

MExpress

Mechanical Engineering Department's Official Newsletter
VOLUME 05 - Issue 07



EDITORS:

Dr. C. Velmurugan
Dr. B. N. Sreeharan

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ASSOCIATE EDITORS:

Mr. B. Praveen
Mr. S. V. Nithesh
Mr. S. Shakeel Akthar
Mr. K. T. Imanyan

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da.mec@kct.ac.in



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AIR POWERED CARS



Mr. Nithesh S V
20BME080
2nd Mech.- B

Introduction:

These are the cars which run on Compressed air instead of using gasoline. It runs by using air, so there is no air pollution caused here. It gets a two cylinder, compressed air engine which helps in generating power to the car. This engine has the capacity to run using the air and can act as an Internal combustion engine.

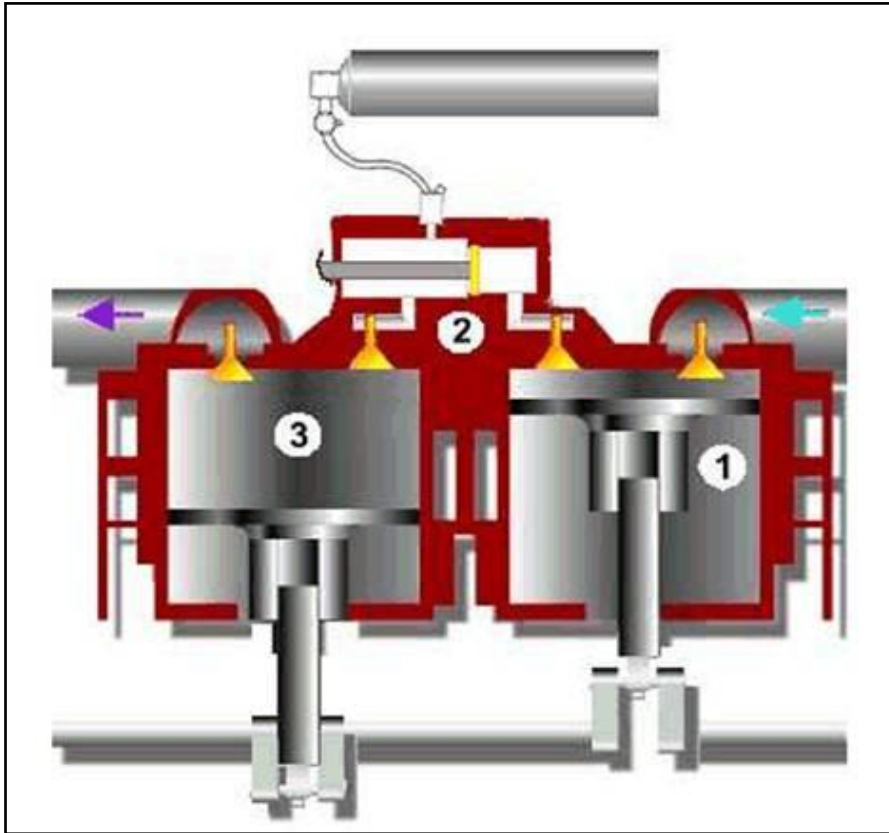
Working:

It is a hybrid type of the engine, that can run in fuel with the combination of air. Its change can be controlled electrically. When the speed of car is below 60 kmph, it runs using air. At higher speeds, it changes to gasoline.



Air tanks are fixed at the underside of vehicle which can carry upto 79 gallons of air, which is approximately 300 litres. They can give a range of about 200 km at a top speed of 95 kmph. When it nears low level, it can be refilled. It requires small amount of oil of about 0.8 litres (800 ml) that must be changed after every 50,000 km.

Air tanks are made up of Reinforced Carbon Fibre with a thermoplastic liner. Each tank can hold upto 3,180 ft³ of air at a pressure of 4,300 psi. The tanks can get recharged in 3-4 minutes. They can also be recharged using On-board compressor, 3-4 hours after connecting to standard power outlet.

