE OF ENGINEERING

S.No.18, Plot No.5/3, Karvenagar, Pune-411 052

Accredited with 'A' Grade by NAAC

Accredited by NBA (Electrical and Mechanical Engg. Department)

Recipient of 'Best College Award 2019' of SPPU

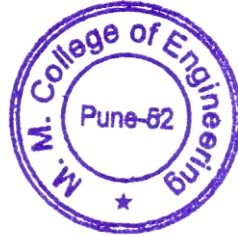
Recognized under section 2(f) and 12B of UGC Act 1956

Criterion 7

7.2: Best Practices

7.2.1. Best Practice - I : Professional skills exposure to students

Sr. No.	Parameter	Academic Year	Documents
1	Best Practice - I : Professional skills exposure to students	2017-18	SAEINDIA BAJA
2			SAEINDIA SUPRA
3			Robocon
4			Efficycle



PRINCIPAL
M.M. College of Engineering
Karvenagar, Pune -52

Report of BAJA SAEINDIA 2018

The most awaited Engineering Design competition BAJA SAEINDIA arrived, which was to be held at NATRIP Testing tracks, Pithampur, Indore from 24th to 28th January 2018.

After loading the vehicle on 20th January, the team left on 21st January from Sangamwadi, parking No 2. We reached our hotel at Indorama at around 8:30am on 22nd January. Students from T.E and B.E were selected to appear for the BAJA Aptitude Test (BAT), and left for SVVV College at 9am. Rest of the team members stayed back to unload the vehicle and put it into the pits in ready condition.

Early morning on 24th January the team lined up with the vehicle for the Technical Inspection (TI). The same day 3 of our static events were scheduled on the same day ie Sales, Cost and Go Green. The respective representatives of the team presented the presentation due to which we were not able to complete the TI on 24th January as the day ended

On 25th January we again lined up for the TI, but were called for the Design Evaluation along with the vehicle. A panel of 3 judges meticulously inspected each aspect of our vehicle and asked us questions related to our design which we were able to satisfactorily answer them. Later at afternoon we completed the TI after few suggested changes by the Technical Inspectors. We also successfully completed the Brake test at around 5:30pm and were ready to conquer the Dynamic events scheduled for the next day.

On 26th January, we attempted both our acceleration events followed by one attempt of Sled pull. We also attempted both Maneuverability attempts back to back. The most difficult of all Suspension and Traction was not completed in both our attempts and we managed to tackle only 4 obstacles successfully. We also attempted the lone attempt left for Sled pull thereby completing all the dynamic events. We came back to the pits and made our vehicle ready for the most celebrated event, the Endurance Race. The green flag for the Endurance race was waived by Mr. Pawan Goenka at 9:30am on 28th January 2018. We received AIR 1 in Design Evaluation of Rs. 60,000/- on the same day.

We reached Pune at 12 pm on 29th January 2018 with a spirit and confidence of performing much better in the next year.

Overall Expenditure: Rs. 7,29,274/-

From College: Rs. 3,00,000/-

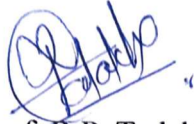
From Sponsorship: Rs. 2,75,000/-

From Students: Rs. 1,54,274/-

We thank our College, Principal, Faculty Advisors and all our well wishers who have always stood by us in times of our difficulties and challenges and helped us along the journey.



Akshay Todkar
Team Captain



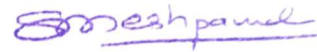
Prof. R.P. Tadakhe
Faculty advisor



Prof. A.D. Desale
Faculty advisor



Dr. K.R. Patil
Senior Faculty Advisor
Head
Dept. of Mechanical Engineering



Dr. S. M. Deshpande
Principal
MMCOE

Report on SUPRA SAEINDIA 2017 Competition

TEAM ABHEDYA RACERS, MMCOE, CAR No 124

Venue: Buddha International Circuit, Greater Noida

Event Dates: 26th June to 1st July 2017

We, the Team Abhedya Racers have started our journey towards the Delhi (Noida) on 24th June 2017. The train arrived in Pune on 24th June at morning 3:55 am and departed at 4.10 am. We reached to the accommodation venue on 25th June at 9:30 am.

On day 1, there was only the schedule of registration of all teams and team members as well as faculty members. So, we registered the team and team members along with faculty members. No any other activity had been scheduled related to the event. For the rest of the day we had arranged all the equipments in the respective pit (pit no-124). We also clarified our doubts regarding Technical Inspection handbook from volunteers and judges.

