



Government College of Engineering

Station road, Osmanpura, Aurangabad-431005

(An Autonomous Institute of Government of Maharashtra)



TEAM ARYANS

Striving for Excellence

Team Report

Preliminary Round- BAJA 2021

December 2020





Date: 23rd December, 2020

TEAM ARYANS from Government College of Engineering Aurangabad, is a team of 25 passionate and auto enthusiastic engineering students, participating in BAJA SAE INDIA competition since 2011. BAJA is a national and international level competition organized by the SAE (Society of Automotive Engineers) which gives opportunity to Engineering students from all over the country to enhance and present their technical abilities, skills and creativity. The competition favours the Research, Design, Fabricating, Testing, Marketing, Validation and racing of the ATV (All-Terrain Vehicle) that is built up by the participating teams with ideas, creativity, innovations and skills. The distribution of work is done according to the departments' transmission, rollage, brakes, suspension, steering, data acquisition, sales, and cost.

This year, a novel COVID outbreak resulted the world in complete lockdown and has affected the layout of BAJA SAE competition also. The pandemic challenged the teams to work from their places, but whatever the situation is, our team started team's work online. We involved with group of juniors, given them different tasks, and lastly took the virtual interviews to recruit new members into the team. Even in this pandemic situation, maintaining the team legacy, our team has registered and participated for the 2021 event.

Amidst this pandemic situation, BAJA SAE INDIA committee decided to not to stop the continuity of this competition and has taken a step to conduct events virtually for this year's competition. The competition is divided into two stages. In first stage, the team has to present the design presentation virtually and attempt a quiz round which will be based on Rulebook and General Automobile. The second stage of the competition will be based on virtual static presentations which will include Sales Presentation, Design Presentation, CAE presentation and BAJA Committee is planning to arrange virtual dynamic events using IPG carmaker software.

This year, the teams were challenged to design All-Wheel Drive (AWD) vehicle. Our team planned accordingly, distributed the work within departments, and successfully achieved this target to design the 1st All -wheel drive vehicle in the history of Team Aryans. Team conducted daily meetings on WebEx platform since month of September to interact with the team members





and to get the overview of all the tasks to be completed within deadlines. We completed our vehicle design in late October and started preparing for presentation.

The first stage of the competition was organized on **12th & 13th December, 2020**. The quiz round was given on 12th of December and we successfully presented our design presentation on 13th December according to the provided slot timings. The results for this stage declared on 21st December and our team has performed extremely well in this stage. The results for the same are as follows:

Quiz Score	39.5/50
Presentation Score	38.9/50
AWD Bonus	4.1/5
Total Score	82.5/100

Achievements:

Overall: AIR 5th
Presentation: AIR 5th
AWD/ 4WD: AIR 3rd



4WD Prototype Designed by Team





This journey wouldn't been a success without the precious support of college, faculty, parents and continuous support of alumni and their guidance. We would like to give our sincere thanks to Dr. A. M. Nikalje Sir, Faculty Advisor (BAJA 2020-2021), Dr. S. B. Chikalthankar sir, Head, Mechanical Engineering Department, Dr. S. R. Hirekhan Sir, Head, Electronics and Telecommunication Department for their valuable guidance. We would also like to thanks Dr. U. J. Kahalekar Sir, Dean Students activities and Principal of institute, Dr. P. B. Murnal sir for their valuable cooperation.

Team Members 2020 – 2021:

Pradeep Madane (Team Captain), Pushpraj Dongare (Team Vice-Captain), Amruta Yadav (Team Manager), Kaivalya Pande, Prajwal Gote, Tushar Khodankar, Atharva Bagad, Tilottama Kodam, Saurabh Singare, Parth Brahmapurkar, Amit Sonawane.

New Members: Akram Syed, Mahesh Gadalkar, Chaitanya Bhagat, Sakshi Tungikar, Yashwant Mali, Pankaj Chaudhari, Ram Shingane, Sarthak Joshi.