Mechanism:

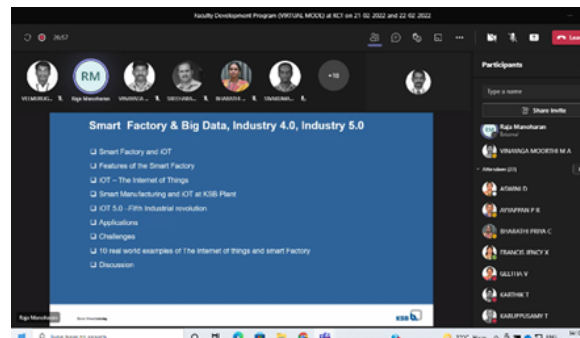
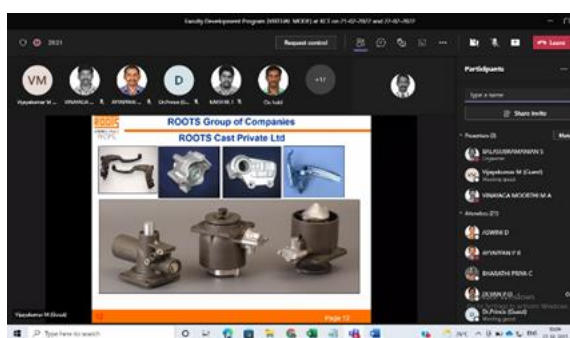
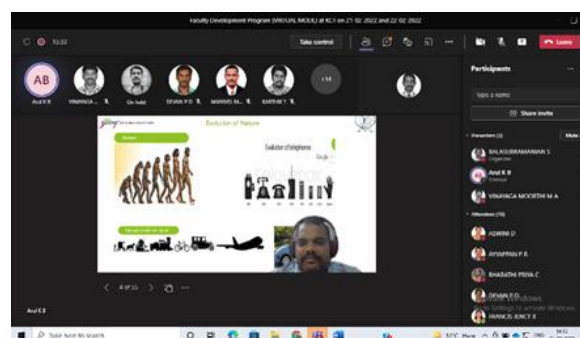
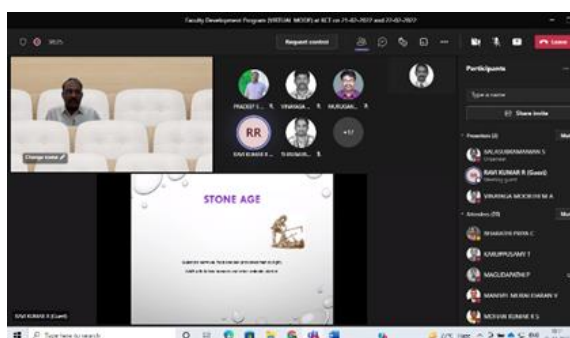
The first piston is in the ambient air, and so it compresses to 300 psi in the compression chamber during the 1st cycle of the engine.

When the piston pauses, a small amount of compressed air from the tank is released to the expansion chamber to create a low pressured, low temperature volume of about 140 psi.

Before the valve to exhaust cylinder, is opened, and a high-speed shutter connects the compression and expansion chambers. The sudden pressure and temperature difference between the low chamber creates waves in expansion chamber and results in the production of work in exhaust chamber that drives piston to power the engine. Now, the vehicle runs at the required velocity based on the input.

PROGRAMMES ORGANIZED

- Department organized an FDP on “Smart Manufacturing and Innovations” on 21.02.2022 and 22.02.2022. **Mr. R. Ravikumar**, COO, Roots Multiclean Limited and Treasurer, Coimbatore Productivity Council, **Mr. Arul Ram**, Lead Manufacturing and Green Initiatives Godrej Limited, Delhi, **Mr. M. Vijayakumar**, Head - Facility Development and Automation, Roots Industries India Limited, Coimbatore and **Mr. M. Raja**, General Manager, KSB Pump Limited, Coimbatore were the resource persons.



Dr. S. Balasubramanian, Associate Professor and **Mr. M. A. Vinayagamoorathi**, Assistant Professor - II coordinated the FDP.



- An Industry Institute Interaction Programme was organized by the department on 17.02.2022 and 24.02.2022. **Mr. R. Vijayaganthi**, Branch Manager, Domestic Marketing Network, Larsen & Toubro Limited, Coimbatore and **Mr. Ganesh Venkatraman**, Regional Manager, South (College Connect), Larsen & Toubro Limited, L & T Edutech, Chennai interacted with the representatives from the department and institution.



Mr. B. Jeeva, Assistant Professor coordinated the Industry Institute Interaction events.