On day 2 the Technical Inspection had been started. As the Team Abhedya Racers have submitted the design report before 8th June 2017, so we were eligible to get three attempts for the Technical Inspection. On the day 2 we had taken our vehicle to Inspection bay number 04. There were around 3-4 judges to inspect whole vehicle. Judges suggested us some minor 9 number of corrections related to vehicle i.e. replacement of catch can, positive locking etc. Then for the rest of the day we worked on these problems. So, we all team members discussed and planned to satisfy all these needs and try to correct all the problems on the Day 2 itself. As all the corrections were solvable hence it hadn't consumed so much time. There were hot pits for welding and cutting operations so, we used the same for welding of stopper which was beyond the accelerator pedal. At the end of the day we had almost completed all the major work.

On day 3 we had taken our vehicle to the Inspection Bay as it was our second attempt. Again judges had suggested some corrections i.e. replacements of fuel filter, mounting of filter etc. for the rest of the day we worked on the same issues. Earlier we used the plastic fuel filter but judges suggested to use metal fuel filter. As the fuel filter is OEM part so the members from transmission department bought it from the market in the Noida which was of Maruti 800. As the locking for the stopper of accelerator pedal was not all over positive and hence we had to change it again. Final correction was to have rigid mounting for fuel filter so for the same issue we had replaced zip ties with C-clamps and made it a rigid mounting.

Day 4 was the last day of Technical inspection and we have cleared the Technical Inspection by satisfying all the requirements of rulebook. Then we had proceeded for static events. We had weighted our vehicle and weight was 220 kg. Then we had proceeded for the retrace test and we cleared this test by the first attempt. Driver 1 (Tanmay Khambkr) had taken 3.66 sec. to come out

of the vehicle while retrace test, whereas Driver 2 (Sumit Polas) took 3.82 sec for the same. So we cleared the retrace test without any difficulty. Then, we filled the fuel in fuel tank and the capacity of fuel tank was about to 5.8 liters. After the fuelling we found leakage through fuel tank, so with the help of M-seal we closed all the areas from where leakage was taking place. Then we had proceeded for the Tilt Test where vehicle had been tilted for 45 and 60 degrees respectively. During tilt test none of the bolts were protruding through tilt table and all the four wheels were in firm contact with the base. So, we cleared the tilt test in first attempt itself. After tilt test we proceeded towards the noise test and cleared it too. During air intake test fuel pipe got busted because of excess pressure so we replaced it and planned to give the air intake test on the next day.

On day 5, we continued with the air intake test. As the inlet leakage was taking place so engine was not stopping by closing the intake manifold. Then we placed O-ring inside intake manifold and cleared air intake test. Then we proceeded for the last test of the Technical Inspection i.e. Brake test. While first attempt, all 4 wheels get locked but the speed was 36 km/hr, as the ideal speed needed to be 40km/hr. During second attempt, speed was ideal but all 4 wheels hadn't got locked. During third attempt same issue taken place like that of attempt one. During fourth attempt we cleared the brake test and proceeded to the dynamic events. Because of rain and time limitation we only attempted the acceleration event. Unfortunately, we hadn't attempted skid pad and auto cross event.

Endurance race was scheduled on day 6. **Only 28 teams out of 126 cleared Technical Inspection and were eligible for endurance. Out of 8 laps on BIC TAR 1.0 has completed four laps without any failure and stood first in the first lot.** At the time of fifth lap unexpected failure in the bearing of right rear wheel took place and we couldn't complete the endurance.

At the end of the event we had started our return journey on 2nd July 2017 and arrived in Pune on 3rd July 2017 at 3.20 pm.

We are very thankful to Management of Marathwada Mitramandal, Pune; Principal, MMCOE, Pune; for their whole heartedly support and guidance without which it was not possible to achieve this glory.