FACULTY AS RESOURCE PERSONS



Dr. S. Bhaskar, Associate Professor handled a One hour thirty minutes session on 09.02.2022 on "The OBE approach of Developing Course Content (Syllabus) based on the Course Outcomes and OBE Syllabus Format and another One hour thirty minutes session on 09.02.2022 on "Assignment Patterns /Strategies to attain predominantly domain independent POs (PO6 to PO12) to ensure uniform mapping of COs and POs. Further, he handled a

One hour thirty minutes session on 09.02.2022 on "Optimal Mapping of COs and POs with special attention on ways to map COs with PO6 to PO12 of UG – E & T programs and handled a One hour thirty minutes session on 09.02.2022 on "OBLT - Outcome Based Course Delivery (Scientific Teaching Methodology) and Outcome Based Course Material (Lecture Notes) preparation" during the AICTE - ISTE Sponsored Refresher/Induction Program on Innovative Teaching and Outcome Based Education Date: 07.02.2022 to 12.02.2022 organized by Dhirajlal Gandhi College of Technology, Salem.

Dr. V. Muthukumaran, Professor attended a Doctoral Committee meeting at CIT, Coimbatore as an Expert Member on 21.02.2022



Mr. P. D. Devan, Assistant Professor has acted as an AUR at Kalaingar Karunanithi Institute of Technology on 24.02.2022.



MANUSCRIPT SUBMISSION



Dr. S. Balasubramanian, Associate Professor and **Mr. M. A. Vinayagamoorthi**, Assistant Professor - II submitted a technical manuscript in Scopus indexed journal for publication.



Dr. R. Manivel, Professor, submitted a manuscript in a Scopus indexed journal for publication.

PAPER PUBLICATION

- **Dr. S. Balaji**, Assistant Professor, **Dr. V. R. Muruganantham**, Associate Professor and **Mr. P. D. Devan**, Assistant Professor published a paper entitled "Investigation and optimization of turning process parameters in super duplex stainless steel" in Materials Today: Proceedings, 2022, ISSN 2214-7853, <https://doi.org/10.1016/j.matpr.2022.01.450>.
- **Mr. P. D. Devan**, Assistant Professor published a technical paper entitled "Automatic Facemask Vending Machine" in International Journal of Advance Research and Innovative Ideas in Education, Vol. 8, Issue No. 1, pp 990-996.



PAPERS REVIEWED



Dr. C. Velmurugan, Professor and HoD reviewed a paper entitled "Optimization of Surface Roughness and Material Removal Rate of 17-4PH SS in CNC End-Milling" for the Scopus indexed International Journal of Engineering, Design and Technology.

Ph. D. Completion



Dr. C. Velmurugan, Professor and Hod, coordinated a Ph. D. Viva Voce for his research scholar **Mr. S. Rajesh**, Assistant Professor who successfully defended his research work on 11-02-2022.



INDUSTRY LINKAGE



Dr. B. N. Sreeharan, Assistant Professor - II visited M/s. G R Engineering Works for facilitating students' project work on 14-02-2022.

PROGRAMMES ATTENDED / COURSES COMPLETED

Mr. S. Sivakumar, Assistant Professor - II participated in an FDP on "Smart Manufacturing and Innovations" from 21-02-2022 to 22-02-2022, organized by Kumaraguru College of Technology, Coimbatore.



Mr. R. S. Mohan Kumar, Assistant Professor, participated in a Conclave on "Two Days Virtual Conclave on Productivity" from 16-02-2022 to 17-02-2022, organized by CPC, Coimbatore. He also participated in a Faculty Training on "2 days Virtual faculty Training on PLM" on 11-02-2022 and on 21-02-2022, organized by Capgemini Engineering, Bengaluru.

Mr. P. Pradeep, Assistant Professor participated in an FDP on "Smart manufacturing and Innovations" from 21-02-2022 to 22-02-2022, organized by Kumaraguru College of Technology, Coimbatore.



Mr. P. D. Devan, Assistant Professor participated in a Webinar on "Faculty Empowerment Programme on "Research – Publications & Proposals" on 17-02-2022, organized by Kumaraguru College of Technology, Coimbatore. He also participated in an FDP on "Smart manufacturing and Innovations" from 21-02-2022 to 22-02-2022, organized by Kumaraguru College of Technology, Coimbatore.



Mr. M. A. Vinayagamoorthi, Assistant Professor - II participated in a webinar on "Motivation and Achievement" on 12-02-2022, organized by Coimbatore Productivity council, Coimbatore. He also participated in a Conclave on "Two Days Virtual Conclave on Productivity" from 16-02-2022 to 17-02-2022, organized by CPC, Coimbatore. Further, he participated in a Faculty Training on "2 days Virtual faculty Training on PLM" on 11-02-2022 and on 21-02-2022, organized by Capgemini Engineering, Bengaluru.

Mr. B Jeeva, Assistant Professor participated in "AICTE Training and Learning (ATAL) Academy Online Elementary FDP on "Avenues for Energy Conservation in Thermal Power Plants" from 07-02-2022 to 11-02-2022, organized by Anna University with AICTE ATAL, Anna university, Chennai-600025. He also participated in an FDP on "AICTE Incorporating Universal Human Values in Education" from 31-01-2022 to 04-02-2022, organized by AICTE, New Delhi, AICTE, New Delhi.



Mr. K. Manikanda Prasath, Assistant Professor completed a Course on "Digital Marketing' 8 Weeks Course"" from 01-01-2022 to 22-02-2022, organized by Udemey.

Dr. S. Thirumurugaveerakumar, Associate Professor participated in an FDP on "Curriculum Design, Assessment, Evaluation and Innovative Teaching and Learning to Achieve Outcome Based Education" from 19-02-2022 to 25-02-2022, organized by Sri Krishna of Technology, Coimbatore. He also participated in a Faculty Training on "2 days Virtual faculty Training on PLM" on 11-02-2022 and on 21-02-2022, organized by Capgemini Engineering, Bengaluru. Further he participated in an FDP on "Smart manufacturing and Innovations" from 21-02-2022 to 22-02-2022, organized by Kumaraguru College of Technology, Coimbatore.



Dr. S. Sivakumar, Assistant Professor - III participated in an STTP on "Train the Trainer Course For BIM" from 10-01-2022 to 15-02-2022, organized by BIM Academy, Northumbria University, New Castle, United Kingdom. He also participated in an STTP on "Certificate Course in Data Science and Machine Learning" from 11-08-2021 to 29-12-2022, organized by National Institute of Electronics and Information Technology, ISTE Complex, 25, Gandhi Mandapam Road, Chennai – 600025.

Dr. V. Muthukumaran, Professor completed a Coursera course on "Four Week online course on Introduction to solar cells" from 20-01-2022 to 17-02-2022, organized by Technical University of Denmark, Coursera.





Dr. V. R. Muruganantham, Associate Professor participated in an FDP on "Smart manufacturing and Innovations" from 21-02-2022 to 22-02-2022, organized by Kumaraguru College of Technology, Coimbatore. He also participated in an FDP on "Faculty Empowerment Programme on "Research – Publications & Proposals" on 17-02-2022, organized by Kumaraguru College of Technology, Coimbatore and he also participated in an FDP on "Curriculum Design, Assessment, Evaluation and Innovative Teaching and Learning to Achieve Outcome Based Education" from 19-02-2022 to 25-02-2022, organized by Sri Krishna of Technology, Coimbatore.

Dr. M. Thirumalaimuthukumar, Assistant Professor - II participated in an FDP on "Curriculum Design, Assessment, Evaluation and Innovative Teaching and Learning to Achieve Outcome Based Education" from 19-02-2022 to 25-02-2022, organized by Sri Krishna of Technology, Coimbatore and he also II participated in an FDP on "Smart manufacturing and Innovations" from 21-02-2022 to 22-02-2022, organized by Kumaraguru College of Technology, Coimbatore and a "Faculty Empowerment Programme on "Research – Publications & Proposals" on 17-02-2022, organized by Kumaraguru College of Technology, Coimbatore.



Dr. V. Manivelmuralidaran, Assistant Professor - II participated in an FDP on "Smart manufacturing and Innovations" from 21-02-2022 to 22-02-2022, organized by Kumaraguru College of Technology, Coimbatore.

Dr. T. Karuppusamy, Assistant Professor - II participated in a Webinar on "Self-reliance through Productivity" on 13-02-2022 another Webinar on "Housing Industry in Canada" on 14-02-2022, organized by Coimbatore Productivity council, Coimbatore. Further, he participated in a Webinar on "Faculty Empowerment Programme on "Research – Publications & Proposals" on 17-02-2022 organized by Kumaraguru College of Technology, Coimbatore. Dr. Karuppusamy, participated in an FDP on "Smart manufacturing and Innovations" from 21-02-2022 to 22-02-2022, organized by Kumaraguru College of Technology, Coimbatore.



Dr. S. Balaji, Assistant Professor participated in an FDP on "Faculty Development Programme on Research Methodology & Publication ethics" from 07-02-2022 to 11-02-2022, organized by Islamic University of Science & Technology, Jammu & Kashmir.

Dr. R. Manivel, Professor participated in a Webinar on "C2S -Chips to Start-up" on 02-07-2022, organized by Meity Electronics , New Delhi.