Expenses for the SUPRA SAEINDIA 2017

Sr. No	Particulars	Amount
1)	Contribution from college	3.27 Lakhs
2)	Contribution from students	1.90 Lakhs
3)	Sponsorship	Tyres and Wheel Rim worth Rs40,000/- (Forty Thousand)
	Total	5.50 Lakhs

Noteworthy Achievement: Team Abhedya Racers cleared all the Technical Inspection though it was a Debut Team

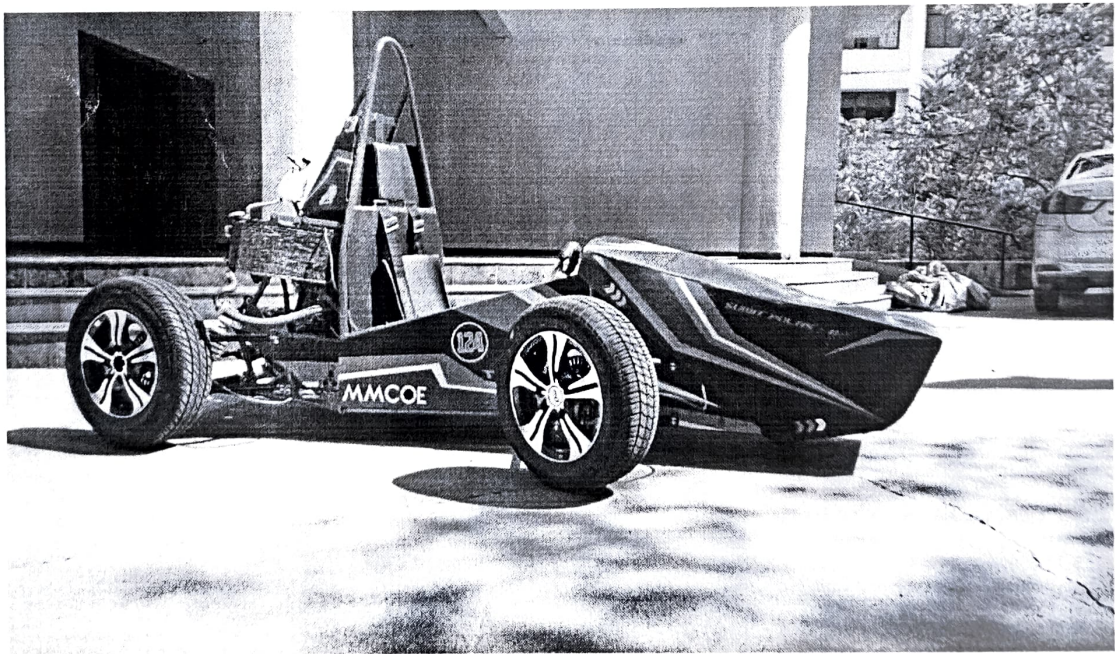
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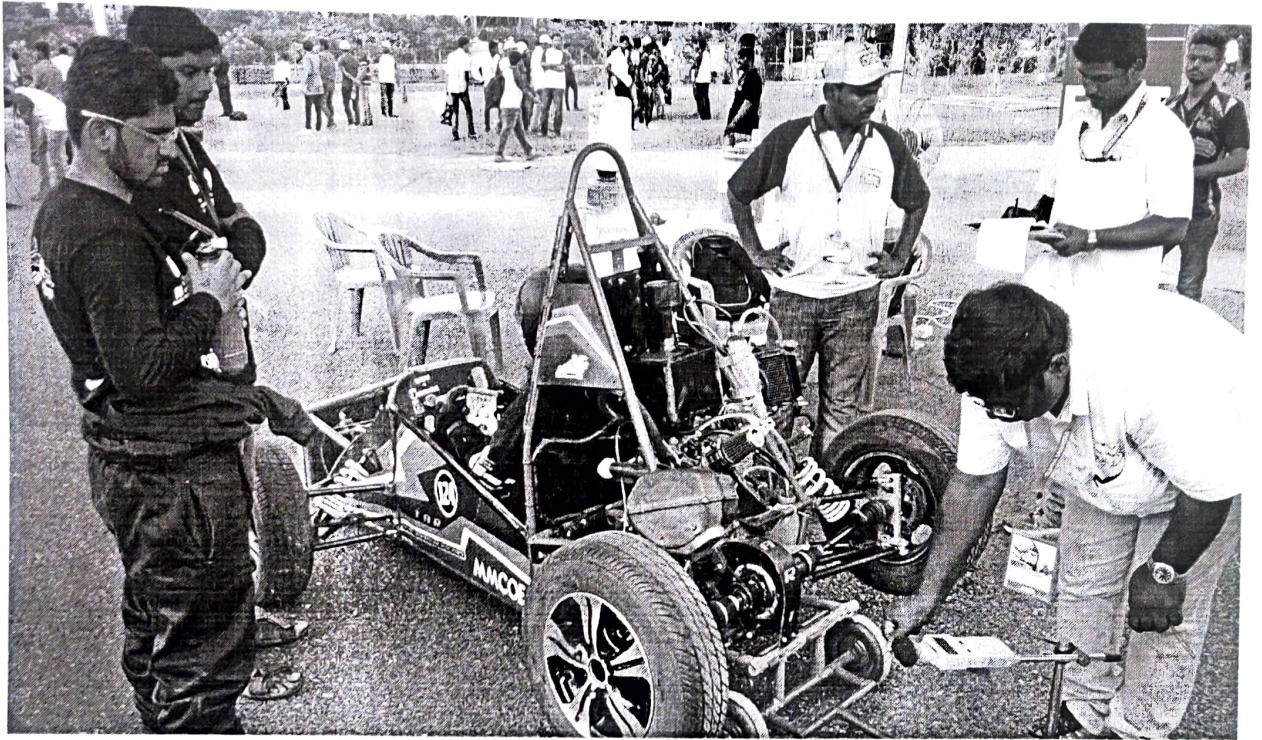


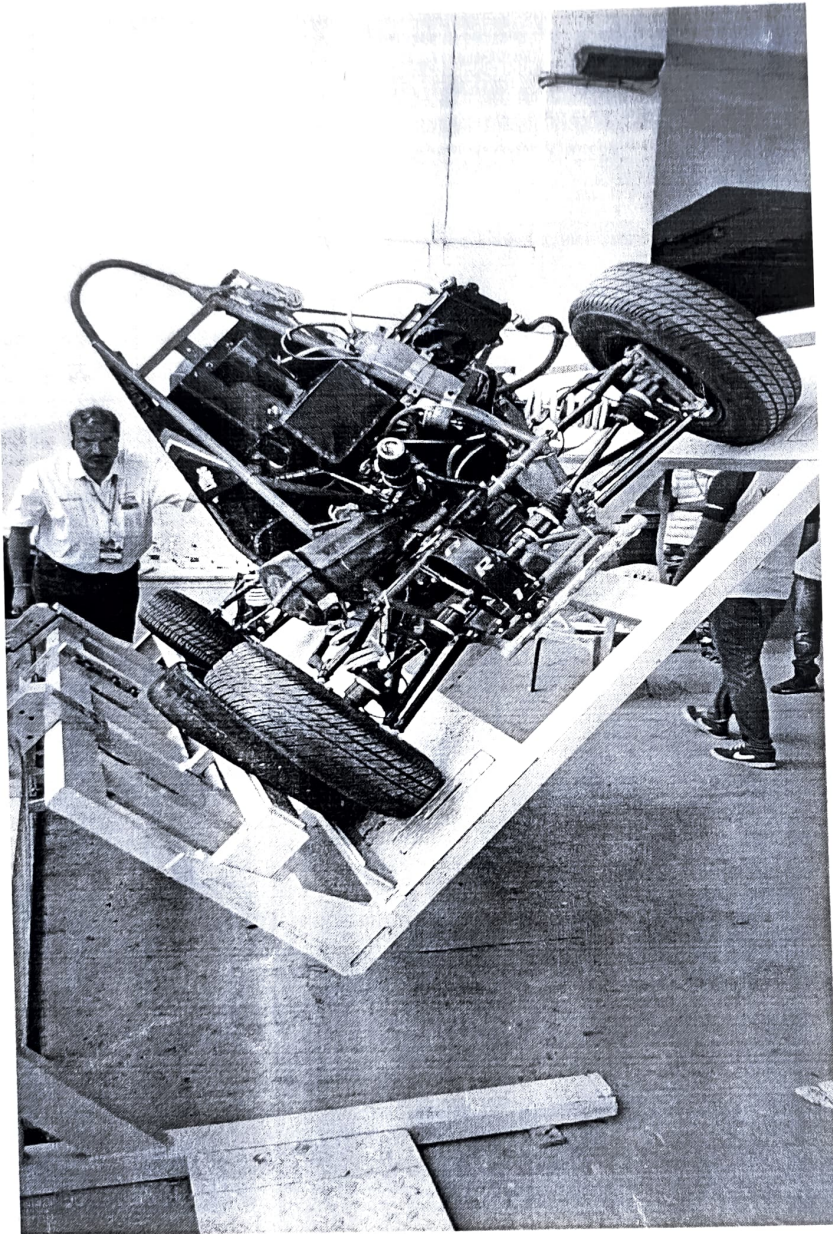
(Dr. K. R. Patil)
Senior Faculty Advisor,
MMCOE SAEINDIA Collegiate Club