Dr. N. Sangeetha, Associate Professor participated in an FDP on “Smart manufacturing and Innovations” from 21-02-2022 to 22-02-2022, organized by Kumaraguru College of Technology, Coimbatore.

Dr. M. Balaji, Associate Professor participated in an FDP on “Smart manufacturing and Innovations” from 21-02-2022 to 22-02-2022, organized by Kumaraguru College of Technology, Coimbatore.



Dr. B. Senthilkumar, Associate Professor participated in an FDP on “Smart manufacturing and Innovations” from 21-02-2022 to 22-02-2022, organized by Kumaraguru College of Technology, Coimbatore.

Dr. B. N. Sreeharan, Assistant Professor - II participated in a Webinar on “Various Funding Opportunities in DST for Engineering Institutions” on 06-02-2022, organized by RAMCO Institute of Technology, Rajapalayam and another Webinar on “Product Life Cycle Management” on 03-02-2022, organized by JCT College of Engineering and Technology, Coimbatore. Further, he participated in a Webinar on “Lean Thinking in Service Operations” on 25-02-2022 organized by JCT College of Engineering and Technology, Coimbatore. In addition, Dr. Sreeharan, participated in an FDP on “Smart manufacturing and Innovations” from 21-02-2022 to 22-02-2022, organized by Kumaraguru College of Technology, Coimbatore and in an FDP on “Role of Psychology in Teaching and Learning” from 31-01-2022 to 05-02-2022, organized by Pioneer College of Arts and Science, Coimbatore.



9th International Conference on Latest Trends in Engineering, Technology, Science and Management ICLTETSM 2022, Top Engineers, International Conference, Chennai, Tamil Nadu, 27th March 2022

Category	:	International Conference
Start Date	:	27th March 2022
End Date	:	27th March 2022
Event Mode	:	Online
Organiser	:	Top Engineers
City	:	Chennai
State	:	Tamil Nadu

REGISTER LINK : <https://forms.gle/ieyyKYEWav9TP3yN7>

HIGHLIGHTS OF THE CONFERENCE:

1. Free plagiarism checking
2. All the accepted papers will be published in the International Journal of Advanced Research in Management Architecture Technology & Engineering [IJARMATE] or International Journal of Advanced Research in Innovative Discoveries in Engineering and Applications [IJARIDEA]
3. All the papers will be published in the conference proceedings with the ISBN number.
4. Any person among the authors of the paper can present the paper.
5. Top Engineers Certificate with ISO certified number and uniquely designed hologram sticker.

SPECIAL AWARDS:

1. Young Researcher award
2. Best Group Presentation award
3. Best Paper award
4. Best Presenter award

IMPORTANT DATES:

Date of Conference	:	27.03.2022
Last date for Paper Submission	:	18.03.2022
Last date for Registration	:	20.03.2022

International Conference on Advances in Engineering and Web of Things ICAEWoT 2022, IIRM-SDT, International Conference, Chirala, Andhra Pradesh, 27th March 2022

Category : International Conference
Start Date : 27th March 2022
End Date : 27th March 2022
Event Mode : Online
Organiser : IIRM-SDT
City : Chirala
State : Andhra Pradesh

LINK : <https://www.iirmsdt.org/p/9th-page-online-conference.html>

DESCRIPTION

The International Conference on Advances in Engineering and Web of Things-ICAEWoT-2022. The Conference will be organized Digitally. The Object of the ICAEWoT-2022 is to present the Emerging Techniques in Engineering, Internet of Things (IoT), and Web of Things (All Branches: Engineering, Science & Technology, Pharmacy, Management, Humanities, and Arts & Sciences). The organizing committee of the conference is pleased to invite prospective authors to submit their original manuscripts to the ICAEWoT-2022. All full paper submissions will be peer-reviewed and evaluated based on originality, technical and/or research content/depth, correctness, relevance to conference, contributions, and readability. Paper-ID will be provided to each paper for further reference after selecting it






INTERNATIONAL CONFERENCE ON ADVANCES IN ENGINEERING and WEB of THINGS (WoT) - ICAEWoT - 2022::
on
DATE: 27-MARCH-2022::GOOGLE MEET:: 9 AM

Keynote Speaker



Dr. M. SREEDEVI
Assistant Professor,
Sri Venkateswara University,
Tirupati - 517 502, A.P, INDIA

Technical Chair



Dr. D. RAJENDRA PRASAD
Professor,
Dept. of ECE,
St. Ann's College of Engineering & Technology, Chirala, A. P., INDIA