(Prof. A. D. Desale)
Additional Faculty Advisor,
MMCOE SAEINDIA Collegiate Club









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'येथे बहुतांचे हित'
Accredited by NBA - Electrical & Mechanical Engineering

ROBOCON 2018

Faculty Advisor -

Prof. Gaurao Chaudhary
Prof. Shubhangi Joshi

Introduction -

Team Rudra is the Robotics Club of Marathwada Mitra Mandal's College of Engineering. Team Rudra has been participating in ABU Robocon since 2015. Robocon is a Robotics contest organised by Asia Pacific Broadcasting Union where teams of engineering students from various countries in Asia Pacific Region compete to complete the given tasks.

Every year the host country selects the game theme based on their culture and traditions. All the participating teams develop 2 Robots to complete the given tasks within the set time constraints.

Since our debut in Robocon 2015, where we were awarded the "Best Rookie Award". Team Rudra has shown remarkable progress in a very short time span, currently acknowledged as one of India's Best Teams.

Organizing Country - Vietnam

Theme - "NÉM CÒN" The Festival Wishing Happiness & Prosperity

Theme Implementation -

The theme comes from a traditional game in ethnic region of Vietnam, namely ném cò (throwing shuttlecock). The goal of the game was to throw the shuttlecocks through the ring at height. In Vietnamese culture, the game is about celebration and making friendship.

The two robots created by Team Rudra were called hope and faith where hope was the manual robot whose task was to pick the shuttlecock from the rack and hand it over to the automatic robot faith.

For picking the shuttlecock placed on the rack, hope was equipped with a picking mechanism which consisted of a circular disk like structure with precisely cut slots at the outer end. This mechanism was allowed to rotate in both clockwise and counter clockwise direction with the help of a high torque dc motor. By rotating the



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mechanism in one direction the robot was able to pick up the shuttlecock which was hanging on the rack .The robot was designed in such a way the it could pick up multiple shuttlecocks at once which made it very efficient. After picking the shuttlecock the shuttle cock was passed to the automatic robot by simply rotating the picking mechanism in counter direction.

Faith, the automatic robot which was used to throw the shuttlecock through the loop consisted of laser sensors which were used to detect whether the passing process was completed or not. Once the passing process was complete, the robot with the help of its line following sensors used to automatically travel to the throwing zone. Once it reached the throwing zone the throwing mechanism was used and the shuttle was thrown through the loop. The required force and velocity for the throwing the shuttlecock was achieved using a pneumatic actuator connected to the throwing link. The pressure was varied to achieve variable range.

Team Achievement -

Team Rudra secured an excellent All India Rank 23rd in the Nationals of 2018.

Team List -

Name	Branch	Year
Prashik Taware	Mechanical Engineering	Final Year
Arbaz Shaikh	Mechanical Engineering	Final Year
Shreyas Shetty	Mechanical Engineering	Final Year
Shubham Deshpande	Mechanical Engineering	Final Year
Aditya Fuke	E&TC Engineering	Final Year
Vivek Kulkarni	E&TC Engineering	Final Year
Vrutik Velani	Mechanical Engineering	Third Year
Hrishikesh Joshi	E&TC Engineering	Third Year
Mervyn Vaz	E&TC Engineering	Third Year
Pranav Auti	E&TC Engineering	Third Year



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Rishikesh Ramdasi	E&TC Engineering	Third Year
Yashraj Hawle	E&TC Engineering	Third Year
Litesh Bhole	Electrical Engineering	Third Year
Pratik Kurbet	Electrical Engineering	Third Year
Adwait Shiralkar	Mechanical Engineering	Second Year
Gautami Deshpande	Mechanical Engineering	Second Year
Harshal Kulkarni	Mechanical Engineering	Second Year
Neha Awate	Mechanical Engineering	Second Year
Shridhar Myakal	Mechanical Engineering	Second Year
Soham Bhawe	E&TC Engineering	Second Year
Swaraj Deogaonkar	E&TC Engineering	Second Year
Prathamesh Phulpagar	Computer Engineering	Second Year
Sanket Kale	Computer Engineering	Second Year
Vishakh Shewalkar	Computer Engineering	Second Year

Faculty Advisor

Prof. Gaurao Chaudhary

Prof. Shubhangi Joshi



SAE NIS EFFI-CYCLE 2017

Drive Excellence Season



Final Results

Dated: 10th January, 2018

SAE (Society of Automotive Engineers)-Northern India Section is pleased to announce the overall scores and rankings of teams participated in Efficycle-2017 event held at Lovely Professional University, Punjab from 1st - 5th November, 2017.