Session Chair



Dr. UTTAM ROY
Director, RIVER Publication House & Guest Editor IJME (Indexed by Scopus) & Korea Review of International studies (ABDC indexed)

General Chair



Sri. SIVUDU MACHERLA
General Chair, IIRM,
Assistant Professor & Head,
Dept. of CSIT,
PACE Institute of Technology and Sciences, Ongole, Prakasam(District) Andhra Pradesh., India



HIGHLIGHTS:

- Best Presentation Award
- Best Paper Award
- Conference Proceedings with ISBN
- All Co-Authors should get E-Certificates & E-Proceedings
- We provide Life Time Professional Member Ship to all Registered authors & Co-authors
- Articles will be uploaded in the IIRM-SDT Google scholar link as per the author request only
- Conference E-Proceedings will be uploaded to our website
- Registered Articles list will be uploaded on our website as per the allotted "Paper ID".
- Note: We will permit per Article 4 to 6 authors including Guide for B.E / B.Tech Students, 1 to 2 authors including Guide for M.E / M.Tech Students, 1 to 2 authors including Guide for Research Scholars, 1 to 2 authors for Academician/Practitioner/Industrialist, and 1 to 2 authors for Ph.D./Post Doc.
- Note1: Through Conference, Research Articles will be published in various Scopus, Web of Science, UGC Care, and SCT Journals with a separate fee, please select journal name from journals link: <https://www.iirmsdt.org/p/journals.html>
- Note2: Per Article, Registration Fee for B.E or B.Tech: ₹1100/-, for M.E or M.Tech: ₹1600/-, for Academician/Practitioner: ₹1800/-, Research Scholars: ₹1900/-, Ph.D./Post Doc.: ₹ 2100/-, Industrialist: ₹ 3000/-
- Note3: For Foreigners, 100 Dollars for single author
- NOTE4: Hard Copy of Conference Certificates, Membership Certificates, and proceedings will be posted to your postal address with a separate fee-₹ 300/-

IMPORTANT DATES:
Article Submission Deadline : 23 - MARCH-2022
Registration Deadline : 25 - MARCH-2022
Conference Date : 27 - MARCH-2022

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 Conference Link: <https://www.iirmsdt.org/p/9th-page-online-conference.html>
 Journals Link: <https://www.iirmsdt.org/p/journals.html>
 Media Partner: <https://www.knowafest.com/college-fests/events>

CODE JAM 2022 BY GOOGLE | CODING CONTEST

Registration Closing : 3rd April 2022
Reward : Championship title and \$15,000 USD

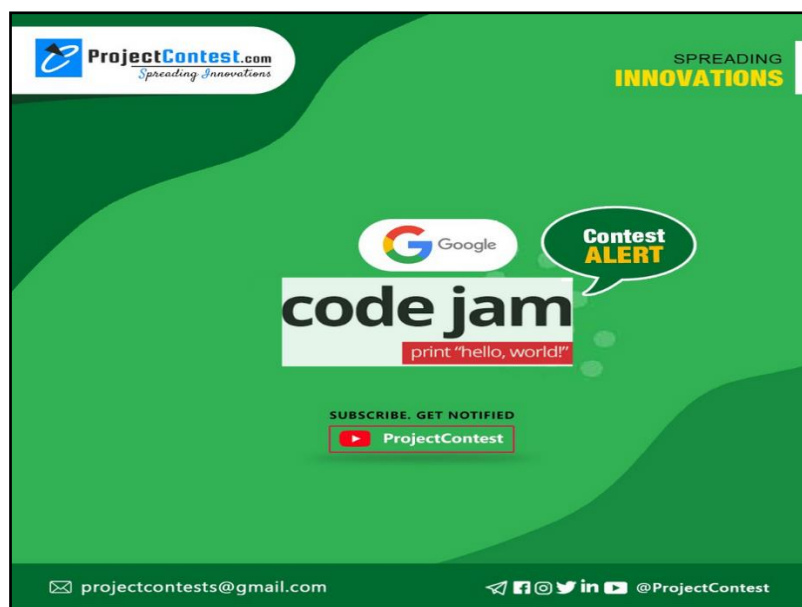
About the Contest :

Code Jam is Google's longest running global coding competition which is in the 19th year, where programmers of all levels put their skills to the test. Competitors work their way through a series of online algorithmic puzzles to earn a spot at the World Finals, all for a chance to win the championship title and \$15,000 USD. Google's through Code Jam calls on programmers around the world to solve challenging, algorithmic puzzles against the clock. Contestants advance through four online-hosted rounds to compete at the annual Code Jam World Finals that is held at a different international Google office each year. Each round brings new challenges, and in the end 25 contestants will have the ultimate chance to put their skills to the test, vying for cash prizes and the coveted championship title at the World Finals.

Contest Flow :

- Register and compete in Code Jam's Online Qualification Round. It lasts 27 hours, but you won't need that long to earn the round's qualifying point minimum. Once you do, you'll advance to Online Round 1. Google offer three sub-rounds for Round 1, and you can compete in as many as it takes for you to finish in the top 1,500 of any of these rounds.
- The top 1,500 from each sub-round move on to compete for a spot in the top 1,000 contestants of Code Jam Online Round 2. These top 1,000 contestants advance to Online Round 3 and earn a limited-edition Code Jam t-shirt.

The top 25 contestants from Code Jam Online Round 3 will compete in the Virtual World Finals for the championship title and a cash prize of \$15,000 USD.



HIGHER STUDIES

- 3 students received admission letters for their higher studies.
- 40 students from final year and 20 students from third year were appeared for GATE 2022 exam.
- 4 students were utilized internal coaching Class organized in KCT.
- 20 students from the final year were passed the competitive exam.

S. No.	Roll No.	Name Of the Student	Exam Passed
1.	18BME109	Harshit S	IELTS
2.	18BME134	Praneesh Kumar	IELTS
3.	18BME135	Dharmendhiran	IELTS
4.	18BME090	Aravindh B	IELTS
5.	18BME174	Dushyanth	IELTS
6.	18BME056	Kavipriyan L	IELTS
7.	18BME064	Madhumitta	IELTS
8.	18BME091	Nitheaswarran	IELTS
9.	18BME059	Nithin Lakshmanan	GRE
10.	18BME059	Nithin Lakshmanan	TOFEL
11.	18BME097	Pramod	IELTS
12.	18BME040	Pranav Anand K	GRE
13.	18BME040	Pranav Anand K	TOFEL
14.	18BME134	Praneesh	IELTS
15.	18BME019	Rogit Raaj	GRE
16.	18BME019	Rogit Raaj	TOFEL
17.	18BME082	Sreejith R	GRE
18.	18BME082	Sreejith R	IELTS
19.	18BME093	Rishi	IELTS
20.	18BME021	Jaya surya	IELTS

PLACEMENT UPDATES

- 131 students are eligible for placement out of which 86 students has been placed.
- 118 students have been found to be without arrear opted for placement and 15 students with arrear has been opted for placement
- Till today we have received 155 offers so far.
- 40 dual placement students have been found.
- Offer based we have 85.85 % Placed so far and student based we have 65.6 %.

INTERSHIP FOR STUDENTS

- Around 25 students from final year to 2nd year started their internship permission process.

ENERGY BOAT CHALLENGE, MONACO

- Mr. Kishore Krisna S – (19BME013) of third year Mechanical Engineering student got selected in the 2nd batch of Team Sea Sakthi from KCT garage to participate in the Energy boat challenge which is going to happen at Monaco.

Team Sea Sakthi is the marine arm of a research forum on behalf KCT Garage. Students of this forum manufacture custom vehicles which represents the institution in student racing events across India, with more than 50 awards and honors to our name. Although marine is a new undertaking for Team Sea Sakthi, the students have ample experience in designing and building battery powered electrical vehicles. The team views the energy boat challenge as an opportunity to measure their ideas against the world. The challenge, in our perspective, will be an important learning and experiential milestone.

TATA BLACKBIRD



Mr. Nithesh S V
20BME080
2nd Mech.- B

Introduction :

TATA has been working on their new car named as “Blackbird”, which is been decided to be positioned in between, Nexon and Harrier. It comes under SUV segment. It is expected to hit more because of its interior features and exterior design.



Features:

Directly going to the features side, since TATA is a well-known company for safety, they provided amazing features.

The interior gets a stunning ambient lighting for a pleasant look, digital driver display, 10-inch infotainment system, which has the fully loaded connected car technology, Front ventilated seats, touch sensitive AC controls, In car Wi-Fi services, Automatic AC zones, The steering wheel is with two spokes, Rear multi-view camera with guidelines, Keyless entry, push start/stop button, and so on.

Design:

Coming to the interior, it is with a decent good-looking design, which has the layered dashboard with a touch screen cluster, and a digital driver display with a two spoke steering wheel. It has an electrically powered sunroof, Wi-Fi charging, ambient lighting, seat design and every small points add a good note in interior designs.