Rank	Efficycle Number	Team Name	College Name	City	State	Score
1	2	Velociracers	College of Engineering	Pune	Maharashtra	1289.9
2	62	Zyklus	Galgotia's College of Engineering and technology	Greater Noida	Uttar Pradesh	1246.4
3	39	REVENTON	GURU NANAK DEV ENGINEERING COLLEGE	Ludhiana	Punjab	1240.5
4	44	AARYANS	WALCHAND COLLEGE OF ENGINEERING	Sangli	Maharashtra	1233.0
5	12	PROTAGONISTS	ABES ENGINEERING COLLEGE	Ghaziabad	Uttar Pradesh	1194.4
6	7	Achilles	Marathwada Mitramandal's College Of Engineering	Pune	Maharashtra	1151.4
7	8	Thunderbolt 5.0	National Institute of Technology	Warangal	Telangana	1142.0
8	23	BRAVADO	AJAY KUMAR GARG ENGINEERING COLLEGE	Ghaziabad	Uttar Pradesh	998.3
9	5	Resonance Racing	ALL INDIA SHRI SHIVAJI MEMORIAL SOCIETYs, COLLEGE	Pune	Maharashtra	995.4
10	37	TEAM GREEN WARRIORS	ZAKIR HUSSAIN COLLEGE OF ENGINEERING AND TECHNOLOG	ALIGARH	Uttar Pradesh	995.0
11	52	EFFIROADERS	Chameli Devi Group Of Institution	Indore	Madhya Pradesh	954.7
12	13	APACHE	Vishwakarma Institute of Technology	Pune	Maharashtra	954.1
13	51	GREEN RANGERS	Sant Longowal Institute of Engineering and Technon	Sangrur	Punjab	947.3
14	18	Synectics	CGC College of Engineering	Mohali	Punjab	928.4
15	54	SAMKARAN	PES UNIVERSITY	Bengaluru	Karnataka	865.5
16	30	ILLUMINATI RACERS	LOVELY PROFESSIONAL UNIVERSITY	Phagwara	Punjab	862.9
17	31	TRIKUT 3.0	Maturi Venkata Subba Rao Engineering College	hyderabad	Telangana	842.8
18	46	Evolution	Indian Institute of Technology	Guwahati	Assam	810.5
19	1	DJS Tachyon	Dwarkadas J. Sanghvi College of Engineering	Mumbai	Maharashtra	776.1
20	10	Vintage Whizzlers 4.0	Sri Krishna College of Technology	Coimbatore	Tamil Nadu	734.6
21	20	PRAVARA HAWKS	Sir Visvesvaraya Institute of Technology, Nashik	Nashik	Maharashtra	725.9
22	3	MECHANIZERS 21.0	SREENIDHI INSTITUTION OF SCIENCE AND TECHNOLOGY	hyderabad	Telangana	724.7
23	34	MErauders 3.0	National Institute of Science and Technology	Orissa	Orissa	641.0
24	14	Právah	Shiv Nadar University	Gautam Buddha Nagar	Uttar Pradesh	497.2
25	26	AVEGA	MOTILAL NEHRU NATIONAL INSTITUTE OF TECHNOLOGY	Allahabad	Uttar Pradesh	487.9
26	55	Enviero1.0	Oriental Intitute of Science and Techonology	Bhopal	Madhya Pradesh	469.1
27	29	TRIKE RIDERS V 1.0	PROF. RAM MEGHE INSTITUTE OF TECHNOLOGY & RESEARCH	Amravati	Maharashtra	464.7
28	28	PEC RACING	PEC UNIVERSITY OF TECHNOLOGY	Chandigarh	Chandigarh	458.3
29	4	KALINGA KNIGHTS	KALINGA INSTITUTE OF INDUSTRIAL TECHNOLOGY	BHUBANESWAR	Orissa	453.4
30	43	Phoenix Racing	Kakatiya Institute of Technology & Science, Warang	Warangal	Telangana	437.9
31	9	FIREhawks	Bangalore Institute of Technology	Bangalore	Karnataka	422.4
32	25	HAWKS 4.0	UNIVERSITY OF PETROLEUM AND ENERGY STUDIES	Dehradun	Uttaranchal	402.5