Coming to the exterior, this 4.2 m long car gets a massive designed 17-inch alloy wheel. In short it can be said that the design elements are slightly borrowed from Nexon, Harrier which gives an aggressive touch.

Specifications :

It is a 5-seater car, which is powered by 1.2-litre Revotorq turbocharged petrol engine, a 3-cylinder engine, with a power output of 130 bhp at 5500 rpm and gives a torque output of 178 Nm at 1750 rpm. It is a FWD car with a 6-speed manual gear box. It gets a decent spaced boot of 385 litres and fuel tank capacity of 50 litres.

Safety:

Since TATA is named for safety, they give more importance on the build quality, etc. Blackbird comes with

- | | |
|---------------------------------------|--|
| ✚ 6 Airbags | ✚ Hill Hold Control |
| ✚ ABS With The EBD | ✚ Seat-Belt Warning System |
| ✚ Electronic Stability Control System | ✚ Central Locking System with Child Safety Locks |
| ✚ ISOFIX Seat Mounts | ✚ Rear Parking Sensor and The Cameras |
| ✚ Multi-Collision Braking | ✚ Tyre Pressure Monitoring |
| ✚ Engine Immobilizer | ✚ Speed Sensing Door Lock System |
| ✚ Roll-Over Protection | |
| ✚ Brake Disc Wiping | |

Colour options:

- | | |
|---------------|----------------|
| ✚ Orcus White | ✚ Daytona Grey |
| ✚ Calypso Red | ✚ Oberon Black |
| ✚ Camo Green | |

Its pricing has been expected ranging from 10 lakhs (BASE VARIANT) to 16.50 lakhs (TOP MODEL).



KUMARAGURU
college of technology

COIMBATORE – 641 049

Department of Mechanical Engineering

INSTITUTE VISION:

The vision of the college is to become a technical university of International Standards through continuous improvement.

INSTITUTE MISSION:

Kumaraguru College of Technology (KCT) is committed to providing quality Education and Training in Engineering and Technology to prepare students for life and work equipping them to contribute to the technological, economic, and social development of India. The College pursues excellence in providing training to develop a sense of professional responsibility, social and cultural awareness and set students on the path to leadership.

DEPARTMENT VISION:

To emerge as a centre, that imparts quality higher education through the programme in the field of Mechanical Engineering and to meet the changing needs of the society.

DEPARTMENT MISSION:

The department involves in sustained curricular and co-curricular activities with competent faculty through teaching and research that generates technically capable Mechanical Engineering professionals to serve the society with delight and gratification.

B. E. MECHANICAL ENGINEERING

PROGRAM EDUCATIONAL OUTCOMES (PEO's):

- PEO 1 :** Graduates will take up career in manufacturing and design related disciplines.
- PEO 2 :** Graduates will be involved in the execution of Mechanical Engineering projects.
- PEO 3 :** Graduates will take up educational programme in mastering Mechanical sciences and management studies.

PROGRAM OUTCOMES (PO's):

- 1. Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

2. **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
6. **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
7. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
8. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
9. **Individual and teamwork:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. **Life-long learning:** Recognize the need for and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAM SPECIFIC OUTCOMES (PSO's):

1. Apply the fundamentals of science and mathematics to solve complex problems in the field of design and thermal sciences.
2. Apply the concepts of production planning and industrial engineering techniques in the field of manufacturing engineering.

M. E. INDUSTRIAL ENGINEERING**PROGRAM EDUCATIONAL OBJECTIVES (PEO's):**

- PEO 1 :** Graduates will be mid to higher level management / engineering professionals with responsibilities in engineering management, data analysis and business operations.
- PEO 2 :** Graduates will be engineering professionals, and technology leaders who would manage such functions as plant engineering, production, supply chain and quality management.
- PEO3 :** Graduates would function as educators or researchers in academic institutions.

PROGRAM OUTCOMES (PO's):

- P01 :** An ability to independently carry out research /investigation and development work to solve practical problems.
- P02 :** An ability to write and present a substantial technical report/document.
- P03 :** Students should be able to demonstrate a degree of mastery over the area as per the specialization of the program. The mastery should be at a level higher than the requirements in the appropriate bachelor program.

PROGRAM SPECIFIC OUTCOMES (PSO's):

- PS01 :** Graduates able to apply the engineering management and data management concepts in industrial engineering areas.
- PS02 :** Graduates able to apply industrial engineering skills and knowledge to manage the functions of production and supply chain management.