Rank	Efficycle Number	Team Name	College Name	City	State	Score
33	33	BAAZ 2.0	Manipal University Jaipur	Jaipur	Rajasthan	384.8
34	57	Samanvaya Racing	Institute Of Engineering and Technology	Indore	Madhya Pradesh	366.2
35	50	Eco Striders	ABES INSTITUTE OF TECHNOLOGY	Ghaziabad	Uttar Pradesh	357.1
36	48	Xtreme83	K.E. Society's Rajarambapu Institute Of Technology	Sangli	Maharashtra	352.3
37	22	INVINCIBLES	UNIVERSITY COLLEGE OF ENGG. OSMANIA UNIVERSITY	Hyderabad	Telangana	351.1
38	35	ATIVIRYA	INDIRA GANDHI DELHI TECHNICAL UNIVERSITY FOR WOMEN	Delhi	Delhi	350.6
39	63	Vaishnav Kriegers	Shri Vaishnav Vishwavidyalaya Vidhyapeeth	Indore	Madhya Pradesh	314.6
40	58	BRAHMOS 2.0	SETH JAI PARKASH MUKAND LAL INSTITUTE OF ENGG. & TECH.	Yamuna nagar	Haryana	310.6
41	40	WISHBONE	DELHI TECHNICAL CAMPUS	Greater Noida	Uttar Pradesh	308.5
42	42	EKLAVYA	INSTITUTE OF ENGINEERING & MANAGEMENT	Kolkata	West Bengal	291.5
43	32	KALAM	Maharaja Agrasen Institute of Technology	Delhi	Delhi	270.8
44	11	BLACK MAMBA	TKM COLLEGE OF ENGINEERING	Kollam	Kerala	264.2
45	21	FURY	The LNM Institute of Information Technology	Jaipur	Rajasthan	263.2
46	24	VYAPAKS	THDC Institute of Hydropower Engineering and Technology		Uttaranchal	254.5
47	53	Blitz	Rajiv Gandhi Institute Of Technology	Kerala	Kerala	238.3
48	16	FARRAGO	College Of Engineering Trivandrum	Trivandrum	Kerala	230.8
49	49	YANTRIC	RAJIV GANDHI INSTITUTE OF TECHNOLOGY, KOTTAYAM	Vellore	Kerala	222.0
50	60	ASE RACING	AMRITA SCHOOL OF ENGINEERING	Coimbatore	Tamil Nadu	157.1
51	47	ETRIGAN	KRISHNA ENGINEERING COLLEGE	Ghaziabad	Uttar Pradesh	123.2
52	15	BLAZING KNIGHT	DRONACHARYA COLLEGE OF ENGINEERING	Gurgaon	Haryana	95.8
53	17	APE	Chandigarh Engineering College	Mohali	Punjab	93.3
54	56	INDUJA	IMS ENGINEERING COLLEGE	Ghaziabad	Uttar Pradesh	73.0
55	36	Bruiser Heads	Gokaraju Rangaraju Institue Of Engineering and Tech	Kuka	Telangana	67.9
56	38	GS racers	Shri Govindram Seksaria Institute Of Science & Tech	Vallabh Nagar	Madhya Pradesh	23.5
57	19	Vegam	Dayananda Sagar College of Engineering	Bengaluru	Karnataka	-56.0

* Following teams did not report at the event site. Hence score of these teams cannot be given.

Sr. No.	Efficycle Number	Team Name	College Name	Location
1	6	VINTAGE WHIZZLERS	SRI KRISHNA COLLEGE OF TECHNOLOGY	COIMBATORE, Tamil Nadu
2	27	TERRAIN MASTERS	Valliammai Engineering College/Anna university	Kanchipuram, Tamil Nadu
3	41	ProDrive	PSG College of Technology	Coimbatore, Tamil Nadu
4	45	Chargeurs Phoenix	UIET,PU,CHANDIGARH	Chandigarh, Chandigarh (UT)
5	59	Wingineers	Dronacharya College of Engineering	Gurgaon, Haryana
6	61	RUBICONZ	COLLEGE OF ENGINEERING	TRIVANDRUM, Kerala
7	64	ARCHERS	Mahendra Institute of Technology	NAMAKKAL, Tamil Nadu

EFFICYCLE TECHNICAL COMMITTEE